OPNAVINST 3710.7T

NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS

OPNAV INSTRUCTION 3710.7T

THIS PUBLICATION SUPERSEDES OPNAV INSTRUCTION 3710.7S DATED 15 NOVEMBER 2001.

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS.

01 MARCH 2004

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON,D.C. 20350-2000

IN REPLY REFER TO:

OPNAVINST 3710.7T
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OPNAV INSTRUCTION 3710.7T

From: Chief of Naval Operations

Subj: NATOPS GENERAL FLIGHT AND OPERATING INSTRUCTIONS

Encl: (1) NATOPS General Flight and Operating Instructions

1. Purpose. To issue enclosure (1) that provides policy and procedural guidance applicable to a broad spectrum of users and complements individual NATOPS manuals.

2. Cancellation. OPNAVINST 3710.7S

3. Background. The Naval Air Training and Operating Procedures Standardization (NATOPS) Program is a positive approach toward improving combat readiness and achieving a substantial reduction in the aircraft mishap rate. Standardization, based on professional knowledge and experience, provides the basis for development of sound operating procedures. The standardization program is not intended to stifle individual initiative, but rather to aid commanding officers in increasing their unit's combat potential without reducing command prestige or responsibility.

4. Reproduction. Duplication of this publication for other than military use, without specific authority of the Chief of Naval Operations, is not authorized.

5. Instructions. All instructions that are cited in the text are listed (with their current suffixes) in Appendix C.

6. Reports and Forms. Reports and forms required by this instruction are listed in Appendix L.

M. P. Fitzgerald
Director, Air Warfare

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(Airfield Operations Office, Lawson Army Airfield, Fort Benning, GA 31905)

(Air Force Plant Representative, Hughes Aircraft Co, Culver City, CA 90230)

(Base Operations Officer, Naval Marine Corps Auxiliary Landing Field, Bogue, Newport, NC 28570)

(Commander, 7240th Support Squadron, APO New York 09085)

(Defense Contract Administration Services Management Area Wichita, Wichita Mid-Continental Airport Terminal Building, Wichita, KS 67209)

(Defense Logistics Agency, Defense Plant Representative Office, IBM Corporation, Route 17C Bldg 901A, D14, Owego, NY 13827-1298)

(Defense Logistics Agency, Defense Plant Representative Office, Grunian St. Augustine P.O. Box Drawer 3447, St. Augustine, FL 32085-3447)

(Department of Defense Joint Air Reconnaissance Control Center, NAS Boca Chica, Key West, FL 33040)

(Division of Military Application, Atomic Energy Commission, Germantown, MD 20767)

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(Headquarters, Aerospace Maintenance and Regeneration Center (AMARC), Davis Monthan Air Base, AZ 85707)

(Headquarters, USAF Logistics Command (XOOS), Wright Patterson AFB, OH 45443)

(Headquarters, U.S. Army, 5001 Eisenhower Ave., Alexandria, VA 22333)

(Headquarters, U.S. Army, Aviation Center, ATZQ-ES-FS, Ft. Rucker, AL 36362)

(Headquarters, 4440th Tactical Fighter Training Group, Nellis AFB, NV 89191)

(Joint War Games Agency, OJCS, Washington, DC 20390)

(NASA, Wallops Island, VA 23337)

(National Oceanic and Atmospheric Administration, NOAA Corps, NC2, 6010 Executive Blvd., Rockville, MD 20952)

(Navy/Marine Military Liaison, Astronaut Office, NASA/JSC, Mail Code CB, 2101 NASA Road One, Houston, TX 77058)

(Navy Training Support Unit, C/O Reflectone Training Systems, P.O. Box 21869 Waco, TX 76702)

(Office of the Surgeon General, Code SGP AAF, Forrestal Building, 1000 Independence Ave., Washington, DC 20314)

(Officer in Charge, Navy Management Systems Support Office Detachment, Pacific, Naval Station, Box 368217, 3075 Eel Alley, San Diego, CA 92136-5183)

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(Sabreliner, C/O Tracor Flight Services Inc., P.O. Box 33213, NAS Pensacola, FL 32508-33213)

(USAFE (DOOT), APO New York 09633)

(U.S. Coast Guard Safety Center, 2100 2nd St. SW, Washington, DC 20593)

(USMC Tactical Electronic Warfare Squadron 1, 1st Marine Aircraft Wing, FMF Pacific, Unit 82303 FPO AE 09503-9208)

(U.S. Naval Security Group-Activity, Sabana Seca, FPO AA 34053)

(USN Exchange Officer, HS-817 Squadron, RAN Base NOWRA, Unit 11020, APO AP 96554)

LIST OF EFFECTIVE PAGES

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 298, CONSISTING OF THE FOLLOWING:

INTERIM CHANGE SUMMARY

The following Interim Changes have been cancelled or previously incorporated into this manual.

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
1 thru 30	Previously incorporated or cancelled.

The following Interim Changes have been incorporated into this Change/Revision.

INTERIM CHANGE NUMBER(S)	REMARKS/PURPOSE
31	Modifies training rules for simulated air combat maneuvering to eliminate mid-air collisions during training engagements.
32	Adds Aircrew Chemical, Biological, Radiological, or Nuclear Defense (CBRND) Training and Operating requirements.
33	Transitions management of NATOPS program from OPNAV (N789J) to COMNAVAIRFOR (N32) and COMNAVAIRSYSCOM (AIR-4.0P).

Interim Changes Outstanding — To be maintained by the custodian of this manual.

INTERIM CHANGE NUMBER	ORIGINATOR/DATE (or DATE/TIME GROUP)	PAGES AFFECTED	REMARKS/PURPOSE

RECORD OF CHANGES

Change No. and Date of Change	Date of Entry	Page Count Verified by (Signature)

NATOPS General Flight and Operating Instructions

CONTENTS

Page No.

Page No.

CHAPTER 3 — POLICY GUIDANCE

Page No.

CHAPTER 4 — FLIGHT AUTHORIZATION, PLANNING AND APPROVAL

Page No.

CHAPTER 5 — FLIGHT RULES

Page No.

CHAPTER 6 — AIR TRAFFIC CONTROL

Page No.

CHAPTER 7 — SAFETY

CHAPTER 8 — AEROMEDICAL AND SURVIVAL

Page No.

CHAPTER 9 — MISCELLANEOUS

Page No.

CHAPTER 10 — FLIGHT RECORDS, REPORTS AND FORMS

Page No.

CHAPTER 11 — GENERAL INSTRUCTIONS ON DUTY INVOLVING FLYING AND ANNUAL FLIGHT PERFORMANCE REQUIREMENTS

Page No.

CHAPTER 12 — CLASSIFICATION AND QUALIFICATION OF FLIGHT PERSONNEL

Page No.

CHAPTER 13 — INSTRUMENT REQUIREMENTS AND QUALIFICATIONS

Page No.

Page No.

APPENDIX C — SELECTED AVIATION INSTRUCTIONS

APPENDIX D — TOTAL MISSION REQUIREMENT CODES

Page No.

APPENDIX E — NAVAL AVIATION SURVIVAL TRAINING PROGRAM REQUIREMENTS

APPENDIX F — EXCEPTION, SPECIAL QUALIFICATION, SERVICE, LANDING AND APPROACHES CODE

APPENDIX G — TIME ZONE, SYSTEM STATUS, PASSENGER PRIORITY, AND OPPORTUNE CARGO CODES

APPENDIX H — WEAPONS PROFICIENCY CODES

Page No.

LIST OF ILLUSTRATIONS

Page No.

Page No.

CHAPTER 11 — GENERAL INSTRUCTIONS ON DUTY INVOLVING FLYING AND ANNUAL FLIGHT PERFORMANCE REQUIREMENTS

CHAPTER 13 — INSTRUMENT REQUIREMENTS AND QUALIFICATIONS

APPENDIX A — NATOPS FLIGHT PERSONNEL TRAINING AND QUALIFICATION JACKET

APPENDIX E — NAVAL AVIATION SURVIVAL TRAINING PROGRAM REQUIREMENTS

GLOSSARY

The explanation or definitions of terms and abbreviations commonly used in the aviation community can be found in FAR, Part 1, and DOD FLIP General Planning, Chapter 2; and Aeronautical Information Manual (AIM) Pilot/Controller Glossary. No effort to duplicate these terms is intended. Where terms are used in this instruction with a different connotation or where definitions are lacking in the above-mentioned publications, the explanations of such terms are included.

A

Actual Instrument Approach. When actual instrument conditions are encountered below 1,000 feet above the airport/flight deck elevation during an instrument approach.

Actual Instrument Conditions. Conditions external to the aircraft in flight that do not permit visual reference to the horizon.

Aerobatic Flight Maneuvers. An intentional maneuver involving an abrupt change in aircraft attitude, intentionally performed spins, or other maneuvers requiring pitch/dive angles greater than 45°, bank angles greater than 60°, or accelerations greater than 2gs. A break maneuver that conforms to the model NATOPS manual is not considered to be aerobatic flight.

Aeromedical Dual Designator. An aeronautically designated Medical Department officer (i.e., flight surgeon, aerospace physiologist, aerospace experimental psychologist, or aviation optometrist) with the Additional Qualification Designator (AQD) of either 6AC (Med Dept & NFO) or 6AE (Med Dept & Pilot).

Aeromedical Officer. An aeronautically designated Medical Department officer (i.e., flight surgeon, aerospace physiologist, aerospace experimental psychologist, or aerospace optometrist), or officer student in a course of instruction leading to such designation.

Aeronautically Designated Personnel. A collective term that applies to all Naval Aviators, Naval Flight Officers, Naval Aerial Observers (USMC), Naval Flight Surgeons, Naval Aerospace Physiologists, Naval Aerospace Experimental Psychologists, Aviation Operations Officers (AVOPS), Aviation Warfare Systems Operator (AW rating), personnel assigned by the Chief of Naval Personnel under a distribution Naval Enlisted Classification (NEC) of 82XX and 94XX, and USMC-enlisted crewmembers. Enlisted noncrewmembers are not considered aeronautically designated.

Aircraft Class. A broad classification as to the general mission purpose of an aircraft design (e.g., attack, fighter, helicopter, patrol, transport, vertical takeoff and landing and unmanned aerial vehicles).

Aircraft Commander Time. The individual flight time during which an individual, designated as a qualified aircraft commander in the aircraft model being flown, is serving as pilot in command. Aircraft commander time is a measure of command experience rather than of pilot experience.

Aircraft Model. The basic mission symbol and design number (i.e., P-3, S-3, F-14, and H-60).

Aircraft Series. The specific version of aircraft within the same model (e.g., AV-8B; H-46D or E; F/A-18D or E/F).

Aircraft Type. The broadest classification of aircraft as to physical characteristics (i.e., fixed-wing, rotary-wing or tilt-rotor).

Aircrew. A collective term that applies to all categories of personnel in a flight status either as crew or noncrewmember. Aircrew are military personnel on competent flight orders or civilian personnel whose duties require frequent and regular participation in aerial flights to perform inflight functions such as installation, maintenance, evaluation of airborne technical equipment (maintenance skins), communication specialists, photo specialists, etc.

B

Bolter. An attempted arrested landing on a carrier in which some portion of the aircraft, such as the landing gear or hook, touches the deck but the arresting gear is not engaged and the aircraft continues in flight.

C

Career Crewmember (also known as Career Enlisted Flyer). A member of the Navy enlisted aviation community rating (AD, AE, AM, AMH, AME, AMS, AO, AT, AV, AW, PR, IT (TACAMO only), or AZ (TAR only)) holding a 78XX, 82XX, or 94XX NEC; or is in a formal training pipeline leading to the award of those NECs, and is detailed by PERS-404E or NRPC-417. Career Enlisted Flyers are crewmembers who are primarily detailed throughout their career into flying billets. Career Enlisted Flyers receive either continuous or conditional Career Enlisted Flyer Incentive Pay (CEFIP) and not Hazardous Duty Incentive Pay (HDIP) for aerial flight.

Chemical, Biological Radiological, or Nuclear Defense (CBRND). Defensive measures taken against the effects of a chemical, biological, or a nuclear weapon attack.

Computer Aided NAVFLIRS Data Entry (CANDE). CANDE is a CNO/Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) — authorized automated program designed to provide support to squadron personnel for accurate completion of the NAVFLIRS form (OPNAV 3710/4). It allows squadron personnel to input preflight and postflight data into the program that will generate a data diskette for processing at the local data service facility (DSF) and hard-copy facsimiles for the master flight file and the maintenance analyst.

Civilian Non-DOD Government Employee. Individual could be with other Federal Government agency, state, county, or local government, etc., or an individual not with any government agency but whose activities benefit the general public at large. Firefighters and in-flight medical services are examples.

Combatant Commander. A commander of one of the unified or specified combatant commands established by the President.

Competent Authority. An official bearing the title of commanding officer or reporting senior higher in the chain of command.

Control (Radar)

a. Advisory. The tactical control of aircraft by a designated control unit in which the pilot receives directions and recommendations. Aircraft commanders are not relieved of responsibility for their own safety and navigation.

b. Close. The tactical control of aircraft by a designated control unit, whereby the pilot receives orders affecting aircraft movements. The pilot will not deviate from controller instructions unless given permission or unless unusual circumstances require immediate action for the safety of the flight. In either case, the pilot will inform the controller of the action taken. This type of control requires two-way radio communication and radar contact. The controller is responsible for the safe separation of the aircraft, and the pilot must be informed whenever the aircraft is not held on the radarscope for periods in excess of 1 minute or five sweeps of the radar and, as a result, is being dead reckoned. The ultimate safety of the aircraft is the responsibility of the pilot.

c. Positive. The tactical control of aircraft by a designated control unit, whereby the pilot receives orders affecting aircraft movements that transfer responsibility for the safe navigation of the aircraft to the unit issuing such orders. The ultimate safety of the aircraft is the responsibility of the pilot.

Controlling Custodian. The command exercising administrative control of assignment, employment, and logistic support of aircraft. Controlling custodians are identified in OPNAVINST 5442.2.

Conversion Mode. Flight operations with the nacelles set between 74° and 5° are considered to be in CONV mode. (Constant nacelle settings between 5° and 1° are not selectable by the pilot.)

Crew Resource Management (CRM). The use of specifically defined behavioral skills as an integral part of every flight to improve mission effectiveness by minimizing crew preventable errors, maximizing crew coordination, and optimizing risk management.

Cross-Country Flight. A flight that either does not remain in the local flying area or remains in the local flying area and terminates at a facility other than an active military facility.

D

Designations. A designation is a one-time occurrence and remains in effect until removed for cause. Commanders shall issue a designation letter to the individual upon the occasion of his/her original designation with appropriate copies for inclusion in his/her NATOPS qualification jacket.

DIFCREW. Duty for enlisted personnel in a flying status involving operational or training flights.

DIFDEN. Duty in a flying status for an officer not involving flying.

DIFOPS. Duty in a flying status for an officer involving operational or training flights.

DIFTEM (USN). Duty in a temporary flying status performing special mission duties as a noncrew member. Enlisted personnel are so ordered in accordance with BUPERINST 1326.4 (series).

Direct Station-to-Station Communications. A means of passing flight progress information between airfields. Communications should be established by one of the following methods:

a. Voice landline

b. Aeronautical Information System (AIS).

E

Enlisted Crewmember (USMC). Enlisted personnel on competent orders to perform duty involving frequent and regular participation in aerial flight as a crewmember.

Enlisted Noncrewmember on Flight Orders (USMC). Enlisted personnel on competent orders to perform duty involving frequent and regular participation in aerial flight who are not performing duties related to the actual operation of the aircraft or associated equipment in the aircraft (i.e., maintenance personnel who perform inflight functions such as installation or troubleshooting of airborne technical equipment (maintenance skins) and VIP support, photo specialists, etc.).

F

Flight

a. For operational purposes, a flight is one or more aircraft proceeding on a common mission.

b. For recording and reporting purposes, a flight begins when the aircraft first moves forward on its takeoff run or takes off vertically from rest at any point of support and ends after airborne flight when the aircraft is on the surface and either:

(1) The engines are stopped or the aircraft has been on the surface for 5 minutes, whichever comes first

(2) A change is made in the pilot in command.

c. For helicopters, a flight begins when the aircraft lifts from a rest point or commences ground taxi and ends after airborne flight when the rotors are disengaged or the aircraft has been stationary for 5 minutes with rotors engaged.

Note

Flight time on repetitive evolutions such as field carrier landing practice (FCLP), passenger/cargo stops, and carrier qualifications shall be logged from the time the aircraft takes off until the aircraft has been on

the surface for 5 minutes after each evolution flown (i.e., three sorties of 55 minutes actual air time interspersed with two 20-minute ground periods for refueling or passenger/cargo transfer will be logged as 3.0 hours of flight time).

Flight Clearance. A flight clearance provides temporary flight operating limits for an aviation system operating in a nonstandard configuration or to a nonstandard envelope, pending issuance of the technical directive or change to the NATOPS, NATIP, or tactical manuals. A flight clearance is a temporary airworthiness approval from COMNAVAIRSYSCOM.

Flight Crew. Personnel whose presence is required on board a manned aircraft or at a control station for UAVs to perform crew functions in support of the assigned mission (e.g., pilot, copilot, navigator, flight engineer, internal pilot, crew chief, air observer, special crew, trainee, etc.).

Flight Support Personnel. Personnel immediately involved in the maintenance, fueling, towing/moving, start-up, taxi, or launch and recovery of aircraft including, but not limited to, taxi directors, catapult and arresting gear crew, final checkers, landing signal enlisted (LSEs), aircraft maintenance personnel and aircraft move crews and directors.

Flight Time. The elapsed time computed in accordance with the definition of flight. Flight time is logged in hours and tenths of hours and is creditable to the aircraft, personnel aboard, and equipment.

Formation Flight. A flight of more than one aircraft operating by prior arrangement as a single aircraft with regard to altitude, navigation, and position reporting, and where separation between aircraft within the flight rests with the pilots in that flight.

H

Hazard. A condition with the potential to cause personal injury or death, property damage, or mission degradation.

I

Individual Flight Time. The total pilot time and special crew time creditable to an individual.

Instructor. A naval aviator, naval flight officer, or naval aircrewman designated in writing by competent authority as a flight instructor, NATOPS evaluator, or NATOPS instructor in the aircraft model being flown.

Instructor Time. Individual flight time during which an instructor is required to instruct or evaluate other aeronautically designated personnel or students undergoing a formal flight syllabus.

Instrument Meteorological Conditions. Meteorological conditions expressed in terms of visibility, distance from clouds, and ceiling less than the minimums specified for visual meteorological conditions. IMC conditions exist anytime a visible horizon is not distinguishable.

Instrument Time. The portion of pilot time in either day or night under actual or simulated instrument conditions.

a. Actual instrument time will be logged by both pilots in a dual/multipiloted aircraft during flight in actual instrument conditions.

b. Simulated instrument time shall be logged only by the pilot actually manipulating the controls.

Note

NFOs and student NFOs may report actual instrument time if they fly in an aircraft in which they can monitor the pilot instruments and recommend information to the pilot during actual instrument conditions.

J

Joint Service Battlestaff Personnel Embarked on Naval Aircraft. Personnel of all services serving as Battlestaff crewmembers on board Navy E-6 aircraft conducting airborne strategic communications.

L

Landing. A return to the surface; landings include touch and go (providing the landing gear touches the surface), bolter, forced, or crash.

Note

Terms of control terminology such as immediately, possible, and practicable refer to the degree of urgency intended in the message:

a. Land immediately — Self-explanatory.

b. Land as soon as possible — Land at the first site at which a safe landing can be made.

c. Land as soon as practicable — Extended flight is not recommended. The landing site and duration of flight is at the discretion of the pilot in command.

Local Flight. A flight that remains within the local flying area and terminates at either the same facility or another military facility with which the originating station has direct station-to-station communications.

Local Flying Area. That area in the vicinity of an air installation in which locally-based aircraft can operate during an average/typical sorties flight time. The local flying area shall not exceed 350 miles from an air installation and be designated as such in the Air Operations Manual by the Commanding Officer. In so far as practicable, local flying areas shall be bounded by prominent terrain features and/or air navigation aid radials/distances.

M

Mile. All distances referred to in this instruction are nautical miles unless otherwise specified.

Mission Commander Time. Flight time during which an individual, designated as a qualified mission commander in the aircraft model being flown, is serving as the mission commander. Mission commander time is a measure of command experience rather than flight experience.

Multipiloted Aircraft. Any aircraft having two sets of flight controls and instruments and operated by two pilots, both of who meet the requirements of the NATOPS manual for that model aircraft.

N

Naval Aircraft. For the purposes of this instruction, those aircraft accepted into the naval aircraft inventory reporting system, pre-accepted aircraft, and public use aircraft operated exclusively by or for the Navy.

Naval Aircrewman. A designation for enlisted personnel who have met the requirements for qualification and have been so certified in accordance with paragraph 12.9 of this instruction.

Naval Aviation Shore Facility. A facility at which an active airfield exists and is either owned, operated, or controlled by the Navy or Marine Corps.

Night Time. The portion of pilot time during darkness (i.e., between the official time of sunset and sunrise (on the surface below the aircraft in flight), regardless of whether visual or instrument conditions exist).

O

Officer in Tactical Command. The senior officer present eligible to assume command, or the officer to whom he has delegated tactical command.

Official Business. The necessity to contact personnel, units, or organizations for the purpose of conducting transactions in the service of and in the interest of the United States Government. This definition does not authorize the use of official business only airfields, their services, or other items attendant to itinerant operations when making en route stops while proceeding to an airfield at which official business is to be conducted. Official business only restrictions do not preclude the use of the facility as an alternate during instrument flight rule (IFR) conditions.

Operational Flying. (See paragraph 11.2 for definition and application.)

Operational Necessity. A mission associated with war or peacetime operations in which the consequences of an action justify accepting the risk of loss of aircraft and crew.

Operational Risk Management. The process of dealing with the risk associated with military operations, which include risk assessment, risk decision making and implementation of effective risk controls.

Orientation Flight. A continuous-flight in DOD aircraft performed within the local flying area and terminating at the point of origin intended to further the understanding of particular programs concerning the roles and missions of the Department of Defense.

P

Passenger. An individual who is not part of the aircrew traveling in an aircraft designed or normally configured for passenger (nonaircrew) carrying capability on a point-to-point flight.

Pathfinder. An aircraft whose primary mission is to assist tactical aircraft with communication or navigation of flights over regions where normal tactical aircraft navigation/ communication equipment is unusable.

Pilot in Command. The pilot assigned responsibility for safe and orderly conduct of the flight.

Pilot Time. The flight time credited to a designated aviator, student naval aviator, student/designated naval flight surgeon, student/designated aerospace physiologist, or student/designated aerospace experimental psychologist assigned to duty involving flying. Pilot time includes all time credited as first pilot and copilot. Pilot time is intended to be a record of active participation in the control of an aircraft. Pilot time will be credited to the individual actually earning it regardless of rank, billet, age, or level of experience.

a. First Pilot Time. The portion of pilot time during which an individual is positioned with access to the flight controls and is exercising principal active control of the aircraft.

b. Copilot Time. The portion of pilot time while assisting the pilot exercising principal active control of a multipiloted aircraft during which the copilot is positioned with access to and is immediately ready to operate the flight controls; or, in those aircraft with only one set of flight controls, that portion of flight time while instructing the pilot who is exercising principal active control when the designated instructor is positioned so that pilot and aircraft instruments can be observed. Aeronautically designated personnel may log CPT while performing copilot duties as required by the aircraft mission.

Pilot Under Instruction. A designated aviator under instruction.

Pre-accepted Aircraft. Those aircraft under development or in production for the Navy which have not yet been accepted into the naval aircraft inventory via DD 250.

Project Specialist. A non-aeronautically designated individual embarked in a government aircraft not equipped with ejection seats for the purpose of operating aircraft systems, operating specially designed equipment, or observing aircraft or crew performance when required in connection with assigned duties or contractual responsibilities which will require flight on a regular basis for mission accomplishment which extend beyond a 90- day flying period. Project specialists are not responsible for normal aircrew duties.

Public Use Aircraft. For the purposes of this instruction, civil aircraft operated exclusively by or for the government under contract for greater than 90 days.

Q

Qualified in Model. A designation that indicates the minimum requirements for qualification in a specific crew position, as set forth in the appropriate NATOPS manual, have been attained. Such designations are a one-time occurrence (per unit/command tour) and remain in effect until removed for cause. Annual NATOPS evaluations should not be confused with or combined with these designations. If specific aircraft model NATOPS guidance is lacking, an individual shall be considered qualified in model for specific crew position when so designated by the reporting custodian.

R

Reporting Custodian. An organizational unit of the lowest echelon of command accepting responsibility (involving accountability to CNO) for aircraft as designated either by CNO or by the controlling custodian of the aircraft.

Risk. An expression of possible loss in terms of severity and probability.

Risk Assessment. The process of detecting hazards and assessing associated risks.

S

Selected Passengers. A non-aeronautically designated individual embarked in a government aircraft equipped with ejection seats. Selected passengers are not responsible for normal aircrew duties and shall have flying requirements which require flight on a regular basis for mission accomplishment which extend beyond a 90-day flying period. This category is not appropriate for those completing orientation flights or for midshipmen.

Simulated Instrument Approach. An instrument approach flown under simulated instrument conditions.

Simulated Instrument Conditions. Conditions external to the aircraft in flight are visual meteorological conditions (VMC), but pilot vision is limited primarily to the interior of the aircraft.

Single-Piloted Aircraft. Any aircraft that has only one set of flight controls or a tandum cockpit, or any aircraft that has two sets of flight controls and instruments and is being operated by only one pilot who meets the requirements of the NATOPS manual for that model aircraft.

Special Crew Time. The portion of flight time accrued while not acting as first pilot or copilot, but otherwise serving as a member of the authorized crew complement of an aircraft or as a student in flight training.

Special Operations Personnel. Personnel that are required to conduct special operations such as high-altitude parachuting from military aircraft (SEALS, ANGLICO, RECON, physiology safety observers, etc.).

Stereo Route. Routinely used route of flight established by users and ARTCC identified by a coded name. These routes simplify flight plan handling and communications.

Student Naval Aviator (Student Pilot). An individual undergoing training who is not designated as a naval aviator.

T

Tilt-rotor. Aircraft type capable of rotor-borne and wing-borne flight (e.g., MV-22).

Trip. A consecutive series of flights by the same aircraft with the same general purpose of flight (with regard to the aircraft only), pilot in command, and transaction code (i.e., ship operations or shore operations) from point of original departure to destination.

U

Unmanned Aerial Vehicle. A remotely piloted aircraft designed for purposes other than as a target (e.g., reconnaissance, surveillance, gunfire support, etc.). UAVs are flown by referencing instruments or visually.

V

Very Important Persons. VIPs are defined as flag officers, DOD officials equal to or senior to flag officers, high-profile public figures, elected members of Congress, etc.

Visual Meteorological Conditions. Meteorological conditions expressed in terms of visibility, cloud distance, and ceiling that are equal to or better than specified minimums. Basic weather conditions prescribed for flight under visual flight rules (VFR). (Refer to Chapter 5.)

VOD. For the purposes of this instruction, all helicopter and tilt-rotor aircraft that have the capability to deliver passengers or cargo.

LIST OF ABBREVIATIONS/ACRONYMS

A

ABI. Aviation billet indicator.

ACFT CMDR. Aircraft commander.

ACIP. Aviation career incentive pay.

ACM. Air combat maneuvers.

ACP. Allied communication publication.

ACT. Aircraft commander time.

ADIZ. Air defense identification zone.

ADMAT. Administrative material inspection.

AEW. Airborne early warning.

AFCS. Automatic flight control system.

A/G. Miscellaneous ship.

AI. Air intelligence; Air intercept.

AGL. Above ground level.

AIA. Aircraft inspection and acceptance.

AIM. Aeronautical Information Manual.

AIS. Aeronautical Information System.

ALS. Approach lighting system.

ALSS. Aviation life support system.

ALTRV. Altitude reservation.

AMCM. Airborne mine countermeasures.

AMDD. Aeromedical Dual Designator.

AME. Aviation medical examiner.

AMO. Aviation medical officer.

AMSO. Aeromedical Safety Officer.

AOA. Angle of attack.

AOR. Area of responsibility.

AP. Area planning.

ARCP. Air refueling control point(s).

ARTCC. Air route traffic control center.

ASAC. Antisubmarine air controller.

ASED. Aviation service entry date.

ASEP. Aircrew survivability enhancement program.

ASI. Aviation status indicator.

ASTC. Aviation Survival Training Center.

ASW. Antisubmarine warfare.

ATC. Air traffic control.

ATCAA. Air traffic control assigned airspace.

ATCF. Air Traffic Control Facility.

ATP. Allied tactical publication.

AVOPS. Aviation Operations Officer.

B

BRAC. Base realignment and closure.

BUMED. Bureau of Medicine and Surgery.

BuNo. Bureau number.

BVA. Best visual acuity.

C

CAD. Collective address designator.

CANDE. Computer-aided NAVFLIRS data entry.

CAP. Combat air patrol.

CASREP. Casualty report.

CBR. Chemical, biological, and radiological.

CBRND. Chemical, biological, radiological, or nuclear defense.

CCA. Carrier-controlled approach.

CDC. Combat Direction Center.

CG FOURTH MAW. Commanding General, 4th Marine Air Wing.

CEFIP. Career Enlisted Flyer Incentive Pay.

COMUSNAVEUR. Commander, U.S. Naval Forces Europe.

COMUSNAVCENT. Commander, U.S. Naval Forces Central.

COMUSNAVSO. Commander, U.S. Naval Forces South.

CMC. Commandant of the Marine Corps.

CNATRA. Chief of Naval Air Training.

CNI. Communication, navigation, identification.

CNO. Chief of Naval Operations.

CO. Commanding Officer.

COD. Carrier on-board delivery.

COMCABEAST. Commander, Marine Corps Air Bases, Eastern Area.

COMCABWEST. Commander, Marine Corps Air Bases, Western Area.

COMFAIR. Commander, Fleet Air.

COMMARFORs. Commading Generals, Fleet Marine Force.

COMMARFORLANT. Commander, U.S. Marine Forces, Atlantic.

COMMARFORPAC. Commander, U.S. Marine Forces, Pacific.

COMNAVAIRES. Commander, Naval Air Force Reserve.

COMNAVAIRFOR. Commander, Naval Air Forces.

COMNAVAIRLANT. Commander, Naval Air Force, U.S. Atlantic Fleet.

COMNAVAIRPAC. Commander, Naval Air Force, U.S. Pacific Fleet.

COMNAVAIRSYSCOM. Commander, Naval Air Systems Command.

COMNAVAIRWARCENACDIV. Commander, Naval Air Warfare Center, Aircraft Division.

COMNAVEDTRACOM. Commander, Naval Education and Training Command.

COMNAVRESFOR. Commander, Naval Reserve Force.

COMNAVSAFECEN. Commander, Naval Safety Center.

COMSEVENFLT. Commander Seventh Fleet.

COMSIXTHFLT. Commander Sixth Fleet.

CONUS. Continental United States.

CORTRAMID. Coordinated training of midshipmen.

CPT. Copilot time.

CRM. Crew Resource Management.

CTF. Commander Task Force.

CVW. Carrier air wing.

D

DCF. Document control form.

DCMC. Defense Contract Management Command.

DEWIZ. Defense early warning identification zone.

DH. Decision height.

DIFCREW. Duty involving flying, crewman.

DIFDEN. Duty in a flying status not involving flying.

DIFOPS. Duty in a flying status involving operational or training flights.

DIFTECH. Duty involved flying as a technical observer.

DIFTEM. Personnel under training to become crewmembers.

DM. Defensive Maneuvering.

DME. Distances measuring equipment.

DNEC. Distributive naval enlisted classification.

DOD. Department of Defense.

DP. Departure procedure.

DPRO. Digital projection readout.

DSF. Data service facility.

DSN. Defense switched network.

DUAT. Direct user access terminal.

E

ECM. Electronic countermeasures.

ER. External pilot (UAV).

ETA. Estimated time of arrival.

ETD. Estimated time of departure.

ETE. Estimated time en route.

F

F/W. Fixed wing.

FAA. Federal Aviation Administration.

FACSFAC. Fleet area control and surveillance facility.

FAILSAFE. Fleet air introduction/liaison of survival aircrew flight equipment.

FAR. Federal Aviation Regulation.

FCF. Functional checkflight.

FCLP. Field carrier landing practice.

FDLP. Field deck landing practice.

FFPB. Field Flight Performance Board.

FL. Flight level.

FLIP. Flight information publication.

FLIR. Forward looking infrared.

FLP. Field landing pattern.

FMF. Fleet Marine Force.

FMS. Foreign military sales.

FNAEB. Field Naval Aviator Evaluation Board.

FOD. Foreign object damage.

FPC. Flight purpose code.

FPT. First pilot time.

FRS. Fleet Replacement squadron.

FS. Flight surgeon.

FSS. Flight service station.

FSSB. Flight Status Selection Board.

FXP. Fleet exercise publication.

FYTD. Fiscal year to date.

G

GCI. Ground-controlled intercept.

GLOC. G-loss of consciousness.

GPC. General purpose code.

GPS. Global positioning system.

GSA. General Services Administration.

H

HAP. High-altitude parachute.

HAT. Height above touchdown.

HDIP. Hazardous duty incentive pay.

HEED. Helicopter emergency egress device.

HF. High frequency.

HOI. Handbook of overhaul instructions.

HWD. Horizontal weather depiction.

I

ICAO. International Civil Aviation Organization.

ICS. Intercommunication system.

IFARS. Individual flight activity reporting system.

IFF. Identification friend or foe.

IFR. Instrument flight rules.

ILS. Instrument landing system.

IMC. Instrument meteorological conditions.

IMR. Individual master roster.

IR. Internal pilot (UJAV).

IR. Infrared; IFR Military Training Route.

IRS. Intelligence report; Independent research.

IT. Instructor time.

J

JAGMAN. Manual for Judge Advocate General.

JANAP. Joint Army, Navy, Air Force publication.

JQR. Job qualification requirements.

K

KIAS. Knots indicated airspeed.

L

LANT/PAC/MED/TRAMID. Atlantic/Pacific/ Mediterranean/Naval reserve officers training corps midshipmen.

LEO. Law enforcement official.

LEP. Laser eye protection.

LIMDU. Limited duty.

LOA. Letter of agreement.

LOG. Log video.

LOS. Line of sight; Launch on search.

LPC. Low pressure chamber.

LPU. Life preserver unit.

LSO. Landing signal officer.

M

MAG. Marine aircraft group.

MAP. Military assistance program.

MARSA. Military assumes responsibility for separation of aircraft.

MAW. Marine Air Wing.

MCAS. Marine Corps Air Station.

MCO. Marine Corps Order.

MCT. Mission commander time.

MDA. Minimum descent altitude.

MDS. Maintenance data system.

MEDEVAC. Medical emergency evacuation.

METS. Modular Egress Training System.

MIFAR. Monthly individual flight activity report.

MIM. Maintenance instruction manual.

MITO. Minimum interval takeoff.

MMU. Model Manager Unit.

MOA. Military operating areas.

MOP. Month(s) operations flying.

MOS. Military occupational specialty.

MRU. Military radar unit.

MSL. Mean sea level.

MSN. Mission.

MSN CDR. Mission Commander.

MTR. Military training route.

MWA. Military weather advisory.

N

NAC. Naval aircrewnman.

NALCOMIS. Naval Aviation Logistics Command Management Information Systems.

NALIS. Navy logistics information system.

NAMT. Naval air maintenance trainer.

NAS. Naval air station.

NASA. National Aeronautics and Space Administration.

NASTP. Naval Aviation Survival Training Program.

NATEC. Naval Air Technical Data and Engineering Service Command.

NATIP. Naval Aviation Technical Information Product.

NATO. North Atlantic Treaty Organization.

NATOPS. Naval air training and operating procedures standardization.

NAVAID. Navigation aid.

NAVAVNDEPOTs. Naval air depots.

NAVAVSCOLSCOM. Naval Aviation Schools Command.

NAVFIG. Naval Flight Information Group.

NAVMETOCCOM. Naval Meteorology and Oceanography Command.

NAVOPMEDINST. Naval Operational Medicine Institute.

NAVPERSCOM. Navy Personnel Command.

NAVREP. Navy representative.

NCOIC. Noncommissioned officer in charge.

NCR. No carbon required.

NEC. Naval enlisted classification.

NFM. NATOPS flight manual.

NFO. Naval flight officer.

NIMA. National Imagery and Mapping Agency.

NITE. Night imaging and threat evaluation.

NJROTC. Naval Reserve Junior Officer Training Corps.

nm. Nautical mile.

NMCS. Not mission capable-supply.

NMCM. Not mission capable-maintenance.

NOE. Nap of the Earth.

NOS. National Oceanographic Service.

NOTAM(s). Notice(s) to airmen.

NPQ. Not physically qualified.

NROTC. Naval reserve officer training corps.

NSTI. Naval Survival Training Institute.

NTTP. Naval Tactics, Techniques, and Procedures publication.

NVD. Night vision device.

NWP. Naval warfare publication.

O

OAT. Outside air temperature.

ODCR. Officer data control report.

OFT. Operational flight trainer.

OIC. Officer in charge.

OMA. Operational Maintenance Activity.

OMB. Office of Management and Budget.

OOCF. Out-of-control flight.

OPAREA. Operating area.

ORE. Operational readiness evaluation.

ORG. Originator.

ORI. Operational readiness inspection.

ORM. Operational risk management.

OT&E. Operational test and evaluation.

P

PALS. Precision approach and landing system.

PAR. Precision Approach Radar.

PCS. Permanent change of station.

PEP. Personnel exchange program.

PHIBRON. Amphibious Squadron.

PIC. Pilot in command.

PO. Payload operator (UAV).

POC. Point of contact.

PQM. Pilot qualified in model.

PQS. Personnel qualification standard.

PR. Parachute rigger.

PROTRAMID. Professional training of midshipmen.

Q

QAC. Quick attachable chest.

R

RAC. Replacement aircrew.

RDD. Required delivery date.

RDO. Runway Duty Officer.

RDT&E. Research, development, test, and evaluation.

ROTC. Reserve Officer Training Corps.

RSSMM. Rescue swimmer school model manager.

RSSTP. Rescue swimmer school training program.

RTO. Range training officer.

RUC. Reporting unit code.

RVR. Runway visual range.

S

SAD. Senior air director.

SAR. Search and rescue.

SARMM. Search and rescue model manager.

SCATANA. Security control of air traffic and air navigation aids.

SCT. Special crew time.

SELRES/SMCR. Selected reserve.

SERE. Survival, evasion, resistance to interrogation and escape.

SFA. Single frequency approach.

SIF. Selective identification feature.

SOP. Standard operating procedure.

SPC. Specific purpose code.

STANAG. Standardization agreement.

STOL. Short takeoff and landing.

SUA. Special use airspace.

T

T&R. Training and readiness.

TACTS. Tactical aircrew combat training system.

TAD. Temporary additional duty.

TAR/FTS. Tactical air request.

TBA. To be assigned.

TCAS. Traffic Alert and Collision Avoidance System.

TDIP. Technical data indoctrination package.

TERPS. Terminal instrument procedures.

TMR. Total mission requirements.

T/M/S. Type/model/series.

TO. Table of organization.

TRAMID. Training for U.S. Naval Academy/Naval reserve officers training corps midshipmen.

TR. Training rules.

TYCOM. Type Commander.

U

UAV. Unmanned aerial vehicle.

UCR. Urgent change recommendation.

UHF. Ultrahigh frequency.

UIC. Unit identification code.

UT. Underway trial.

UTC. Coordinated Universal Time.

V

VFR. Visual flight rules.

VHF. Very high frequency.

VIP. Very important person.

VMC. Visual meteorological conditions.

VOD. Vertical on-board delivery.

VOR. VHF Omni-Directional Range.

VR. VFR Military Training Route.

V/STOL. Vertical/short takeoff and landing.

VTOL. Vertical takeoff and landing.

W

WST. Weapon system trainer.

WW. Weather watch.

CHAPTER 1

Introduction

1.1 GENERAL

The Naval Air Training and Operating Procedures Standardization (NATOPS) program is a positive approach towards improving combat readiness and achieving a substantial reduction in aircraft mishaps. This instruction issues policy and procedural guidance of the Chief of Naval Operations (CNO) that is applicable to all NATOPS users.

Use of ORM in the planning and execution of all military training is mandated by DODINST 6055.1. OPNAVINST 3500.39 further directs all Navy and Marine Corps Activities to apply ORM in planning operations and training to optimize operational capabilities and readiness.

1.1.1 Purpose and Scope

a. This instruction prescribes general flight and operating instructions and procedures applicable to the operation of all naval aircraft and related activities. This instruction is not intended to cover every contingency that may arise nor every rule of safety and good practice. To achieve maximum value, the contents of all directives cited must be studied and understood. Routine interpretation and procedural questions should be referred to type wing/type command NATOPS offices for resolution prior to referral to COMNAVAIRFOR. Where the need arises, special instructions or waivers will be issued by COMNAVAIRFOR.

b. In the tactical environment, military exigency may require on-site deviations from instructions/procedures contained here. The existing risk of deviation must continually be weighed against the benefit of deviating from this instruction. Deviation from specified flight and operating instructions is authorized in emergency situations when, in the judgment of the pilot in command, safety justifies such a deviation.

c. It is often not feasible to completely specify all situations or circumstances under which provisions of this instruction shall apply; therefore, wording such as “normally,” “etc.,” “usually,” and “such as” is employed. Words or clauses of that type shall not be used as loopholes nor shall they be expanded to include a maneuver, situation, or circumstance that should not be performed or encountered by the aircraft in question.

d. To increase combat readiness and improve flight safety, the scope and operation of the NATOPS program, conduct of NATOPS evaluations, urgent and routine change procedures to NATOPS publications, and NATOPS review conference procedures are discussed in Chapter 2.

1.1.2 Change Procedures. Recommended changes to this and other NATOPS publications may be submitted by anyone in accordance with Chapter 2 of this instruction. Submit recommended changes to this instruction to Commander Naval Air Forces (N32), NAS North Island, P.O. Box 357051, San Diego, CA 92135-7051.

1.1.3 Change Symbols. Revised text is indicated by a black vertical line in either margin of the page, adjacent to the affected text, like the one printed next to this paragraph. The change symbol identifies the addition of new information, a changed procedure, the correction of an error, or a rephrasing of the previous material.

1.1.4 Waiver Requests. Figure 1-1 delineates responsibility for areas within this instruction. Waiver requests should be sent to the applicable command and code.

1.1.5 How To Obtain Copies

a. Automatic distribution of this directive is by electronic means only. Electronic copies of the revisions, changes and interim changes to this manual can be found in the following locations:

(1) www.natec.navy.mil NATEC website.

ORGANIZATION	CHAPTER
COMNAVAIRFOR (N32)	1, 3, 8, 11, 12, 13, Appendix A, C, and E
COMNAVAIRSYSCOM (AIR-4.0P)	2
CNO (N785F)	4, 5, 6, and 9
CNO (N781)	7 and Appendix B, D, F, G, H, I, J, and K
CNO (N78)	10

Figure 1-1. OPNAVINST 3710.7 Areas of Responsibility

(2) https://natops.navair.navy.mil NATOPS website.

(3) Unclassified SECNAV and OPNAV directives are at Navy Electronic Directives System (NEDS) website http://neds.nebt.daps.mil.

b. **NATOPS Publications**

(1) Automatic Distribution. Automatic distribution of individual NATOPS publications are as requested by the individual units in their ADRL accounts. Units flying the aircraft will receive paper copies based on requirements determined by the NATOPS Model Manager. Other units will receive CD-ROM distribution, whenever available, as determined from the unit's ADRL request.

(2) Additional Copies. Those who require paper copies can obtain them from the NATOPS Model Manager unit, whose address is published in the Preface of each NATOPS publication. The name, rank, telephone number, and e-mail address of the NATOPS Program Manager for each publication is contained in the NATOPS Status Report which is a product posted on the NATOPS website, natops.navair.navy.mil. Electronic copies of most NATOPS publications are posted in PDF-format on the NATOPS Search page of the NATEC website, http://www.natec.navy.mil. Active interim change messages are normally posted on the site within 7 days of their release.

1.2 OTHER GOVERNING SOURCES OF INFORMATION

Instructions and procedures contained here are not intended to replace or duplicate the following governing sources.

1.2.1 NATOPS Manuals. Those manuals that are issued for specific aircraft or aviation-related activities for CNO by COMNAVAIRSYSCOM. They contain standard flight doctrine and the optimum operating procedures for the aircraft model or aviation activity concerned. Where a NATOPS manual is not issued for a particular model aircraft, appropriate commands shall issue doctrine and procedures locally. Where a specific NATOPS manual indicates a deviation from this instruction, the specific NATOPS manual constitutes CNO authority to deviate from this instruction. Individual aircraft NATOPS requirements should be at least as stringent as those set forth here. If as a result of a NATOPS conference, it is desired to establish a less stringent requirement, prior approval shall be obtained from COMNAVAIRFOR. Such approval may be requested by submitting a copy of the copy of the conference report to COMNAVAIRFOR(N32) and COMNAVAIRSYSCOM (AIR-4.0) with the item listed as a change requiring further approval in accordance with Chapter 2. When more stringent requirements are issued in this instruction, this instruction shall govern until specific authority to deviate has been granted by COMNAVAIRFOR.

1.2.2 Local Flying Rules and Instructions. Local flying rules and instructions will be found in regulations issued by the various fleets, forces, naval air stations, and other activities where naval aircraft are based or operated. Navy and Marine Corps Air Stations and other naval aviation shore facilities that routinely conduct flight operations shall supplement this instruction with air operations manuals. Guidelines for the preparation of air operations manuals are contained in NAVAIR 00-80T-114 (ATC NATOPS manual).

1.2.3 Federal Aviation Regulations (FAR). Naval aircraft shall be operated in accordance with applicable provisions of FAR, Part 91, except:

a. Where this instruction prescribes more stringent requirements.

b. Where exemptions or authorizations issued to the Department of the Navy/DOD permit deviation from FAR.

1.2.3.1 FAR Exemptions. Users shall determine the expiration date, full scope and restrictions of an exemption prior to exercising it. Exemptions to FARs applicable to DOD aircraft may be viewed on the FAA Automated Exemption System (AES) website, http://aes.faa.gov, using petitioner as "Department of Defense" or "Department of the Navy" for USN and USMC exemptions and consulting the AES User Manual as needed. Some exemptions/authorizations which are currently on file that allow deviation from FAR Part 91 include:

a. Section 91.117 (Aircraft Speed). Operation of naval aircraft at speeds in excess of limits imposed by section 91.117 shall be governed by paragraph 5.1.4 of this instruction.

b. Section 91.121 (Altimeter Settings). Allows the use of the local altimeter setting when conducting high-speed tactical maneuvers that include rapid transits of Flight Level 180. (Exemption 2861A, non-expiring)

c. Section 91.135 (Operations in Class A Airspace). Authorizes USN undergraduate student aviators to conduct solo flight in Class A airspace without an instrument rating.

d. Section 91.159 (a) (VFR Cruising Altitude or Flight Level). Allows operations at altitudes other than those prescribed by section 91.159 (a) while engaged in drug interdiction operations, only to the extent necessary to obtain positive identification of a suspect aircraft and maintain visual contact with that aircraft, provided the aircraft has a dedicated on-board observer (other than the pilot) to watch for other air traffic, and the aircraft has an operating transponder with Mode C. (Exemption 5100F, expires 9/30/2004.)

e. Section 91.169 (b) and (c) (Alternate Airport Requirements). Alternate airport requirements and alternate airport weather criteria for clearance of flights to be conducted under IFR shall be specified in paragraph 4.6.4 of this instruction. (Exemption 30B, non-expiring)

f. Section 91.179 (b) (1) (IFR Cruising Altitude or Flight Level). Exemption from the altitudes to be maintained in uncontrolled airspace has been granted to the extent necessary to conduct military training route (MTR) training. Policies and procedures for the conduct of MTRs is contained in OPNAVINST 3722.33 (FAA Order 7610.4, Special Military Operations) and FLIP Area Planning AP/1B. (Exemption 2396, non-expiring)

g. Section 91.209 (a) (Aircraft Lights). An exemption has been granted to DOD aircraft engaged in drug interdiction flights provided the aircraft has a dedicated on-board observer plus an additional resource capable of detecting all aircraft operating in the vicinity of the DOD aircraft. (Exemption 5100F, expires 9/30/2004.)

h. Sections 91-209(a) and (b) (Aircraft Lights). An exemption for USMC aircraft from 91.209(a) and (b) for flight without lighted aircraft position lights in order to conduct night vision device flight training in USMC helicopters. (Exemption 8028, expires 04/30/2005.)

1.2.4 DOD Flight Information Publications (FLIPs) (NOTAL) and Notices to Airmen (NOTAMs) (NOTAL). The procedures, special notices, and instructions contained in the FLIPs and NOTAMs are mandatory for all pilots flying naval aircraft.

1.2.5 FAA Order 7110.65 (Air Traffic Control) (NOTAL). The FAA order is applicable to air traffic control by Department of Defense (DOD) activities unless individual military service exceptions are noted therein. The applicable procedures shall be used by naval aviation shore facilities when performing air traffic control (ATC) functions. Waivers for deviations from the procedures set forth in FAA order 7110.65 may be granted by CNO (N785F). Authority for reduced runway separation for arriving and departing aircraft using the same runway is outlined in paragraph 6.3.1.

1.2.6 NATOPS Air Traffic Control Manual (NAVAIR 00-80T-114). This manual is applicable to the operation of Navy and Marine Corps air traffic control facilities. Applicable procedures shall be used by shore facilities when performing ATC functions.

1.2.7 Other Instructions. Special instructions are listed in Appendix C.

1.3 EXPLANATION OF TERMS

The explanation or definitions of terms and abbreviations commonly used in the aviation community can be found in FAR, Part I, and DOD FLIP General Planning, Chapter 2; and Aeronautical Information Manual (AIM) Pilot/Controller Glossary. No effort to duplicate these terms is intended. Where terms are used in this instruction with a different connotation or where definitions are lacking in the above-mentioned publications, the explanations of such terms are included in the Glossary.

1.4 WARNINGS, CAUTIONS, AND NOTES

The following definitions apply to WARNINGs, CAUTIONs, and Notes found throughout this instruction.

WARNING

Explanatory information about an operating procedure practice, or condition, etc., that may result in injury or death if not carefully observed or followed.

CAUTION

Explanatory information about an operating procedure, practice, or condition, etc., that may result in damage to equipment if not carefully observed or followed.

Note

Explanatory information about an operating procedure, practice, or condition, etc., that must be emphasized.

1.5 WORDING

The concept of word usage and intended meaning that has been adhered to in preparing this instruction is as follows:

a. "Shall" has been used only when application of a procedure is mandatory.

b. "Should" has been used only when application of a procedure is recommended.

c. "May" and "need not" have been used only when application of a procedure is optional.

d. "Will" indicates futurity and never indicates any degree of requirement for application of a procedure.

e. "Land Immediately" is self-explanatory.

f. "Land as Soon as Possible" means land at the first site at which a safe landing can be made.

g. "Land as Soon as Practicable" means extended flight is not recommended, the landing site and duration of flight is at the discretion of the pilot in command.

CHAPTER 2

Naval Air Training and Operating Procedures Standardization Program

2.1 PURPOSE

To define the NATOPS program organization, assign responsibilities, and specify procedures.

2.2 NATOPS PROGRAM ORGANIZATION

The NATOPS program organization shall be in accordance with this chapter. (See Figure 2-1.)

2.2.1 NATOPS Program Duty Assignments

a. NATOPS Program CNO Sponsor — CNO (N78) is the overall NATOPS program sponsor.

b. Commander, Naval Air Forces (COMNAVAIRFOR) — COMNAVAIRFOR is delegated responsibility for overall management of the NATOPS program.

c. Commander, Naval Air Systems Command (COMNAVAIRSYSCOM) — COMNAVAIRSYSCOM is delegated cognizance over the administration and maintenance of NATOPS publications.

d. NATOPS Program Administrator — COMNAVAIRFOR (N32) is NATOPS program administrator for the overall management of the NATOPS program and is responsible for the daily administration and management of NATOPS policy.

e. NATOPS Product Administrator — The COMNAVAIRSYSCOM airworthiness officer (AIR-4.0P) is delegated responsibility for the administration and maintenance of NATOPS manuals and checklists, representing CNO at all NATOPS review conferences, and overseeing or monitoring all aspects of the production of NATOPS publications.

f. NATOPS Advisory Group — The NATOPS advisory group is composed of the following (and other commands as designated by COMNAVAIRFOR):

(1) Commander, Naval Air Forces (COMNAVAIRFOR)

(2) Commandant of the Marine Corps (CMC)

(3) Commander, Naval Air Systems Command (COMNAVAIRSYSCOM)

(4) Commander, Naval Air Force, U.S Pacific Fleet (COMNAVAIRPAC)

(5) Commander, Naval Air Force, U.S. Atlantic Fleet (COMNAVAIRLANT)

(6) Chief of Naval Air Training (CNATRA)

(7) Commander, U.S. Marine Forces Atlantic (COMMARFORLANT)

(8) Commander, U.S. Marine Forces Pacific (COMMARFORPAC)

(9) Commander, Naval Air Force Reserve (COMNAVAIRES)

(10) Commanding General, 4th Marine Aircraft Wing (CG FOURTH MAW)

(11) Commander, Naval Safety Center (COMNAVSAFECEN)

g. NATOPS Coordinator — A pilot/NFO possessing broad experience in current operational aircraft, assigned to NATOPS program coordination duties at the headquarters of advisory group members.

h. Cognizant (COG) Command — An advisory group member responsible for specific portions of the NATOPS program as designated by COMNAVAIRFOR (N32). COG Command

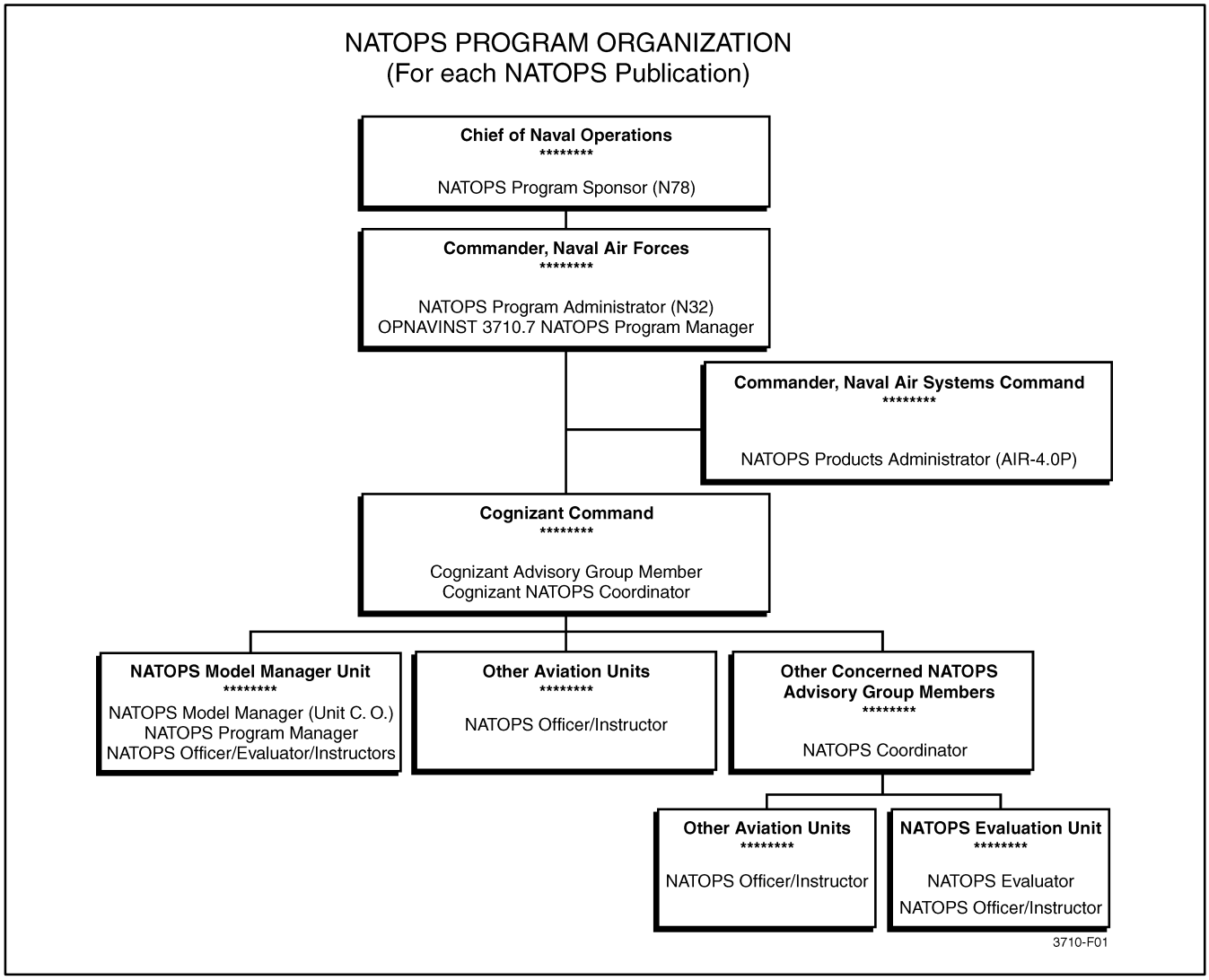

Figure 2-1. NATOPS Program Organization

assignments are delineated in the NATOPS status report posted on the NATOPS website.

i. NATOPS Model Manager — The unit commander or head of department designated by the COG Command to administer the NATOPS program for a specific aircraft model or aircraft-related system. These assignments are delineated in the NATOPS status report.

j. NATOPS Program Manager — An officer assigned by the Model Manager who performs administrative responsibilities for the NATOPS program and who is given written authority to act on behalf of the Model Manager in NATOPS-related matters. The program manager shall be highly qualified in model and should be assigned these responsibilities for a minimum of 18 months.

k. NATOPS Evaluation Unit — A command designated by an advisory group member, normally the COG Command, to conduct annual NATOPS evaluations of units assigned to that advisory group member.

l. NATOPS Evaluator — A highly qualified air crewmember assigned to a NATOPS evaluation unit who conducts annual unit NATOPS evaluations for a flightcrew position. Designations shall be in writing by the commanding officer of the evaluation unit. If the advisory group member is also the COG Command for the aircraft concerned, the NATOPS evaluator should be in the Model Manager unit.

m. NATOPS Instructor — A highly qualified air crewmember whose primary duty should be administering the NATOPS evaluation program within a squadron or unit. The NATOPS instructor shall receive initial and subsequent NATOPS evaluations from the appropriate NATOPS evaluator and be designated in writing by the commanding officer.

n. Assistant NATOPS Instructor — A highly qualified air crewmember who can administer NATOPS evaluation checks. The assistant NATOPS instructor shall receive initial and subsequent NATOPS evaluations from either the appropriate NATOPS evaluator or squadron or unit NATOPS instructor and be designated in writing by the commanding officer.

o. Unit NATOPS Officer — An aviator whose primary duty is to administer the NATOPS program within a squadron or unit. The NATOPS officer may also be the NATOPS instructor.

2.2.2 Responsibilities

a. COMNAVAIRFOR — Acts as the COG command for OPNAVINST 3710.7, designates the NATOPS program administrator, and is the CNO-delegated promulgation authority for OPNAVINST 3710.7

b. NATOPS Program Administrator — The NATOPS program administrator (COMNAVAIRFOR (N32)) acts for COMNAVAIRFOR and:

(1) Oversees and monitors the overall NATOPS program.

(2) Formulates and issues specific NATOPS policy.

(3) Designates NATOPS cognizant commands.

(4) Performs duties as the cognizant coordinator and NATOPS model manager for OPNAVINST 3710.7.

(5) Grants permissions and waivers required by OPNAVINST 3710.7.

c. COMNAVAIRSYSCOM — Designates the NATOPS Products Administrator, and is the promulgation authority for NATOPS manuals.

d. NATOPS Product Administrator — The NATOPS product administrator (COMNAVAIRSYSCOM AIR-4.0P) acts for COMNAVAIRSYSCOM to:

(1) Oversee and monitor the entire NATOPS publications program.

(2) Represent and execute CNO policy at all NATOPS review conferences.

(3) Aid NATOPS program and model manager unit representatives in preparing for and conducting review conferences, and in preparing for and conducting review conference reports.

(4) Monitor the progress of urgent change recommendations and coordinate the development and review of interim changes.

(5) Release NATOPS interim changes.

(6) Prepare letters of promulgation for NATOPS publications.

(7) Prepare revisions, changes, and interim changes to NATOPS publications.

(8) Manage the budget and resources for the production, printing, and distribution of NATOPS publications for all out-of-production Navy and Marine Corps aircraft platforms and general series publications.

(9) Monitor the status of all NATOPS publications and compile and distribute the NATOPS status report.

(10) Manage the editorial support of NATOPS publications for aircraft no longer in production or receiving editorial support through other COMNAVAIRSYSCOM sources.

(11) Maintain liaison with primary review authorities, NATOPS advisory group members, NATOPS model managers, NATOPS program managers, and cognizant command and other Navy command and aircraft manufacturers on matters related to the NATOPS program.

(12) Maintain the NATOPS military standard documents for the standardized production and printing of NATOPS flight manuals and associated pocket checklists.

(13) Coordinate appropriate review of technical data contained in the NATOPS publications in support of interim changes and the NATOPS review conference schedule.

(14) Maintain NATOPS databases.

(15) Maintain the NATOPS internet website.

(16) Coordinate NATOPS program editorial support and facilitate communications between model managers and editors.

e. NATOPS Advisory Group — Group members shall monitor the NATOPS program and are responsible to COMNAVAIRFOR for its proper operation. COMNAVAIRSYSCOM AIR-5.0F acts as the COMNAVAIRSYSCOM NATOPS advisory group representative for issues other than NATOPS change recommendations, interim change actions, and publication production matters, for which AIR-4.0P is the COMNAVAIRSYSCOM advisory group representative. The advisory group shall meet, as required, to properly implement and coordinate the program. Each member shall designate a NATOPS coordinator and, other than COMNAVSAFECEN, designate Model Managers and evaluation units (as required) and issue instructions implementing NATOPS directives that shall include NATOPS evaluation, waiver, and reporting procedures.

(1) NATOPS Coordinator — Responsible for coordinating the overall command NATOPS program as directed by the appropriate advisory group member. The coordinator will maintain liaison with other NATOPS Coordinators and shall attend or designate in writing a fully authorized representative to attend applicable NATOPS review conferences. Designated representatives shall ensure that copies of their letters of designation are forwarded to the NATOPS Products Administrator COMNAVAIRSYSCOM (AIR-4.0P) and COMNAVAIRFOR (N32). The coordinator shall ensure that an annual evaluation is conducted on each NATOPS evaluator within the command. A like-model evaluator from another major command should, if practicable, administer the evaluation, but may be performed by a like-model NATOPS instructor within the same major command if necessary. The report of the evaluation shall be forwarded to the evaluator's commanding officer.

(2) COG Command — Responsible for oversight of the NATOPS program for specifically assigned model aircraft or aviation-related function. The COG Command designates NATOPS model manager units, convenes NATOPS review conferences and processes urgent change recommendations. Additionally, prior to convening a review conference, the COG Command shall consult with the NATEC Logistics Element Manager, via the NATOPS Products Administrator to verify that funding is available to produce and distribute NATOPS publications.

(3) COMNAVAIRSYSCOM — Because of their systems test and evaluation mission, COMNAVAIRSYSCOM has cognizance over all aircraft equipment limitations and technical data in NATOPS publications and is responsible for ensuring the airworthiness of all Naval aircraft, including Preaccepted Aircraft and Public Use Aircraft operated by or for the Navy.

(4) COMNAVSAFECEN — Shall only be responsible for informing other advisory group members of the effectiveness of the NATOPS program as it applies to aviation safety. This includes comments on routine (Conference agenda) and urgent change recommendations.

f. Naval Survival Training Institute (NAVSURVTRAINST) — Designated as the aviation training advisor for emergency egress.

g. NATOPS Model Manager — The Model Manager shall review the assigned NATOPS publications to ensure that they contain the latest approved operating procedures and make appropriate recommendations to the COG Command on all matters concerning the NATOPS manuals.

h. NATOPS Program Manager — Responsible to the Model Manager for specific duties in the

maintenance of the assigned NATOPS publications, and acts as the Model Manager's single point of contact for all NATOPS related issues. This assignment is delineated in the NATOPS status report. The program manager shall:

(1) Conduct a continuous review of existing publications, including appropriate NATOPS manuals, Maintenance Instruction Manuals (MIMs), Handbooks of Overhaul Instructions (HOIs), Allied Tactical Publications (ATPs), Naval Warfare Publications (NWPs), (NTTP's), (NATIP's) and associated instructions to discover any conflicts that might exist.

(2) Report conflicts to the appropriate NATOPS coordinator, the Model Manager (if appropriate), and the activity responsible for the content of the conflicting directive, including recommendations for resolving the conflict.

(3) Maintain close liaison with evaluators of similar aircraft models to correlate data, locate any areas of weakness, and recommend appropriate action.

(4) Make recommendations to the Model Manager on when to schedule review conferences.

(5) Provide guidance and assistance to NATOPS instructors.

(6) Visit and observe, as appropriate, special exercises, tests, and projects involving new operating techniques or procedures applicable to the model aircraft.

(7) Review the NATOPS status report to ensure the accuracy of all pertinent information.

(8) Forward a copy of designation letter and point-of-contact phone number(s) to the COG Command and the NATOPS Products Administrator.

i. NATOPS Evaluator — The NATOPS evaluator conducts annual evaluations of all NATOPS instructors (or assistant NATOPS instructors, if possible) within the same major command. The 12-month evaluation cycle may be extended up to 18 months for circumstances such as extended deployments, and only for units whose previous evaluations indicated a high degree of NATOPS program effectiveness. One or more flightcrews from each unit shall be evaluated at random to measure overall compliance with NATOPS. Evaluation results shall be forwarded to each unit commander.

j. NATOPS Instructor — The NATOPS instructors shall conduct an evaluation on all flight crewmembers within their units. Instructors are responsible to the commanding officer for providing the required standardization and shall keep the commanding officer informed of NATOPS development within the community and the unit.

k. Assistant NATOPS Instructor — Assists squadron NATOPS instructor in performing assigned duties. Assigned as deemed necessary by the commanding officer.

2.2.3 NATOPS Program Products and Publications

a. NATOPS Status Report. A report prepared by the NATOPS Products Administrator and distributed via the NATOPS website or by other electronic means, delineating the status of all NATOPS publications, COG Command, Model Manager, and Program Manager assignments, and other pertinent information.

b. NATOPS Flight Manual (NFM) — A manual for a specific aircraft model containing standardized ground and flight operating procedures, training requirements, aircraft limitations, and technical data necessary for safe and effective operation of the aircraft. To reduce the size of some NATOPS flight manuals, supplements may be issued for specific sections of the NFM (e.g., Weapons System Supplement, Performance Charts Supplement).

c. NATOPS Miscellaneous Manual — A manual issued for special aircraft-related operations or systems that require fleet-wide standardization (e.g., Aircraft Refueling NATOPS, CV NATOPS, LSO NATOPS).

d. Preliminary NATOPS Manual — A Preliminary NATOPS manual is a developmental manual that has not been issued (i.e. no letter of promulgation) or distributed for routine use in the fleet. It is

normally used during an aircraft's initial production and fleet introduction.

e. Partial NATOPS Flight Manual — An NFM issued for a variant of the basic aircraft model and affecting a small but significant percentage of the total fleet. This publication is used in conjunction with the basic NFM and addresses only the differences in the variant.

f. NATOPS Checklists — Excerpts, often in abbreviated form, of selected sections of the NFM or supplement, designed for easy accessibility for use while airborne.

g. NATOPS Program Managers Handbook — A guide maintained by the NATOPS Products Administrator. It is a detailed description of the functions and responsibilities of the Program Manager. Available on the NATOPS website or by other electronic means. This handbook answers questions on updating manuals.

h. NATOPS Changes Software Program — Computer software used to build and manipulate a database of proposed changes as the conference agenda. The computer format allows entry of the same basic information as contained on the OPNAV 3710/6 NATOPS/Tactical Change Recommendation Form, and is available on the NATOPS website or by other electronic means.

i. NATOPS website — The NATOPS website (https://natops.navair.navy.mil) is the primary information conduit for the NATOPS Products Administrator about the NATOPS program. The Program Manager's Handbook, NATOPS Changes Software program, OPNAVINST 3710.7, and the NATOPS conference schedule are among the items available on the website.

2.3 NATOPS PROGRAM ADMINISTRATION

2.3.1 General Administrative Requirements

a. Publication Format — The technical content, style, and format for NATOPS publications shall be in accordance with the applicable military specifications.

b. Letters of Designation — Designations of responsibilities discussed above shall be made in writing, on command letterhead. Copies of the designation letters for NATOPS Model Manager Units, NATOPS Evaluation Units, and NATOPS Program Managers shall be sent to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office and the NATOPS Policy Office (COMNAVAIRFOR (N32)).

c. Waivers — Commands indicated below in the first column of Figure 2-2 may grant waivers to the provisions of NATOPS manuals to develop new procedures or when compliance is impractical. Waiver requests for this instruction are addressed in paragraph 1.1.4. Waivers shall always indicate the purpose for which granted and include a time limit. If a waiver must be continually renewed, it is a good indication that the particular procedure, requirement, or limitation should be revised. Waiver authority may be delegated in writing at the discretion of the empowered commands listed in the second column of Figure 2-2. A copy of all waivers shall be forwarded to COMNAVAIRFOR (N32) and to COMNAVSAFECEN (Code 11).

DELEGATING COMMAND	WAIVER AUTHORITY MAY BE ISSUED TO:
COMNAVAIRFOR	ALL COMMANDS
CMC	FOURTH MAW/MCCDC
COMNAVRESFOR	COMNAVAIRES
FLEET AND FLEET AIR TYPE COMMANDERS	FLEET COMMANDS
COMMARFORPAC	MARFORPAC MARCORBASESPAC COMCABWEST
COMMARFORLANT	MARFORLANT COMCABEAST
CNATRA	ALL CNATRA ACTIVITIES
COMNAVAIRSYSCOM	ALL COMNAVAIRSYSCOM AND DLA ACTIVITIES

Figure 2-2. Waiver Delegation Authority

d. Report and Forms.

(1) Report symbol OPNAV 3710-21, "NATOPS Evaluation Report," (Figure A-9) is approved in accordance with Appendix A.

(2) Copies of the NATOPS/Tactical Change Recommendation/OPNAV 3710/6 (4-90), stock number 0107-LF-009-7900 (Figure 2-3), and of the NATOPS Evaluation Report, OPNAV 3710/7 (3-95), stock number 0107-LF-009-8000 (Figure A-9), are listed in the NAVSUP Publication P2003 on the Naval Logistics Library (NLL) website, www.nll.navsup.navy.mil. These are also available as Cog "I" stock items that may be requisitioned from the Naval Inventory Control Point (NAVICP). Electronic copies of the change recommendation form are available on the NATOPS website, https://natops.navair.navy.mil, and the Navy Electronic Directives website, http://neds.nebt.daps.mil.

2.3.2 Categories of NATOPS Publications. There are three categories of NATOPS publications. The publications are titled as Draft NATOPS publications, Preliminary NATOPS publications, and NATOPS publications.

2.3.2.1 Draft NATOPS Publications. Draft NATOPS publications are unpublished publications that are the produced as the first versions of the publication. They are printed in single-sided, single-column, double-spaced format, with NAVAIR numbers and dates. Draft NATOPS publications contain no letter of promulgation or Navy stock number, and are produced in very limited quantities. They are prepared by the prime contractor and are distributed primarily to NAVAIR and the Fleet Introduction Team personnel. The content of Draft NATOPS publications grow and the publications are revised as the source data and new information for them becomes available.

2.3.2.2 Preliminary NATOPS Publications. Preliminary NATOPS Publications are double-sided, double column, single-spaced documents that are published and contain a NAVAIR number, date, and a Navy stock number. They look like mature NATOPS publications except that they contain the word Preliminary in their titles and do not contain a letter of promulgation. They are also normally incomplete with respect to containing all of the information required by the Military Standards in a mature NATOPS publication.

Initial inputs to the Preliminary NFM are the responsibility of COMNAVAIRWARCENACDIV, the designated Model Manager, and the contractor. To update a Preliminary manual, the COG Command shall convene a conference, normally at the contractor facility, as fleet operational data becomes available and new procedures and techniques are developed. Procedural changes to Preliminary NATOPS manuals can be approved and issued by the Model Manager without using the formal NATOPS change recommendation approval process. COMNAVAIRSYSCOM shall provide the technical information and recommended operating procedures to the NATOPS model manager, who may then modify the operating procedures within the technical constraints, and, after consulting with the NATOPS Products Administrator, issue the interim change without further administrative delay. The Model Manager has responsibility to maintain complete records of such changes and to ensure that all users are promptly informed. This change procedure is only for Preliminary NATOPS publications (which do not contain a Letter of Promulgation).

Note

The NATOPS Products Administrator assigns all interim change numbers. When the Model Manager of a Preliminary NATOPS manual issues an interim change, the NATOPS Products Administrator shall be contacted to obtain the correct number.

2.3.2.3 NATOPS Publications. Mature NATOPS publications contain all of the information required by the NATOPS Military Standards and have been judged sufficiently stable so as to have received a letter of promulgation. Changing them requires following the full NATOPS change recommendation approval process, which includes giving all who fly the aircraft or use the procedures the opportunity to comment on the proposed change recommendations. Publications for aircraft that are deployed to fleet units from the fleet replacement squadron should normally contain a letter of promulgation.

2.3.3 Formal Changes to NATOPS Publications

a. Change — A printed update to a publication, which is limited to only those pages containing revised information. Printed changes to NATOPS publications shall include a new title page showing the change number and date below the original publication or revision date. The change number will appear on the bottom of all changed pages.

b. Revision — A second or subsequent edition of a complete publication, superseding the preceding edition and incorporating all previously issued changes. Revisions to NATOPS publications are indicated only by a revised date on the title page.

c. Interim Change — An update to a publication, often initiated by an urgent change recommendation, and issued by rapid means, normally via message. Occasionally because of size or complexity, interim changes are printed and distributed in the same way as a change or revision. Interim changes are numbered consecutively throughout the life of the NATOPS publication, regardless of the number of subsequent changes or revisions. Interim changes can be cancelled or modified by a NATOPS review conference report or another interim change with a new interim change number.

Note

Assignment of a new interim change number to a correction or a change to an interim change provides visibility for new information in the NATOPS Status Report.

2.3.4 Issuing Interim Changes. For promulgated NATOPS publications (those for which the related NATOPS Flight Manual contains a Letter of Promulgation), COMNAVAIRSYSCOM shall issue all interim changes that contain operating procedures. For Preliminary NATOPS publications, the Commanding Officer of the NATOPS Model Manager unit may issue interim changes that involve operating procedures. COMNAVAIRSYSCOM may issue interim changes that contain technical information for both Preliminary and promulgated publications. For interim changes that contain both technical information and operating procedures, NAVAIRSYSCOM shall provide the technical information and any recommended operating procedures to the NATOPS Model Manager and the cognizant coordinator, who may the modify the operating procedures within the technical constraints. The NATOPS Model Manager of a Preliminary NATOPS Publication shall contact the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS Office for assignment of an interim change number prior to their issuing an interim change. All other commands may not issue interim changes directly, but should submit change recommendations through the appropriate review and approval channels.

2.3.5 Distribution of Changes

a. Revisions and changes are distributed in printed and/or electronic form to all organizations that are on automatic distribution for those publications.

b. Interim changes are distributed in the following ways:

(1) By priority message to major aviation commands and other addressees when urgency so warrants. The major aviation commands shall immediately readdress and redistribute the priority message to appropriate subordinate commands.

(2) In printed form to all holders of the manual; the changes may be replacement pages, cutouts, or pen entries.

c. Copies of the revised publications with printed changes incorporated and the interim changes are also placed on the NATEC website (www.natec.navy.mil).

2.3.6 Incorporation of Changes

a. Unless otherwise directed, numbered (printed) changes to manuals shall be inserted upon receipt. After checking against the list of effective pages, the superseded pages shall be destroyed.

b. Interim changes, may be entered either as replacement pages or as pen changes to the existing pages, shall be recorded on the interim change summary page in the front of the manual.

Note

The interim change summary page in each NATOPS manual should be checked against the NATOPS Status Report to determine if the manual contains the latest update.

c. Replacement pages that have been locally modified to incorporate message and/or printed interim changes that were not included in the latest printed change shall:

(1) Retain their printed change marking (e.g., ORIGINAL, CHANGE 1, CHANGE 2), and

(2) Be marked beside the printed change marking with the number(s) of the interim change(s) that modifies them (e.g., CHANGE 2 with IC 3, ORIGINAL with ICs 26 and 29), as applicable.

2.4 CREATING, UPDATING AND CANCELING NATOPS PUBLICATIONS

2.4.1 Creating a New Publication

a. Request for Creation of a New Publication — A letter shall be sent to the NATOPS Products Administrator by the initiating unit via the Advisory Group Member in the chain of command, justifying the need for the new publication, outlining the proposed contents of the publication, and recommending a Model Manager unit to manage the publication. When available, a draft of the new publication should accompany the letter.

b. Designation of NATOPS COG Command and Model Manager Unit (MMU) — Upon receipt of the letter, the NATOPS Products Administrator shall evaluate the need for the publication. If a need for the publication exists, the NATOPS publications administrator shall recommend to COMNAVAIRFOR that further development of the publication be undertaken and that a cognizant command be assigned. COMNAVAIRFOR (N32) shall then assign a cognizant command for the publication. The COG Command, shall in turn, appoint the MMU of the publication.

c. Formal Approval of the Publication — The MMU shall then prepare a draft of the publication (if not previously available), and the COG Command shall convene a NATOPS conference to formally review and decide the content of the new publication. The review conference will also determine whether the new publication is complete or lacks any information considered essential for a complete publication. If the publication is determined to be complete, it will normally receive a Letter of Promulgation. If the publication is determined to be lacking essential information (e.g., as mandated by Military Standards), it shall contain the word Preliminary in the title of the publication, in lieu of receiving a Letter of Promulgation. If the publication is considered complete but remains subject to a high volume of proposed changes, and the aircraft is not yet deployed beyond the fleet replacement squadron, the publication may be retained in a Preliminary status. This will reduce the administrative burden of the formal NATOPS urgent change recommendation approval process and allow the changes to be incorporated into the publication more expeditiously. Once the aircraft is deployed in fleet units, the publication should contain a Letter of Promulgation and be subject to the formal change recommendation approval process.

d. Assignment of NAVAIR Number — Once formally approved, COMNAVAIRSYSCOM (AIR-4.0P) shall request assignment of a NAVAIR number for the new publication from the NATEC LEM, who will provide the new NAVAIR number.

e. Automatic Distribution List — The Model Manager shall submit a proposed distribution list for each new publication and forward it via the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office to Naval Air Technical Data and Engineering Service Command (NATEC). Each proposed distribution list shall be comprised of a list of each unit to receive automatic distribution of the publication. Include the NATEC Activity Address Code if one already exists. The completed distribution list shall include (1) the NATEC Distribution Account Code of each expected user, or the complete address of each user if a NATEC Activity Address code has not yet been established, (2) the user unit's command attention code, if known, and (3) the recommended distribution quantities of paper and/or CD-ROM copies for each user account. The Model Manager may contact the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office or the NATEC LEM to obtain a copy of the distribution list of a similar publication as an aid in preparing the list.

f. Following preparation of the master copy of the new publication, a copy shall be forwarded to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS

office for final approval and preparation of the Letter of Promulgation for the publication.

2.4.2 Updating Existing Publications

a. Publications are updated periodically by convening a NATOPS Review Conference that formally reviews and approves the accumulated routine change recommendations submitted since the last NATOPS review conference. The changes approved by the NATOPS review conference are compiled into a NATOPS Review Conference Report. The approved changes in the conference report and any interim changes that have been issued, but are not yet incorporated in the publication, are then incorporated by editors into a change or revision to the publication.

b. COMNAVAIRSYSCOM provides a standardized Letter of Promulgation to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office for NATOPS Publications. An updated Letter of Promulgation will be included in a revision of a publication that has been previously published with a Letter of Promulgation. A Letter of Promulgation may also be inserted in any changed or revised Preliminary publication that has matured and is determined to warrant incorporation of a Letter of Promulgation. Barring a request from COMNAVAIRSYSCOM to review the publication, the LOP may be incorporated without the change or revision being forwarded for further review. In both of these cases, incorporation of the letter of promulgation into the new publication is subject to the provision that all changes have been formally approved by a NATOPS review conference and have been incorporated into the publication as intended by the review conference.

c. The new changed or revised publication is then published and distributed to the fleet in paper, CD-ROM and/or electronic form.

2.4.3 Canceling A Publication. Superseded publications are identified on the cover(s) of the changed or revised publications that supersede them. The Model Manager of a publication that is no longer required and will not be superseded by another, shall submit a recommendation to COMNAVAIRFOR (N32) that the publication be cancelled. COMNAVAIRFOR shall relieve the COG command of management responsibilities for the publication, and direct COMNAVAIRSYSCOM (AIR-4.0P) to retire the publication. COMNAVAIRSYSCOM (AIR-4.0P) shall, in turn, declare the publication canceled and notify NATEC of the cancellation. The NATEC LEM will then retire the NAVAIR number and notify NAVICP and the NATOPS Program Manager so that shelf stocks and stock numbers are retired.

2.5 CHANGE RECOMMENDATIONS

a. The effectiveness of the NATOPS program is dependent on the currency and accuracy of NATOPS publications. Inputs from many sources are used to maintain the integrity of the program. Any NATOPS publication user who notes a deficiency or an error is obliged to submit a change recommendation. The participation of the individual is essential, if continuing improvement of the manuals is to succeed.

b. Change recommendations shall be submitted as either routine or urgent as follows:

2.5.1 Routine Change Recommendations. Routine change recommendations are those that do not require immediate issuance to the fleet. Routine change recommendations are sent to the appropriate Model Manager on form OPNAV 3710/6 (4-90) as shown in Figure 2-3 or via e-mail to the NATOPS Program Manager using the data-based NATOPS Changes Program as furnished on the NATOPS website. The Model Manager will acknowledge receipt and make it a part of the next review conference agenda.

Note

- The Model Manager may elect to upgrade the classification to urgent and forward the recommendation to the COG Command.
- Use of same version of database NATOPS Changes Program posted on the NATOPS website will reduce the work required for the NATOPS Program Manager to prepare the review conference agenda and ensure compatibility for recipients of the review conference report.

If the routine change is approved at the conference, it will be incorporated in the next change or revision to the appropriate NATOPS publications. NATOPS review conferences are normally held every 2 years.

NAVTOPS/TACTICAL CHANGE RECOMMENDATION					DATE
TO BE FILLED IN BY ORIGINATOR AND FORWARDED TO MODEL MANAGER					
FROM *(Originator)*		UNIT			
TO *(Model manager)*		UNIT			
COMPLETE NAME OF MANUAL/CHECKLIST	REVISION DATE	CHANGE DATE	SECTION/CHAPTER	PAGE	PARAGRAPH
RECOMMENDATION *(Be specific)*					
☐ CHECK IF CONTINUED ON BACK					
JUSTIFICATION					
SIGNATURE	RANK	TITLE			
ADDRESS OF UNIT OR COMMAND					
TO BE FILLED IN BY MODEL MANAGER *(Return to Originator)*					
FROM				DATE	
TO					
REFERENCE (a) Your Change Recommendation Dated _____					
☐ Your change recommendation dated _____ is acknowledged. It will be held for action of the review conference planned for _____ to be held at _____.					
☐ Your change recommendation is reclassified URGENT and forwarded for approval to _____ by my DTG _____.					
/s/ _____ MODEL MANAGER				_____ AIRCRAFT	

OPNAV 3710/6 (APR 1990) Page 1 of 2 Pages

Figure 2-3. NATOPS/Tactical Change Recommendation Form (Sheet 1 of 2)

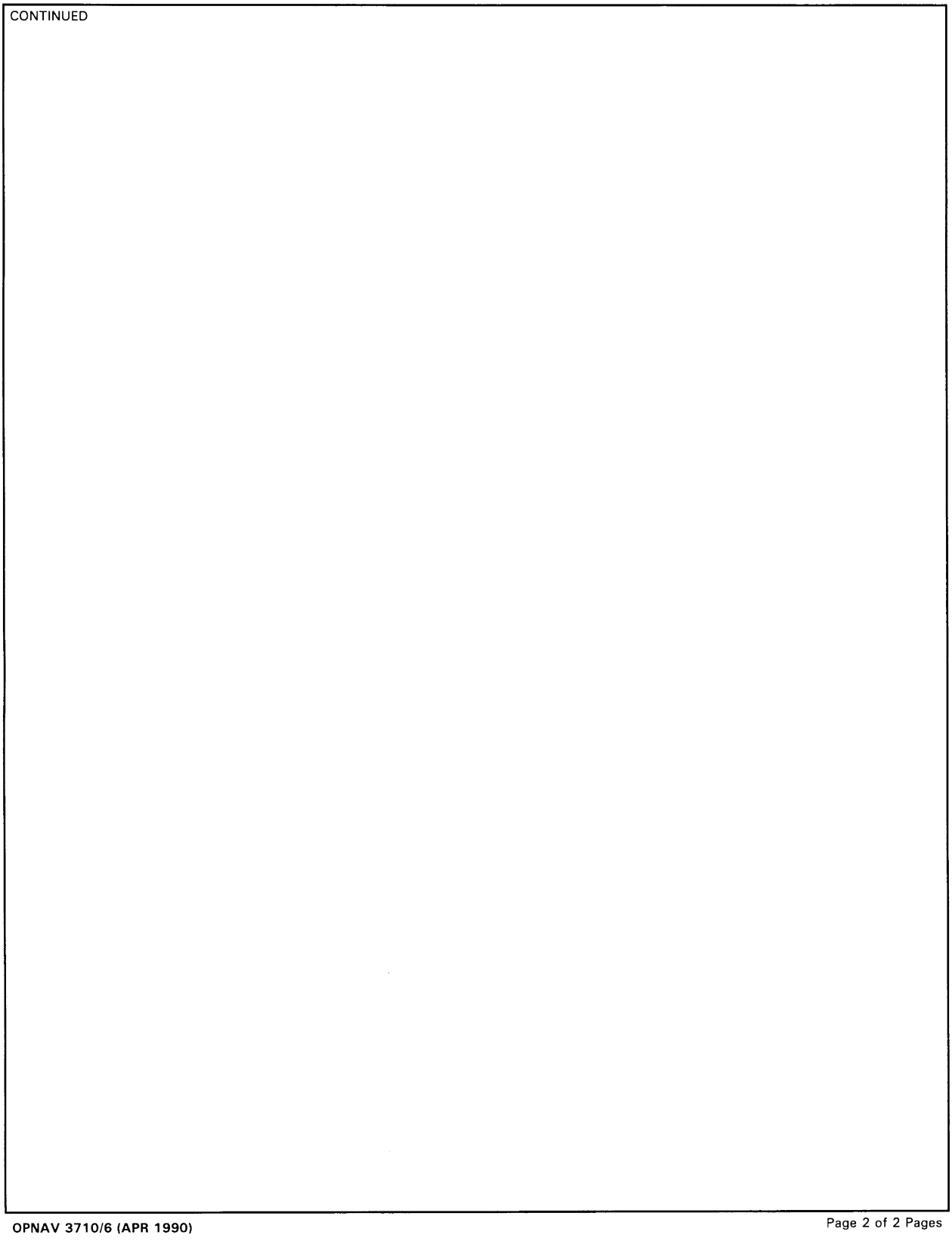

Figure 2-3. NATOPS/Tactical Change Recommendation Form (Sheet 2)

Therefore, a routine change recommendation could take several years to be resolved.

2.5.2 Urgent Change Recommendations. Urgent change recommendations are changes that cannot be allowed to wait for implementation until after the next review conference. Urgent change recommendations shall be generated any time a hazard has been identified and classified as high risk with respect to personal injury, property damage, or mission degradation. If appropriate, include the phrase "safety of flight" in the subject line if the situation involves the fundamental airworthiness of the aircraft or operating procedures likely to place flight personnel in immediate danger.

UCRs and responses to them shall be sent by priority message whenever possible. Transmission of urgent change recommendation messages is authorized during MINIMIZE. UCRs that contain illustrations and/or extensive data should be forwarded by letter. Use of fax or e-mail copies are strongly recommended to reduce both message transmission and mail delivery delays.

2.5.2.1 UCR's to NAVAIR NATOPS Publications. The approval process for UCR's to NAVAIR NATOPS publications is shown in Figure 2-4.

a. Initial UCR Message — The initial message on a subject shall be sent to the advisory group member's NATOPS coordinator in the originator's chain of command, using the message format shown in Figure 2-5. The COMNAVAIRFOR (N32), COMNAVAIRSYSCOM (AIR-4.0P) and the NATOPS Model Manager shall also be included as information addressees.

Note

The advisory group member in the originator's chain of command may or may not be the NATOPS COG Command.

When the change recommendation affects any aspect of emergency egress, rescue, or survival, Naval Survival Training Institute (NAVSURVTRAINST), the aviation training advisor for emergency egress, shall be included as an action addressee.

b. Operational Commander's Endorsement — The advisory group member receiving the initial UCR shall review the UCR for appropriateness and completeness, recommend cancellation of the UCR, recommend downgrading the UCR to routine, or recommend approval and issue of the information (as written or recommended modified) as an interim change to the affected publication. Incomplete UCRs should be returned to the originator for staffing to meet the required standards. If the UCR is complete, the advisory group member (when not the cognizant command), shall, within three working days, forward the initial UCR to the cognizant command with a recommendation to issue, downgrade, or cancel the UCR; and, include recommended modifications to the wording of the UCR with any additional information necessary to justify and understand the recommendation. INFO addressees shall include all other advisory group members exercising operational control over the model aircraft or designated in the affected publication, COMNAVSAFECEN, COMNAVAIRSYSCOM (AIR-4.0P), COMNAVAIRFOR (N32) and the NATOPS model manager.

c. Approval of Technical Information — COMNAVAIRSYSCOM has cognizance over the content and layout specifications, all aircraft equipment limitations, and technical data in NATOPS publications. The fleet COG Command/Model Manager has cognizance over all operating procedures, but must operate within the constraints of the technical limitations. Following receipt of a UCR that involves technical information, COMNAVAIRSYSCOM may issue it directly as an interim change provided that no operating procedures are involved. However, COMNAVAIRSYSCOM may issue such interim changes only after consultation with the COG Command and the model manager.

Note

COMNAVAIRSYSCOM (AIR-4.0P) assigns interim change numbers for all NAVAIR NATOPS publications. When the model manager of a Preliminary NATOPS manual issues an interim change, the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office shall be contacted to obtain the correct number.

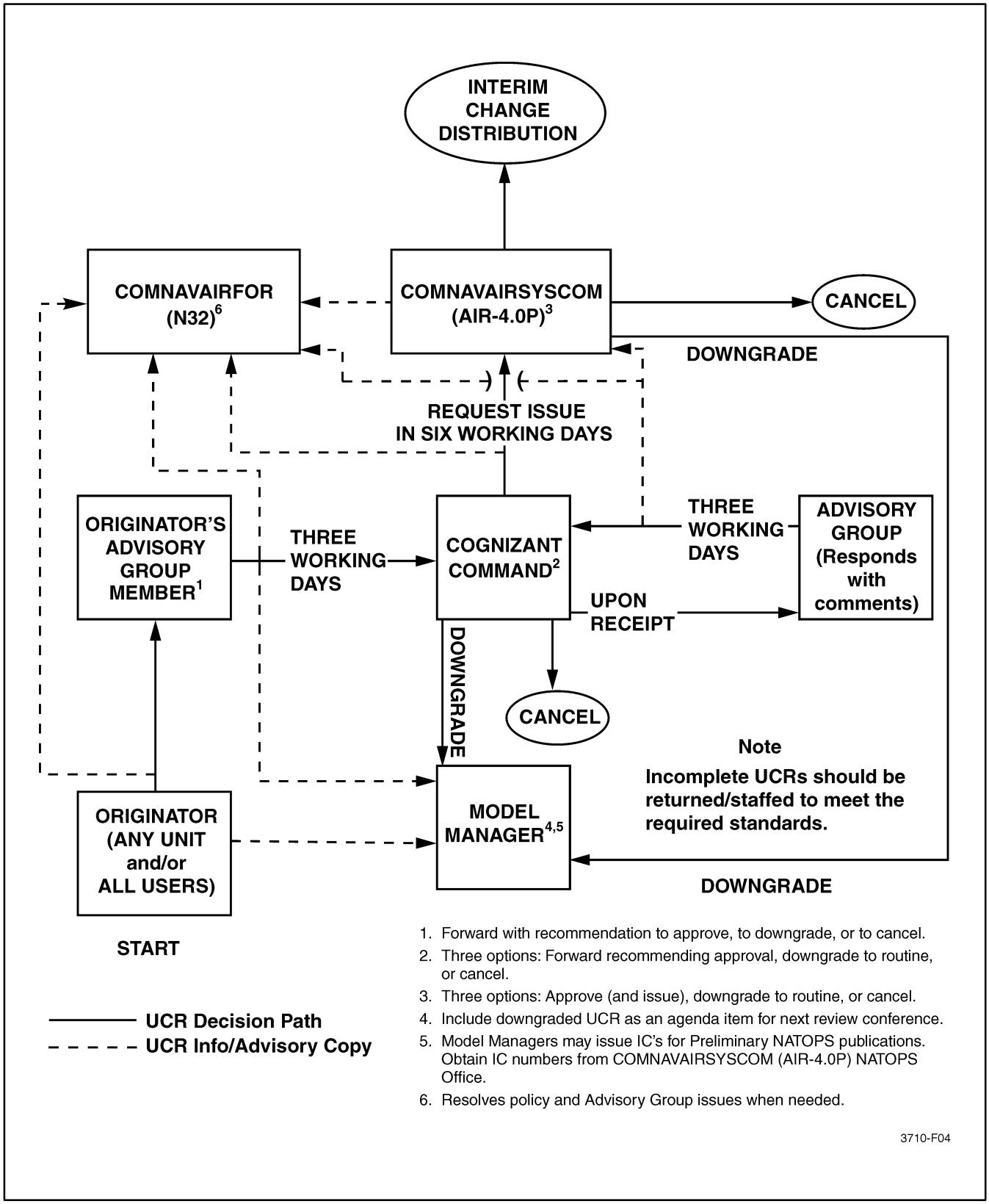

Figure 2-4. Urgent Change Recommendation Approval Process

P R *Date-time group*
FM *Originator* //***//
TO *Advisory group member in your chain of command* //***//
INFO COMNAVAIRFOR SAN DIEGO CA//N32//
COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P/4.1/5.0F//
COMNAVSAFECEN NORFOLK VA//***// ***(If it's a safety-of-flight issue)***
NAVSURVTRAINST PENSACOLA FL//02/025// ***(If aircrew emergency egress/rescue/survival equipment/procedures involved)***
PEOASWASM PATUXENT RIVER MD //PMA *code* // ***(If out-of-production aircraft involved)***
Other appropriate units in your chain of command //***//
Model Manager unit //***//
Evaluation unit in your chain of command //***// ***(If different from the model manager)***
HMX ONE QUANTICO VA//C148-11// ***(If H-3, CH-46E, CH-53 or H-60 aircraft involved)***
UNCLAS //N03711//
MSGID/GENADMIN/ *originator unit* //
SUBJ/URGENT CHANGE RECOMMENDATION TO *aircraft/title* NATOPS PUBLICATIONS//
(When appropriate, add: – – SAFETY OF FLIGHT)
REF/A/DOC/OPNAV/ *date* // ***(3710.7 Instruction, date when last changed)***
REF/B/DOC/NAVAIR *pub #*/ *date of latest change or revision* // ***(e.g., NAVAIR 01-T34AAC-1 (T-34C NFM))***
REF/C/...../
...ETC. ***(Additional references as necessary)***
NARR/REF A IS OPNAVINST 3710.7T, CHAP 2. REF B IS *Pub Title (short pub title)*. REF C IS NAVAIR *Pub Title (short pub title)...Etc.*// ***(e.g., NAVAIR 01-T34AAC-1 (T-34C NFM))***
RMKS/1. IAW REF A, RECOMMEND CHANGE REF B (AND C,..etc.) AS FOLLOWS:
A. CHANGE REF B, PART *number*, CHAPTER *number*, PAGE *number*, FIGURE/PARAGRAPH *number and title*, SENTENCE/LINE *number or other identifiable landmarks on page*.
(1) DELETE: ***(Always indicate what is to be deleted. If no deletion is necessary, enter NA).***
(2) ADD: ***(Quote new text or describe changed material. If none, enter NA. Unless otherwise indicated, new text is inserted in the same location as deleted material.)***
B. ***(Continue change recommendations with next pub and/or next location).***
2. JUSTIFICATION: ***(Enter remarks necessary to justify change recommendations.)***
3. *Unit* POC IS *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-____, EMAIL _____@_____.
//
BT

Note

- *** indicates message routing code. (Use "//JJJ//" when code required but not known).
- NATOPS Advisory Group routing codes may be located in the Urgent Change Recommendation section of the NATOPS Status Report; or, determined by contacting the individual NATOPS Program Manager for the subject publication.
- This sample is intended as a content guide. Refer to NTP-3 for detailed GENADMIN MTF formatting instructions.

Figure 2-5. Sample NATOPS Urgent Change Recommendation Message

d. COG Command's Request for Comments — Upon receipt of a UCR, the COG Command shall request the comments of the other appropriate advisory group members, COMNAVAIRSYSCOM (AIR-4.0P), and the Model Manager (see Figure 2-6). Advisory group members not exercising operational control of subject aircraft need not respond. For cases that involve both technical information and operating procedures, COMNAVAIRSYSCOM shall provide approved technical information and any recommended procedures to the appropriate COG Command. The COG Command shall forward comments from the members of the advisory group, and the MMU, before recommending final action to COMNAVAIRSYSCOM (AIR-4.0P).

e. NATOPS Advisory Group Member's Comments — Within 3 working days of receipt of the request for comments, action addressees shall forward comments (i.e., concurrence, nonconcurrence, comments, or recommendations) to the COG Command, with COMNAVAIRFOR, COMNAVAIRSYSCOM, COMNAVSAFECEN, and the Model Manager as information addressees (see Figure 2-7). Advisory group members who are unable to forward their comments within the allotted 3 working days shall forward to the COG Command an interim report that includes the reason for the delay and an estimate of when their recommendation will be forthcoming. Use of e-mail in lieu of a naval message when providing response to requests for comments on NATOPS UCRs is encouraged provided that the comments are sent to all addressees.

f. Command's Recommendation — Within 6 working days of initial receipt of a UCR sent by an advisory group member, the COG Command shall either cancel, downgrade the UCR, or submit a request to issue the recommended change to COMNAVAIRSYSCOM (AIR-4.0P), with the Model Manager, and others as appropriate as information addressees (see Figure 2-8).

g. COMNAVAIRSYSCOM (AIR-4.0P) approval of UCR's — Upon receipt of the COG command's recommendation for issuance, COMNAVAIRSYSCOM (AIR-4.0P) shall assemble an urgent change recommendation package and prepare the draft interim change document. The UCR package shall include copies of the original UCR and related NATOPS advisory group comments and recommendations. The NATOPS Products Administrator shall retain the interim change package and may cancel, downgrade, or issue the interim change.

2.5.2.2 UCR's to OPNAVINST 3710.7. The approval process for UCR's to OPNAVINST 3710.7 (Figure 2-9) is very similar to that for UCR's to the NAVAIR NATOPS publications, except that COMNAVAIRFOR (N32) performs both the COG coordinator and the releasing authority functions for OPNAVINST 3710.7 UCR's. Urgent change recommendations shall be submitted by the originator to the advisory group member in the originator's chain of command. Following review and staffing, the advisory group member in the originator's chain of command shall forward the UCR with recommendation to COMNAVAIRFOR (N32) for review. COMNAVAIRFOR (N32) functions as the cognizant command and collects comments from the other concerned NATOPS advisory group members. As with the NAVAIR NATOPS publications, COMNAVAIRSYSCOM has cognizance over limitations and technical data, and shall provide the approved technical information and any recommended operating procedures. COMNAVAIRSYSCOM, however, may not issue changes to OPNAVINST 3710.7. After receiving the NATOPS advisory group's comments, COMNAVAIRFOR (N32) decides on the action to be taken and may cancel or downgrade the UCR, or issue an interim change to OPNAVINST 3710.7.

2.5.3 Preparation and Distribution of Interim Changes. Approved UCR's to OPNAVINST 3710.7 are issued by COMNAVAIRFOR as interim changes to OPNAVINST 3710.7. Approved UCR's to NAVAIR NATOPS publications are issued as interim changes by COMNAVAIRSYSCOM (AIR-4.0P) or, if the publication is a preliminary publication, by the NATOPS model manager. The COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office provides all interim change numbers to the NATOPS Model Manager. The Interim change message, with the exception of those containing NATOPS Conference advance change items, shall be complete in itself and should not require the user to refer to another source for the approved text. Interim change messages shall be in the format of Figure 2-10, with copies to all commands listed, as appropriate for the changed publications. Advisory group members are responsible for readdressal of interim change messages to their subordinate commands. Use of COMNAVSAFECEN collective address

P R *Date-time group*
FM *Cognizant Command* //***//
TO *Other advisory group members* //***// ***(Include those who operate the subject aircraft/equipment)***
INFO COMNAVAIRFOR SAN DIEGO CA//N32//
COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P/5.0F//
NAVSURVTRAINST PENSACOLA FL//02/025// ***(If aircrew emergency egress/rescue/survival equipment/procedures involved)***
PEOASWASM PATUXENT RIVER MD//PMA *code* // ***(If out-of-production aircraft involved)***
Model Manager unit //***//
Evaluation unit //***// ***(If different from the model manager)***
DCMC *name* //***// ***(If in-production aircraft involved)***
HMX ONE QUANTICO VA//C148-11// ***(If H-3, CH-46E, CH-53 or H-60 aircraft involved)***
UNCLAS //N03711//
MSGID/GENADMIN/ *Cognizant Command* //
SUBJ/URGENT CHANGE RECOMMENDATION TO *aircraft/title* NATOPS PUBLICATION(S)//
(If appropriate, add: – – SAFETY OF FLIGHT)
REF/A/MSG/ *UCR Originator* / *date-time group* // ***(Original UCR message)***
REF/B/DOC/OPNAV/ *date* // ***(3710.7 Instruction, date when last changed)***

REF/C/...//
(Background information on the recommendation)
...ETC.
NARR/REF A IS INITIAL UCR MSG ORIGINATED BY.. REF B IS OPNAVINST 3710.7T, CHAPTER 2.
REF C PROVIDES FURTHER BACKGROUND INFO REGARDING SUBJECT UCR. Etc...

RMKS/1. REQUEST COMMENTS, RECOMMENDATIONS, AND CONCURRENCE OR NONCONCURRENCE ON REF A.
PER REF B, YOUR RESPONSE IS REQUIRED WITHIN THREE WORKING DAYS.//
2. *Unit* POC IS *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-_____,EMAIL _____@_____.
//
BT

Note

- *** indicates message routing code. (Use "//JJJ//" when code required but not known).
- NATOPS Advisory Group routing codes may be located in the Urgent Change Recommendation section of the NATOPS Status Report; or, determined by contacting the individual NATOPS Program Manager for the subject publication.
- This sample is intended as a content guide. Refer to NTP-3 for detailed GENADMIN MTF formatting instructions.

Figure 2-6. Sample Cognizant Command Request for Comments Message

P R *Date-time group*
FM *Originator* //***//
TO *Cognizant Command* //***// *(If originator is advisory group member or action addressee or . . .)*
Advisory group member in your chain of command //***// *(If originator is subordinate to an advisory group member and an info addressee on the request for comments)*
INFO COMNAVAIRFOR SAN DIEGO CA//N32//
COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P/5.0F//
Other advisory group members //***// *(Include those who operate the subject aircraft/equipment)*
NAVSURVTRAINST PENSACOLA FL//02/025// *(Emergency egress/rescue/survival equipment /procedures involved)*
PEOASWASM PATUXENT RIVER MD//PMA *code* // *(If out-of-production aircraft involved)*
Other appropriate units in your chain of command //***//

Model manager unit //***//
Evaluation unit in your chain of command //***// *(If different from the model manager)*
DCMC *name* //***// *(If in-production aircraft is involved)*
HMX ONE QUANTICO VA//C148-11// *(When H-3, CH-46E, CH-53 or H-60 aircraft involved)*
UNCLAS //N03711//
MSGID/GENADMIN/ *Originator unit* //
SUBJ/URGENT CHANGE RECOMMENDATION TO *aircraft/title* NATOPS PUBLICATION(S)// *(When appropriate, add: - - SAFETY OF FLIGHT)*
REF/A/DOC/OPNAV/*date*)// *(3710.7 Instruction, date when last changed)*
REF/B/MSG/ *UCR originator* / *UCR date-time group* // *(Original UCR message)*
REF/C/DOC/NAVAIR *pub #*/ *date of latest change or revision* //
REF/D/...//
NARR/REF A IS OPNAVINST 3710.7T, CHAP 2. REF B IS INITIAL UCR MSG ORIGINATED BY...
REF C IS *pub short NATOPS title*, *(e.g., T-34C NFM)*
REF D IS...ETC// *(Additional references as necessary)*
RMKS/1. IAW REF A, CONCUR WITH REF B CHANGES TO REF C. *(Concurring without comments)*
(or...)
1. IAW REF A, DO NOT CONCUR WITH REF B CHANGES TO REF C. *(Non-concurring)*
(or...)
1. IAW REF A, RECOMMEND MODIFY REF B, AS FOLLOWS: *(Propose modifying the UCR,)*
A. CHANGE REF C, PART *number*, CHAPTER *number*, PAGE *number*, FIGURE/PARAGRAPH *number*, SENTENCE/LINE *number or other identifiable landmark on page*.
(1) DELETE: *(Always indicate what is to be deleted. If no deletion is necessary, enter NA).*
(2) ADD: *(Quote new text or describe changed material. If none, enter NA. Unless otherwise indicated, new text is inserted in the same location as deleted material.).*
B. *(Continue change recommendations with next pub and/or next location).*
2. JUSTIFICATION: *(Enter remarks to substantiate the non-concurrence or modification recommendation.)*
3. *Unit* POC IS *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-_____,EMAIL _____@_____.
//
BT

Note

- *** indicates message routing code. (Use "//JJJ//" when code required but not known).
- NATOPS Advisory Group routing codes may be located in the Urgent Change Recommendation section of the NATOPS Status Report; or, determined by contacting the individual NATOPS Program Manager for the subject publication.
- This sample is intended as a content guide. Refer to NTP-3 for detailed GENADMIN MTF formatting instructions.

Figure 2-7. Sample Response to a Request for Comments Message

P R *Date-time group*
FM *Cognizant Command* //***//
TO COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P//
INFO COMNAVAIRFOR SAN DIEGO CA//N32//
Other advisory group members //***// ***(Include those who operate the subject aircraft/equipment)***
Model Manager unit //***//
Evaluation unit //***// ***(If different from the model manager)***
UNCLAS //N03711//
MSGID/GENADMIN/ *Cognizant Command* //
SUBJ/URGENT CHANGE RECOMMENDATION TO *aircraft/title* NATOPS PUBLICATION(S)//
(If appropriate, add: -- /SAFETY OF FLIGHT)
REF/A/DOC/OPNAV/ *latest change or revision date* //
REF/B/MSG/ *UCR Originator* / *date-time group* //***(Original UCR message)***
REF/C/...//***(Additional references such as recommended modifications to UCR or subject NATOPS flight manual.)***
NARR/REF A IS OPNAVINST 3710.7T, CHAP 2. REF B IS.... REF C IS....././/
RMKS/1. IAW REF A, REQUEST ISSUE CHANGES RECOMMENDED REF B.
(or...)
1. IAW REF A, REQUEST ISSUE CHANGES RECOMMENDED REF B AS MODIFIED BY REF C ***(or...)*** MODIFIED AS FOLLOWS:
A. CHANGE REF C, PART *number*, CHAPTER *number*, PAGE *number*, FIGURE/PARAGRAPH *number and title*, SENTENCE/LINE *number or other identifiable landmarks on page*:
(1) DELETE: ***(Always indicate what is to be deleted. If no deletion is necessary, enter NA).***
(2) ADD: ***(Quote new text or describe changed material. If none, enter NA. Unless otherwise indicated, new text is inserted in the same location as deleted material.)***
B. ***(Continue change recommendations with next pub and/or next location).***
(or...)
1. IAW REF A, CANCEL REF B.
(or...)
1. IAW REF A, DOWNGRADE REF B TO ROUTINE. MODEL MANAGER IS DIRECTED TO INCLUDE RECOMMENDED CHANGE IN THE AGENDA OF THE NEXT REVIEW CONFERENCE.
2. ***(Enter any remarks necessary to explain disposition.)***
3. *Unit* POC IS *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-_____,EMAIL _____@_____.
//
BT

Note

- *** indicates message routing code. (Use "//JJJ//" when code required but not known).
- NATOPS Advisory Group routing codes may be located in the Urgent Change Recommendation section of the NATOPS Status Report; or, determined by contacting the individual NATOPS Program Manager for the subject publication.
- This sample is intended as a content guide. Refer to NTP-3 for detailed GENADMIN MTF formatting instructions.

Figure 2-8. Sample Cognizant Command UCR Final Disposition Message

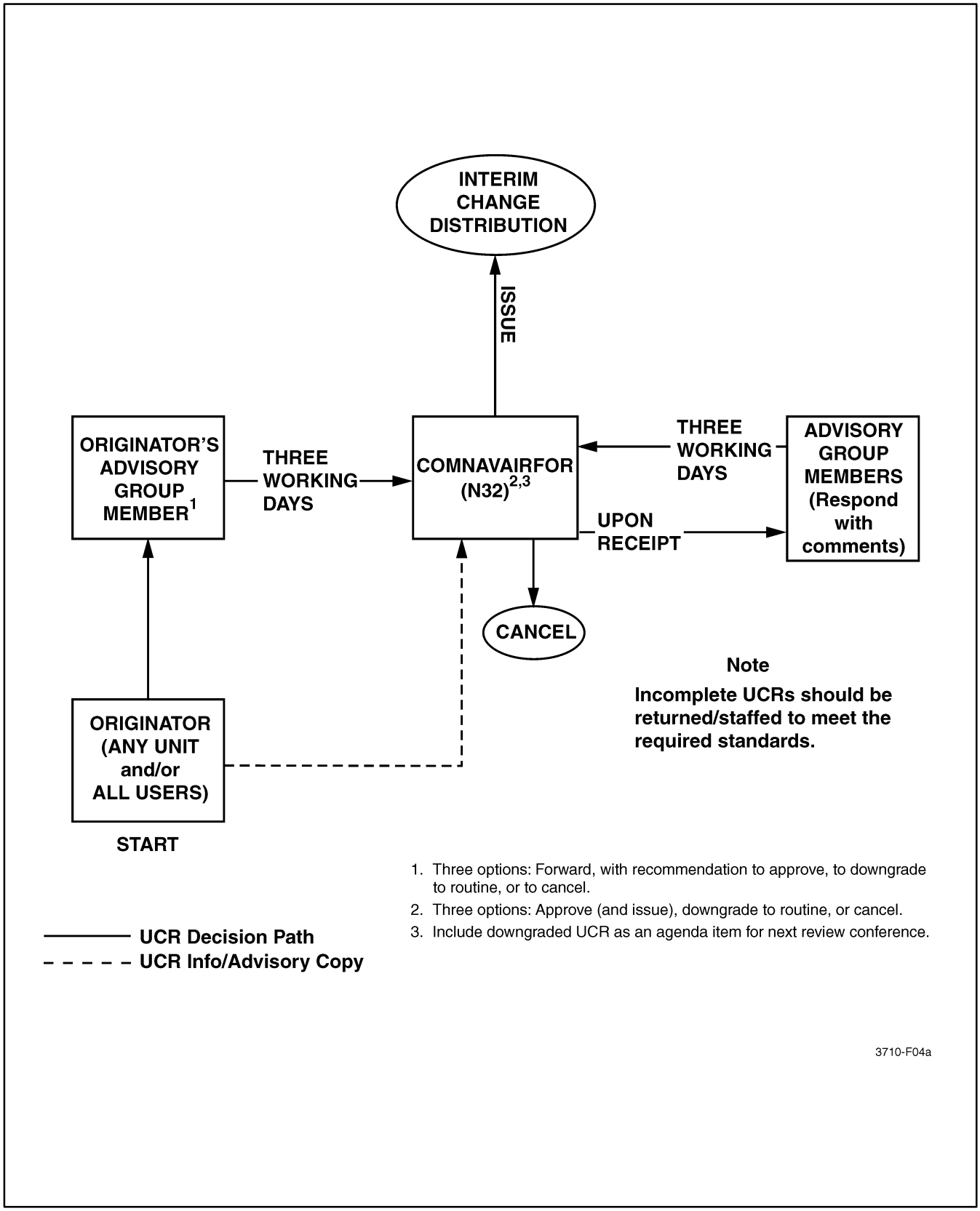

Figure 2-9. Approval Process for UCRs to OPNAVINST 3710.7

P R *Date-time group*
FM *Originator* //***//*(COMNAVAIRFOR, COMNAVAIRSYSCOM, or preliminary publication NATOPS Model Manager*
TO ALL *CAD name* AIRCRAFT/HELICOPTER ACTIVITIES//***//
(If CAD available, and contains all action and info addressees, otherwise include the following:)
COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P/4.1/5.0F// *(If not the message originator)*
Other advisory group members //***// *(Include operators of the subject aircraft/equipment)*
COMNAVSURFLANT NORFOLK VA//***// *(When an Advisory Group Member)*
COMNAVSURFPAC SAN DIEGO CA//***// *(When an Advisory Group Member)*
NAVAIRDEPOT *name* //***// *(If assigned as cognizant field activity)*
PEOASWASM PATUXENT RIVER MD//PMA *code* // *(If assigned as NATOPS model manager)*
INFO COMLANTFLT NORFOLK VA//***// *(For non-aircraft NATOPS Manuals (e.g.: CV NATOPS Manual)*
COMPACFLT PEARL HARBOR HI//***// *(For non-aircraft NATOPS Manuals (e.g.: CV NATOPS Manual)*
COMNAVAIRFOR SAN DIEGO CA//N32// *(If not the message originator)*
COMNAVSURFLANT NORFOLK VA//***// *(When not an Advisory Group Member and surface units involved)*
COMNAVSURPAC SAN DIEGO CA//***// *(When not an Advisory Group Member and surface units involved)*
COMNAVSAFECEN NORFOLK VA//***//
Other advisory group members //***// *(As designated in subject publication)*
COMNAVAIRWARCENACDIV PATUXENT RIVER MD//***//
NAVSURVTRAINST PENSACOLA FL//02/025// *(If aircrew emergency egress/rescue/survival equipment/procedures, involved)*
Model Manager unit //***// *(If not the message originator)*
Evaluation unit in your chain of command //***// *(If different from the model manager)*
DCMC *name* //***// *(If in-production aircraft is involved)*
NAVAIRDEPOT JACKSONVILLE FL//3.3.3//
HMX ONE QUANTICO VA//C148-11// *(If H-3, CH-46E, CH-53 or H-60 aircraft involved)*
UNCLAS //N03711//
MSGID/GENADMIN/ *originator unit* //
SUBJ/*aircraft/title* NATOPS PUBLICATIONS INTERIM CHANGE(S)//
(When appropriate, add: -- SAFETY OF FLIGHT)
REF/A/DOC/NAVAIR/*pub #/date of latest change or revision* // *(e.g., NAVAIR 01-T34AAC-1/15 December 2001)*
REF/B/....././/
...ETC.
NARR/REF A IS *pub short NATOPS title*. REF B is....ETC...// *(e.g., T-34C NATOPS Flight Manual)*
(Additional references as necessary)
RMKS/1. THIS IS INTERIM CHANGE NUMBER__ TO REF A, INTERIM CHANGE NUMBER__ TO REF B, AND
...(etc.) *(Interim change numbers are assigned by NAVAIR (AIR-4.0P) NATOPS Office)*
2. SUMMARY. *(One sentence summary of change)*
3. CHANGE REF A AS FOLLOWS:
A. PART *number*, CHAPTER *number*, PAGE *number*, FIGURE/PARAGRAPH *number and title*, SENTENCE/LINE *number or other identifiable landmarks on page*.
(1) DELETE: *(Always indicate what is to be deleted. If no deletion is necessary, enter NA.)*
(2) ADD: *(Quote new text or describe changed material. If none, enter NA. Unless otherwise indicated, new text is inserted in the same location as deleted material.)*
B. *(If required, continue changes to next location in Ref A.)*
4. *(Continue changes to remaining references, as in paragraph 3.)*
5. *Unit* POC IS *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-_____,EMAIL _____@_____.
6. THIS MESSAGE WILL BE POSTED ON THE NATEC WEBSITE, WWW.NATEC.NAVY.MIL, WITHIN 15 DAYS OF RELEASE. NEW NATOPS IC MESSAGES MAY BE FOUND IN TWO PLACES ON THIS WEBSITE: (1) IN THE NATOPS IC DATABASE FOUND UNDER THE TMAPS OPTION, AND (2) IN THE AFFECTED PUBLICATION(S) JUST AFTER THE IC SUMMARY PAGE. THEY ARE NORMALLY POSTED IN THE DATABASE BEFORE APPEARING IN THE PUBLICATION. IF UNABLE TO VIEW THIS MESSAGE ON THE NATEC WEBSITE, INFORM THE AIRWORTHINESS CUSTOMER SUPPORT TEAM AT TEL DSN 342-3276 OR COMM (301)342-3276, OR BY EMAIL AT NATOPS@NAVAIR.NAVY.MIL.
//
BT

Note

- *** indicates message routing code. (Use "//JJJ//" when code required but not known).
- NATOPS Advisory Group routing codes may be located in the Urgent Change Recommendation section of the NATOPS Status Report; or, determined by contacting the individual NATOPS Program Manager for the subject publication.
- This sample is intended as a content guide. Refer to NTP-3 for detailed GENADMIN MTF formatting instructions.

Figure 2-10. Sample NATOPS Interim Change Message

designator (CAD) message addresses (i.e., ALL SEAKNIGHT HELICOPTER ACTIVITIES) is authorized for the issuance of NATOPS interim changes.

2.6 NATOPS REVIEW CONFERENCE PROCEDURES

2.6.1 General. The effectiveness of the NATOPS program is largely dependent upon frequent review and updating of NATOPS manuals to ensure that they reflect current procedures and accurate technical information. The formal NATOPS review conference is the primary means of carrying out this phase of the program. Procedures set forth in this chapter are intended to ensure that maximum benefit is realized from these conferences.

Note

Correspondence reviews of NATOPS publications, in lieu of formal NATOPS review conferences, are not within the intent of this chapter and shall only be authorized by waiver from the NATOPS Products Administrator.

2.6.2 Responsibility. The responsibility for scheduling, convening, and conducting a NATOPS review conference rests with the appropriate COG Command. In performing those functions, the COG Command is assisted by the MMU and the NATOPS Products Administrator.

2.6.3 Contractor Support of NATOPS Review Conferences. The COG Command may authorize the use of a civilian contractor to assist the model manager during the conference. Close coordination between the contracting officer, the NATOPS Products Administrator, and the MMU is required in determining the scope of the support appropriate for a review conference. COMNAVAIRSYSCOM (AIR-4.0P) NATOPS Coordinators should be contacted to determine editorial requirements prior to anyone writing specifications for conference support contract deliverables.

2.6.4 Convening Decision. The determination as to the need for a conference shall be made by the COG Command, based on recommendations from the MMU and the NATOPS Products Administrator. Conferences should be held every 2 years. Under certain circumstances a delay of more than 2 years may be warranted, but in no case shall a publication exceed 5 years between conferences. Consideration should be given to the following in determining when to hold a conference:

a. The number and importance of routine change recommendations.

b. The number of interim changes issued since the manual's latest revision or change was issued. A large number of unincorporated interim changes may indicate an overall program review is appropriate.

c. An abnormal increase in the aircraft accident rate may indicate that training and operating procedures should be updated and further standardized.

d. Major aircraft modifications usually require detailed description and the incorporation of new or modified procedures.

e. Assignment of new missions or changes to the basic mission.

2.6.5 Scheduling. The NATOPS Products Administrator shall maintain a master schedule of all NATOPS review conferences. As soon as possible after the decision to convene a conference has been made, and prior to releasing a conference convening message, the COG Command, or the MMU shall contact the NATOPS Products Administrator, by informal means to determine a feasible date prior to releasing a conference convening announcement message. The mutually agreed-upon date shall not conflict with any previously scheduled conferences unless waived by the NATOPS Products Administrator.

2.6.6 Conference Location. The COG Command shall determine the location of the review conference. Review conferences are normally held at the aircraft manufacturer's facility for all in-production aircraft. In the interest of conserving TAD funds, conferences for out-of-production aircraft should be scheduled at a Navy facility whenever practicable, preferably at the Model Manager's home station.

2.6.7 Convening Announcement

a. When the review conference date and location have been confirmed and appropriate funding has been identified, the COG Command shall originate the convening announcement (see Figure 2-11). The convening announcement shall precede the conference date by at least 45 days.

b. Announcement of the review conference shall be by message to all major aviation commands employing the aircraft, COMNAVAIRFOR, COMNAVAIRSYSCOM, COMNAVSAFECEN, NAVSURVTRAINST, NATEC, DCMC at the manufacturer's facility, and commanding officer of the hosting activity. It shall include dates and location of the conference; billeting availability; conference fees; request for the names, grades, service numbers, special billeting requirements, and security clearances of the attendees; and request for agenda items (as well as an address and deadline for their submission).

c. Upon receipt of the convening announcement, Advisory Group NATOPS Coordinators shall inform units within their commands as appropriate. Review conference announcements and requests for agenda items should receive wide dissemination within the NATOPS organization.

2.6.8 Conference Agenda

a. Agenda items shall be received by the Model Manager no later than 30 days prior to the conference convening date. Unless waived by the NATOPS Products Administrator, the NATOPS Changes Software Program shall be used to compile the conference agenda. (The waiver shall be obtained in writing from the NATOPS Products Administrator). To facilitate this effort, proposed changes should be submitted to the Model Manager using the NATOPS Changes Software Program posted on the NATOPS website.

Note

Use of same version of database NATOPS Changes Program posted on the NATOPS website will reduce the work required for the NATOPS Program Manager to prepare the review conference agenda and ensure compatibility for recipients of the review conference report.

b. The program manager shall compile and distribute the conference agenda no later than 20 days prior to the conference-convening date. The conference agenda shall include complete information for each item so that details of each can be researched by the conference attendees prior to the review conference, and not just a short list of the agenda items by subject. NATOPS Program Managers are encouraged to e-mail copies of their NATOPS Changes database to attendees and other interested parties. Distribution shall include all addressees on the convening announcement and others as considered appropriate.

c. Agenda items received after the deadline shall be retained by the Model Manager. Time permitting, late items may be considered by the conference at the discretion of the program manager and the NATOPS Products Administrator.

2.6.9 Preliminary Conferences. Model Managers should conduct preliminary conference(s) prior to the main review conference whenever appropriate. Pre-conferences may be useful in identifying technical support requirements and policy issues requiring resolution before the change recommendation could be considered at a review conference. Pre-conferences are also very useful in exploring new, controversial, and/or extensive issues, such as how new portions of the publication should be written or rewritten and, who will write and chop the draft prior to the main review. Pre-conferences will not only prepare the participants so that they arrive at the main review conference with a more comprehensive understanding of the issues, but will also reduce the amount of time and work required to discuss and resolve the agenda items at the main conference.

2.6.10 Conduct of NATOPS Review Conferences

a. The NATOPS Model Manager's designated representative (normally the program manager) shall act as chairperson. The chairperson shall establish the work schedule based on the size and complexity of the agenda. Agenda items may be addressed in any logical sequence. The NATOPS Products

P R *date-time group*

FM *Cognizant Command*//***//

TO *Other Advisory Group members* //***// ***(Include those who operate the subject aircraft/equipment)***

Appropriate user commands

Model Manager unit //***//

Evaluation unit(s) //***// ***(If different from the model manager)***

COMNAVAIRFOR SAN DIEGO CA//N32//

COMNAVAIRSYSCOM PATUXENT RIVER MD//4.0P//

INFO NAVSURVTRAINST PENSACOLA FL//02/025//

UNCLAS //N03711//

MSGID/GENADMIN/ *Cognizant Command* //

SUBJ/ *Aircraft/title* NATOPS REVIEW CONFERENCE CONVENING ANNOUNCEMENT//

REF/A/DOC/OPNAV/ *revision date* //

AMPN/REF A IS OPNAVINST 3710.7T, CHAP 2//

POC/....././/

RMKS/1. IAW REF A, SUBJ CONFERENCE IS SCHEDULED TO CONVENE *time, date* AT *installation name, state, building, room #*. THE NATOPS PROGRAM MANAGER, *NATOPS model manager unit*, WILL CHAIR THE CONFERENCE.

2. ATTENDANCE. COMMANDS PROVIDE NAMES AND RANK OF ATTENDEES TO THE NATOPS PROGRAM MANAGER *Code Rank Name*, TEL DSN ___-_____ COMM ___-___-_____,EMAIL _____@_____.

3. CLASSIFICATION. THE MEETING WILL BE *unclassified/confidential/secret* ATTENDEES SHALL SEND/FAX SECURITY CLEARANCES TO *security manager/address/fax number* (UTILIZE OPNAV 5521/27 VISIT REQUEST FORM IF AVAILABLE). VISIT REQUEST SHALL INCLUDE NAME, RANK/RATE, SSN, MAILING ADDRESS, AND PHONE/FAX NUMBERS.

4. BILLETING ARRANGEMENTS ***(Indicate arrangements as follow:)***. A LIMITED NUMBER OF BOQ ROOMS HAVE BEEN RESERVED FOR CONFERENCE ATTENDEES. CALL MCAS OR NAS *name of base* BOQ FOR INDIVIDUAL RESERVATION AT COMM ___-___-___/, DSN ___-___/. ***(or...)*** CALL CENTRAL BOQ RESERVATIONS AT 1-800-576-9327 TO RESERVE A ROOM. RENTAL CAR *available/not available* IN LOCAL AREA. UNIFORM IS *uniform* . THERE WILL BE A *amount* DOLLAR CONFERENCE FEE ASSESSED TO ALL ATTENDEES. FOR PROPER REIMBURSEMENT, FEE SHOULD BE INDICATED ON TAD ORDERS.

5. SCOPE. THE FOLLOWING NATOPS PUBLICATIONS WILL BE REVIEWED:

NAVAIR ### - - type manual ***(e.g., NAVAIR 01-T34AAC-1 – – T-34C NATOPS Flight Manual)***

NAVAIR ### - - type manual (etc)

6. PREPARATION. SUBMIT CONFERENCE AGENDA ITEMS TO THE MODEL MANAGER NO LATER THAN *date 30 days prior to the conference convening date*. USE THE CHANGES SOFTWARE PROGRAM TO COMPILE CHANGE ITEMS AND SUBMIT FILE ON DISK. ITEMS RECEIVED AFTER THIS DEADLINE WILL BE REVIEWED AT THE CONFERENCE ONLY IF TIME PERMITS. ***(or...)*** ITEMS RECEIVED AFTER THIS DEADLINE WILL BE HELD FOR THE NEXT CONFERENCE. NATOPS MANUALS *WILL* ***(or...)*** *WILL NOT* BE AVAILABLE AT THE CONFERENCE. PLEASE BE SURE TO BRING ALL NECESSARY PUBLICATIONS. OTHER CONFERENCE SPECIFICS WILL BE PROVIDED WITH AGENDA PACKAGE TO BE DISTRIBUTED 20 DAYS PRIOR TO THE CONFERENCE CONVENING DATE.

//

BT

Figure 2-11. Sample NATOPS Review Conference Convening Message

Administrator shall make the determination of any voting procedures other than those specified herein.

b. Minimum conference attendance shall include NATOPS Products Administrator, COG Command NATOPS coordinator, any Advisory Group member exercising operational control of the subject aircraft, COMNAVSAFECEN, and all NATOPS evaluation units for the subject aircraft. Additional attendees shall be invited by the COG Command as indicated in the conference-convening message.

c. The formal voting membership shall be limited to direct representatives of advisory group members, the Model Manager, and NATOPS evaluation units. Each voting command represented shall be limited to one vote and no individual shall have more than one vote. Designation of a representative from another command to vote and act for a voting member who cannot attend the review conference shall be done in writing. Votes may be cast in absentia only if made in writing.

d. Agenda items that involve changes to policy shall not be introduced at the conference if not provided to all voting members in sufficient time for staffing prior to the conference.

e. Discussion should be free and relatively informal. However, the chairperson shall exercise the authority to discontinue discussion when it is no longer profitable. The chairperson may call for an immediate vote on an item, defer voting on the agenda item pending receipt of additional information, or refer it to a committee for further study. It is often advantageous to appoint committees to consider specific agenda items or to review supplementary publications such as classified supplements and checklists.

f. The model manager shall keep a comprehensive record of the conference agenda and items discussed, their disposition, and the reasons for the decision to approve or disapprove each agenda item.

g. Careful planning by the program manager is the key to a successful and efficiently conducted conference. Physical arrangements must include sufficient space for joint sessions and for committee meetings as required. Appropriate reference material and extra copies of the publication(s) being reviewed should be available. Clerical assistance shall be provided by the Model Manager as required to maintain a daily record of NATOPS agenda items. (For in-production aircraft, the aircraft manufacturer is normally contracted to provide these resources when the review conference is held at its facilities.)

h. An advance change item is a conference-approved agenda item that is designated for issue and incorporation into a NATOPS publication as soon as possible. Approved agenda items that require expeditious incorporation are designated in the review conference report as advance change items, which are then issued as Interim Changes for incorporation into the NATOPS publications. Advance change items should be agreed upon by the review conference formal voting membership. Liaison between the NATOPS Program Manager and COMNAVAIRSYSCOM (AIR-4.0P) prior to the conference report being finalized is strongly recommended, both to ensure that Advance Change Items are recorded optimally, and to enable preparation of the Interim Change so that it is ready to be issued when the conference report arrives. The COMNAVAIRSYSCOM (AIR-4.0P) will forward the interim change for release following receipt of the NATOPS conference report.

2.6.10.1 Program Manager's Handbook. The Program Manager's handbook provides an in-depth discussion of the NATOPS program and shall be thoroughly reviewed by the program manager prior to the convening of the conference. The handbook is available for review on the NATOPS website (https://natops.navair.navy.mil).

2.6.11 Conference Report. The conference report is the official Navy report of the results of the review conference events and includes the list of approved changes. It is prepared by the Model Manager and forwarded to review conference attendees and fleet units for information and use as needed, to the COG NATOPS Advisory Group Coordinator and the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS office for review, and to the editorial support organization for production of the resulting changes to the reviewed publications. The conference report is prepared for both those who use the publications and those who prepare them. The users need to know the text and context of the changes, while editors need only to know what text is

to be deleted and/or added. Model Managers should keep the different requirements of the users and the editors in mind and attempt to present the information in a manner optimized for both groups. For in-production aircraft, the contractor will normally record the results; however, the preparation and accuracy of the conference report is still the responsibility of the Model Manager.

2.6.11.1 Conference Report Contents. The review conference report shall contain the following:

a. A cover letter (Figure 2-12) which shall include the following elements:

(1) The date and location of the review conference.

(2) A certification that all items from the review conference have been incorporated into the conference report as approved at the review conference.

(3) Whether there are or are not any advance change items.

(4) Whether there are or are not any outstanding items; and, if there are, provide instructions concerning to whom and by what date the outstanding items shall be submitted.

(5) Agenda items approved by the conference with which the NATOPS Model Manager strongly disagrees, if any.

(6) Other information as necessary to enumerate and explain the enclosures.

b. Enclosures to the review conference report letter shall include:

(1) A list of the review conference attendees. Include each attendee's name, rank, command represented, own command address, both DSN and commercial telephone numbers, and e-mail address.

(2) The Review Conference Agreement (Figure 2-13) shall include the following:

(a) Review conference location and date.

(b) NAVAIR numbers and short titles of the NATOPS publications reviewed.

(c) The copy freeze date assigned to each reviewed publication.

(d) When requested by the prime contractor, whether each reviewed publication is to be revised or changed.

(e) The signatures of the NATOPS Model Manager's representative, the COG Command representative, the COMNAVAIRSYSCOM (AIR-4.0P) representative, and the editorial organization's representative (if present).

(3) A list of the approved conference agenda items, sorted by publication.

(4) A list of advance change items, if any.

(5) A list of outstanding items, if any, including, who is to prepare the information, and to whom and by what date the completed item is to be submitted by the preparer.

(6) A list of the non-approved (rejected and withdrawn) items reviewed by the conference and a brief reason why each was not approved. A summary list showing the conferences disposition of all agenda items may be substituted for this enclosure.

(7) A list of approved agenda items under Model Manager protest, if any.

2.6.11.2 Conference Report Preparation. The following procedures shall be observed when preparing the review conference report:

a. Unless waived by the NATOPS Products Administrator, the data-based version of the database software NATOPS Changes Program, as found on the NATOPS website and explained in the NATOPS Program Manager's Handbook, shall be used to compile the list of approved changes. Handwritten change recommendation forms are not acceptable. The words and symbols for insertion into a publication shall be typed and submitted using both upper and lower case letters as it is intended that they appear in the updated publication.

COMMAND LETTERHEAD

3711
[Code / Ser]
[Date]

From: Commanding Officer, *[NATOPS Model Manager Unit]*

To: Commander, Naval Air Systems Command (AIR-4.0P)

Subj: *[Aircraft or NATOPS manual]* NATOPS Review Conference Report

Ref: (a) OPNAVINST 3710.7T

(b) Review Conference Convening message (DTG)

Encl: (1) List of Review Conference Attendees
(2) NATOPS Review Conference Agreement
(3) Record of Approved Changes Items
(4) (When applicable) Advance Change Items
(5) (When applicable) Outstanding Items
(6) Disposition of Conference Agenda Items ***...(or)...*** List of Non-Approved Conference Agenda Items
(7) (When applicable) Conference Agenda Items contested by the NATOPS Model Manager

1. The *[Aircraft or NATOPS manual]* NATOPS review conference was held at *[location]* from *[Begin date]* to *[End date]* and conducted in accordance with references (a) and (b). Enclosures (1) through (7) are submitted as specified in reference (a) Chapter 2. The list of the conference attendees is attached as enclosure (1). Enclosure (2) contains the list of reviewed publications and the deadlines agreed upon for submission of the review conference report and the outstanding conference report material.

2. The record of approved change items is attached as enclosure (3). Except for those changes identified in paragraph 5 below which the Model Manager takes exception to, approved changes are available for use immediately at the discretion of each unit's commanding officer. Approved agenda items also listed in enclosure (4) are identified as advance change items and will be mandated shortly by interim change message. The remaining approved agenda items are routine in nature and will not become mandatory until distribution of the printed change*[s]* or revision*[s]*.

3. (As applicable) There are no outstanding items. ***...(or)...*** Enclosure (5) lists outstanding items (conditionally approved items requiring further information or concurrence prior to incorporation into the publication*[s]*) and the commands/agencies tasked with providing the required action. Action agencies should forward outstanding material to Commanding Officer, *[Model Manager Unit]*, as soon as possible. Outstanding action item material not received at *[Model Manager Unit]* by the copy freeze date*[s]* listed in enclosure (2) may not be included in the printed changes that will be produced for the effected publication*[s]*.

4. Enclosure (6) lists the disposition of each *[non-approved]* agenda item.

5. (As applicable) This command takes exception to approved agenda item number*[s] [list]*, and is submitting an urgent change recommendation with alternative wording for *[it/each]*. NATOPS Model Manager concerns with the contested agenda item*[s]* are explained in Enclosure (7). Implementation of the contested item*[s]* shall be held in abeyance pending resolution of these urgent change recommendation*[s]* in accordance with reference (a). Any changes from the approved wording in the conference report will be issued as interim change*[s]* to the effected publication*[s]*.

6. (Other information as deemed necessary).

NATOPS Model Manager's Signature

Copy to: (Including all enclosures)
Cognizant Command
Other Concerned NATOPS Advisory Group Members
User Squadrons/Units

Figure 2-12. Sample NATOPS Review Conference Report Cover Letter

REVIEW CONFERENCE AGREEMENT

[Aircraft or NATOPS Manual] NATOPS REVIEW CONFERENCE
[11 - 15 February 2002]

1. The following NAVAIR NATOPS publications were reviewed during the *[Aircraft/NATOPS Manual]* NATOPS review conference held at *[Location]* on *[Inclusive dates]*:

Publication Number	Publication Long Title
[NAVAIR 01-75PAC-1	*Navy Model P-3A/B/C Aircraft NATOPS Flight Manual*
NAVAIR 01-75PAC-1.1	*Navy Model P-3A/B/C NFO/Aircrew NATOPS Flight Manual*
NAVAIR 01-75PAC-1C	*Navy Model P-3A/B/C Normal/Emergency Card Checklist*
NAVAIR 01-75PAC-1E	*Navy Model P-3A/B/C Ditching and Bailout Placards*
NAVAIR 01-75PAC-1F	*Navy Model P-3A/B/C Functional Checkflight Checklist]*

2. All change recommendations received for the above publications were compiled into the conference agenda, were presented and resolved during the review conference in accordance with OPNAVINST 3710.7T, and have been recorded as intended by the review conference for inclusion in the review conference report.
3. Advance change items have been identified for the conference report and are being submitted to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS Office for issue by interim change message.
4. Outstanding items, along with the action required, the assigned action individual/command, and the response due dates for each, have been identified for inclusion in the conference report.
5. The copy freeze date is (1) the date by which all material/information for outstanding/incomplete agenda items should be received by the NATOPS Model Manager, and (2) the date by which the conference production package should be passed by COMNAVAIRSYSCOM (AIR-4.0P) to the editorial production organization for preparation of the changed or revised publication*[s]*. With the concurrence of the undersigned, the copy freeze date for *[each of]* the above publication*[s]* is *[Date]*.

_____ Date: _____
[Rank, Name, Service]
[Aircraft / Manual] NATOPS Model Manager's Representative
(Normally the NATOPS Program Manager)

_____ Date: _____
[Rank, Name, Service]
[COG Command's] Representative

_____ Date: _____
[Rank, Name, Service]
COMNAVAIRSYSCOM (AIR-4.0P) Representative

_____ Date: _____
[Name]
[Company] Representative
(Editorial Production Organization Representative, if at conference)

Figure 2-13. Sample NATOPS Review Conference Agreement

Note

Use of same version of database NATOPS Changes Program posted on the NATOPS website will reduce the work required for the NATOPS Program Manager to prepare the review conference agenda and ensure compatability for recipients of the review conference report.

b. Item numbers in the conference report shall correspond to those assigned and published in the review conference agenda. Items may be subdivided into more than one item; however; previously issued item numbers shall not be reused.

c. Collect approved items by publication. Approved change items for a publication should be sorted by page, paragraph, and figure order in which the items will appear in the publication.

d. The list of approved items should include all items that have been approved, have been approved as modified, and all outstanding-action items. Fields shall include:

(1) Item number

(2) The chapter and page

(3) The paragraph or figure number affected in the publication

(4) The specific change to the publication (in a delete and add format), including instructions for making the change

(5) Any remarks necessary for use by the editor in understanding how the change is to be made and/or the item number(s) of any related changes to the publications

(6) The justification for each change.

e. When duplicate or similar items are submitted, the best-worded item should be approved or approved as modified, and all other versions of that recommended change shall be administratively disapproved. A reference to the related approved item number shall appear in the justification field of an administratively disapproved item.

f. The reason for disapproval of an agenda item shall be documented for each disapproved item. Reasons for disapproval should be kept as brief as possible (e.g., duplicate item, rewording not significant, CNATRA objects, etc.) unless an explanation in greater detail is warranted.

g. Military Standards and other established publishing guidelines governing the content and format of the reviewed publication are to be adhered to unless the NATOPS Products Administrator waives a requirement. The waiving of a Military Standard is best documented as an agenda item in the conference report.

h. During review of a classified publication, each figure, figure title, paragraph, subparagraph, and page shall receive a classification marking in accordance with the SECNAVINST 5510.36 [Department of Navy (DON) Information Security Program (ISP) Regulation]. Appropriate downgrading instructions for each item shall be included in the conference report.

i. Outstanding items are those that are determined by consensus approval of the voting membership to be necessary for incorporation into a NATOPS publication, but for which the required source data is not yet available and/or approved. This is often the case when new equipment is placed in an aircraft, but the necessary accompanying information is not yet in the manual; a situation where a little information is infinitely better than none at all. In this case the item is approved pending the submission of the source data to be supplied by a responsible designated individual. Following receipt of the source data, the status of the item will be changed to “approved.”

j. The copy freeze date is the date on which the contents of the manual are frozen and production of the publication may proceed without further delays. If there are no outstanding change items, the copy freeze date shall coincide with the last day of the review conference.

k. No further changes or additions may be submitted after the conclusion of the conference except for the outstanding items. The additional information for outstanding items must be submitted to the NATOPS Program Manager prior to the copy freeze date. When the necessary information and

approval or disapproval of the recommendation is received for an outstanding item by the Program Manager before the conference report has been forwarded, the material should be incorporated into the conference report, and the item status should be restated as approved, modified or rejected, as appropriate. Outstanding items resolved after the conference report has been forwarded should be forwarded to the organization tasked with preparing the reproducible copy prior to the copy freeze date to ensure inclusion in the change/revision. Copies of the resolved items should also be disseminated to conference attendees and fleet users.

l. When a Model Manager strongly disagrees with the conference-approved disposition of an agenda item, that item shall remain in the record as an approved change; however, the NATOPS Model Manager shall identify the agenda item in the conference report letter and indicate the reason for objection. Within 30 days following the conclusion of the review conference, the Model Manager shall submit an Urgent Change Recommendation to resolve the item in question. Failure to submit an UCR constitutes a withdrawal of the objection. The change item in question shall not be incorporated into the publication until the UCR is resolved.

m. List of non-approved (rejected and withdrawn) items. The purpose of this list is to account for all of the conference agenda items. Since the approved, modified, and outstanding action items are already accounted for in other enclosures, this list may either include only those items that have been disapproved or may be expanded to provide a summary of the disposition of all agenda items, in which case the title of the enclosure should be changed to "Disposition of All Agenda Items." Although the information provided for each item in this enclosure may be as complete as in the list of approved items, the data fields provided may be reduced to include only the item number, publication and location (page/para/fig), a brief subject, disposition and a brief reason for disapproval (when applicable).

2.6.11.3 Conference Report Disposition. As soon as possible, but no later than 60 days after the review conference, the NATOPS Model Manager shall forward copies of the review conference report on paper or electronic media to those listed below. Distribution of the review conference report shall not be delayed because of outstanding items. Distribution, unless specified otherwise below, may be by paper, CD-ROM, or e-mail.

a. The original conference report to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS Office in both paper and electronic media. Best copies of source data, illustrations, and photos should not be included in the original copy of the conference report, but should be included in the publication production package.

b. To the COG Advisory Group member, if different from the Model Manager.

c. To concerned NATOPS Advisory Group members and fleet user units for information and use.

d. To the editorial production organization as part of the publication production package.

2.6.12 Publication Production Package. In addition to the above distribution of the conference report, the following items shall be assembled by the Model Manager and forwarded by traceable means to the editorial production organization by the copy freeze date, or to the COMNAVAIRSYSCOM (AIR-4.0P) NATOPS Office if no production organization is assigned.

a. A paper copy of the review conference report.

b. A marked-up copy of each reviewed publication. These copies should be prepared for the editor(s) and annotated with the location and agenda item number of each approved change. Deleted text/illustrations and the location of added text/illustrations should be simply marked to assist the editor in locating the changes contained in the approved agenda items.

c. A copy of each disk on which Changes data and supporting text/illustrations are being submitted.

d. Best copies of photographs, artwork, and other source data and media submitted for editorial production.

Note

In the event a contracted editor is present at the review conference, the board art,

negatives, and best copies of any tables and illustrations may be provided directly to the editor in order to reduce the probability of those documents being lost or damaged during separate shipment.

2.6.13 Implementation of Approved Agenda Items. The agenda items approved at the review conference are approved for fleet-wide use but are not mandatory upon receipt of the conference record. Advance change items become mandatory when issued by an interim change message or letter. Use of approved agenda items prior to receipt of an interim change or the printed change or revision is at the discretion of the commanding officer.

2.6.14 Prepublication Reviews. The prime contractor or the contractor assigned will incorporate the conference-approved changes into the reproducible copy for the publication(s) from which the printer's negatives will be made. Production of NATOPS publications requires close coordination between the NATOPS Program Manager, the NATOPS Model Manager, the NATOPS Products Administrator, COMNAVAIRSYSCOM, NATEC, NAVAIRWARCENACDIV, the prime contractor and the editorial production organization. Information in the conference report may be incomplete or difficult for the editor to interpret. If questions arise, delays will occur until the editor receives the information necessary to proceed. When questions do arise, every effort should be made to forward the necessary information to the editors as expeditiously as possible and avoid further delays.

During incorporation of the approved items into the manual, there will be at least one in-process review scheduled for the NATOPS Model Manager or his designated representative(s) to ensure that the technical information is being incorporated into the publication(s) as intended by the review conference. The new table of contents and index, which are not generated until after the contents of the chapter pages are fixed, will not be available during the in-process reviews. In-process reviews are normally done via email, but may be done at the editor's production site. All discrepancies requiring correction should be listed and passed to the contractor. Unrecorded discrepancies are often overlooked and may not be corrected.

After the chapters have been reviewed and the complete publication has been assembled, including table of contents and index, the NATOPS Model Manager will be invited to perform a final review of the completed publication(s) prior to printing and distribution. The final review of the assembled publication(s) is normally done at the editor's production site. Listed discrepancies should have been corrected. Travel and TAD funding for the NATOPS Model Manager or his representatives to attend the final review is normally provided by the model manager unit.

In-process and final reviews shall be completed in an expeditious manner. Delays in production initiated by the NATOPS Model Manager to resolve unexpected problems discovered with the approved items are unacceptable. Model Managers should consider issuing modifications to the approved text via the interim change process rather than interrupting editorial production of the publication(s).

2.7 NATOPS EVALUATION PROCEDURES

2.7.1 General. The standard operating procedures prescribed in NATOPS manuals represent the optimum methods of operating various aircraft and related equipment. The NATOPS evaluation is intended to evaluate individual and unit compliance by observing and grading adherence to NATOPS procedures.

2.7.2 Definitions. The following definitions shall apply to the NATOPS evaluation program:

a. NATOPS Evaluation — An evaluation of individual pilot or crewmember, consisting of an open book examination, a closed book examination, oral examination, and an evaluation flight.

b. Qualified — That degree of standardization demonstrated by a very reliable flight crewmember who has a good knowledge of standard operating procedures and thorough understanding of aircraft capabilities and limitations.

c. Conditionally Qualified — That degree of standardization demonstrated by a flight crewmember who meets the minimum acceptable standards. The individual is considered safe enough to fly as pilot in command or to perform normal duties without supervision, but more practice is needed to become Qualified.

d. Unqualified — That degree of standardization demonstrated by a flight crewmember who fails to meet minimum acceptable criteria. The individual should receive supervised instruction until the individual has achieved a grade of Qualified or Conditionally Qualified.

e. Area — A routine of preflight, flight, or post-flight.

f. Subarea — A performance subdivision within an area that is observed and evaluated during an evaluation flight.

g. Critical Area/Critical Subarea — Any area or subarea that covers items of significant importance to the overall mission requirements or the marginal performance that would jeopardize safe conduct of the flight.

2.7.3 Implementation. The NATOPS evaluation program shall be carried out in every unit operating naval aircraft. Fleet replacement squadrons (FRS) shall ensure those pilots, NFOs, and aircrew members have successfully completed a NATOPS evaluation prior to their completion of the course of instruction. In instances where it is impractical to NATOPS qualify such individuals, the formal course of replacement training shall be considered as having conditionally satisfied NATOPS requirements for a period of 1 year from the individual's completion date, provided that all required phases of instruction are completed. An entry shall be made in the individual's training jacket and log book stating that the individual is NATOPS Conditionally Qualified, utilizing a format similar to that shown in Figure 2-14 of this chapter. Evaluations shall be administered to flightcrew personnel as follows:

a. Pilots (other than VP, VR, VQ, VAW, and HS), NFOs, and naval air crewman — Within 6 months after reporting to a unit if not currently qualified in model.

b. Pilot (VP, VR, VQ, VAW, and HS) — Prior to advancing beyond third pilot or equivalent.

c. Aircrew candidates — Prior to designation as air crewmember.

d. All pilots, NFOs, and naval aircrewmen holding current evaluation in model aircraft — Renewal evaluation may be accomplished within 60 days preceding expiration of a current evaluation and is valid for 12 months from the last day of the month in which the current evaluation expires. Otherwise, NATOPS qualifications shall be valid for 12 months from the last day of the month in which the evaluation is flown.

2.7.4 Procedures. The following procedures shall be followed in implementing the NATOPS evaluation program:

a. The evaluation shall consist of a ground evaluation and an evaluation flight. At the discretion of the squadron or unit commanding officer, all or part of the flight should be simulated in a weapons system trainer (WST), operational flight trainer (OFT), or other suitable training device. Use of trainers is particularly encouraged for those simulated emergencies and/or scenarios that present significantly increased risk when performed in an aircraft. If no such device is available, the aircraft cockpit may be used. Evaluation flights in aircraft that require simulated emergencies should be avoided while deployed at sea.

Note

- Commanding officers may extend the expiration date of all NATOPS qualifications that would otherwise expire during the last 90 days of a long deployment. NATOPS qualifications that are due to expire prior to the last 90 days of a long deployment should be renewed prior to deployment. The expiration date for the extension shall not be later than 90 days after return from deployment.

- Extension letters shall be filed permanently with the NATOPS check form (OPNAV 3710/7) for which the extension is granted in section III, Part D (NATOPS Evaluation Record) of the NATOPS Flight Personnel Training Qualification Jacket. See paragraph A.2.3). An appropriate flight log book entry should also be made.

b. Evaluees who receive a grade of Unqualified on a ground or flight evaluation shall be allowed 30 days in which to complete a reevaluation. At the discretion of the commanding officer, the reevaluation need only consist of those areas/subareas in which a grade of Unqualified was

assigned. A maximum of 60 days may elapse between commencement of the initial ground evaluation and the date the evaluation flight is satisfactorily completed. Type commanders may waive the time limitations under circumstances making compliance impracticable.

c. Disposition of evaluees who fail the reevaluation shall be in accordance with directives by the COG advisory group member.

d. While this instruction and the individual NATOPS publications establish standards for grading individual performance, they do not relieve the NATOPS evaluator or instructor from using sound judgment based upon knowledge and experience. The NATOPS evaluation flight is intended to measure performance with regard to knowledge of and adherence to prescribed procedures. Any tendency to extend the evaluation into the areas of pilot proficiency or weapons readiness must be avoided.

2.7.5 Ground Evaluation. Prior to commencing the evaluation flight, an evaluee must achieve a minimum grade of Qualified on the open book and closed book examinations. The oral examination is also part of the ground evaluation, but may be conducted as part of the flight evaluation. To assure a degree of standardization between units, the Model Manager shall prepare and maintain a bank of questions and answers for use by unit NATOPS instructors in preparing the written examinations. The areas to be evaluated in the ground phase shall be delineated in the individual aircraft model NATOPS manual.

a. Examinations — The maximum and minimum number of questions and the time limits for the written examinations shall be specified in the manual. The oral examinations may be conducted prior to or as part of the flight evaluation and should be based on selected general areas outlined in the NATOPS manual.

b. Grading Instructions — Examination grades shall be computed on a 4.00 scale and recorded in the appropriate column of the NATOPS Evaluation Report OPNAV 3710/7 (3-95) (Figure A-8).

(1) Open Book Examination — To obtain a grade of Qualified, an evaluee must obtain a minimum score of 3.5.

(2) Closed Book Examination — To obtain a grade of Qualified, an evaluee must obtain a minimum score of 3.3.

(3) Oral Examination — Questions may be taken from the NATOPS manual, question banks, or drawn from the experience of the instructor/evaluator. Such questions should be direct and positive and should in no way be opinionated. A grade of Qualified or Unqualified shall be assigned.

2.7.6 Evaluation Flight. The areas, subareas, critical areas, and critical subareas of an evaluation flight shall be specified in the NATOPS manual. It may be conducted on any operational or training flight or in an OFT. The following procedures shall be used in determining the final grade.

a. A grade of Unqualified in any critical area or critical subarea will result in an overall grade of Unqualified for the flight.

b. Evaluation flight (or area) grades shall be determined by assigning the following for each subarea: UQ (Unqualified), CQ (Conditionally Qualified), or Q (Qualified). All areas graded less than Q shall be justified in the evaluator's remarks. An overall grade of less than Q for the flight shall be justified in the evaluator's remarks.

c. Evaluation flights resulting in an overall grade of less than Q shall contain the unit commander's remarks concerning the qualifications of the NA/NFO evaluated.

d. Evaluation worksheets and kneepad worksheets contained in the applicable NATOPS manual shall be used during the evaluation flight.

2.7.7 Documentation/Record

a. A NATOPS evaluation report, OPNAV 3710/7 (3-95) (Figure A-8), shall be completed and signed by the NATOPS evaluator/instructor for each evaluation conducted, and forwarded directly to the evaluee's commanding officer.

b. For each pilot and NFO evaluee, the evaluee's commanding officer shall make remarks on the evaluation report regarding the aviation skills and future potential of the evaluee. The evaluee's commanding officer, who need not be aviation-qualified, shall then sign the NATOPS evaluation report as the unit commander. Neither of these responsibilities shall be delegated. The report shall then be filed in the individual's flight training jacket. Commanding Officers are strongly encouraged to make remarks on the aviation skills and future potential of all pilots/NFOs/aircrewmen.

c. An entry shall be made in the pilot/NFO/enlisted air crewmen flight logbook under "Qualifications and Achievements" as shown in Figure 2-14.

QUALIFICATION	
"NATOPS EVAL."	(AIRCRAFT MODEL)
"DATE"	
(CREW POSIT.)	(DATE)
"SIGNATURE"	
(Authenticating signature)	(Unit that administered evaluation)

Figure 2-14. Sample Pilot/NFO/Enlisted Aircrew Flight Logbook Entry

2.7.8 Unit NATOPS Evaluation. A unit NATOPS evaluation shall be conducted every 18 months by the appropriate NATOPS evaluator and shall follow the same procedures delineated in paragraphs 2.7.4 through 2.7.7. Additionally, the unit NATOPS evaluation shall be administered as follows:

a. It shall include one or more individual NATOPS evaluations for each crew position (ground evaluation and an evaluation flight) and be administered to flight crewmembers selected at random by the evaluator to measure overall adherence to NATOPS procedures.

b. The evaluation may be conducted as a part of command inspections if so scheduled by the NATOPS coordinator.

c. The unit commander alone shall be informed in writing of the results of the evaluations and the effectiveness of the NATOPS program within the command. In instances where an unsatisfactory level of unit adherence to NATOPS is uncovered, the evaluator shall forward an appropriate description of the discrepancies to the appropriate type commander via the unit commander and normal chain of command.

d. The 18-month evaluation cycle may be extended to a maximum of 24 months by the NATOPS evaluator for circumstances such as extended deployments, but only for units whose previous evaluations indicated a high degree of NATOPS program effectiveness.

CHAPTER 3

Policy Guidance

3.1 POLICY CONCERNING USE OF AIRCRAFT

3.1.1 Special Policies

3.1.1.1 Emergency and Humanitarian Operations. Naval aircraft operations are authorized in emergencies such as forest fire prevention, search, rescue, major calamities, and for humanitarian reasons involving life-threatening circumstances. Notification of the operation shall be made to CNO or CMC, as appropriate, and the responsible local commander, but without delaying action when time is an essential factor.

3.1.1.2 Theater Indoctrination Training. Prior to operating at other than U.S. airports, commands/ detachments shall receive specific training for the theater(s) in which the unit will operate. As a minimum, this training shall include a thorough review of theater-unique instrument requirements and procedures, the use of non-DOD instrument approach procedures, required instrumentation for specific approaches, theater weather, and local area procedures.

3.1.1.3 Special Airlift Requirements. Special airlifts shall meet the following requirements:

a. The sole purpose of the flight must be to provide air transportation for the accomplishment of urgent business in the national interest that would suffer if other forms of transportation were relied upon.

b. The flight must be in the national interest or result in cost savings to the Department of the Navy.

3.1.1.4 Assignment of Aircraft to Specific Individuals. Unless otherwise authorized by the Secretary of the Navy, no naval aircraft will be assigned to a specific individual nor shall any individual require a specific aircraft or aircraft crew be made available for exclusive use. This does not preclude the display of pilot and crew names on aircraft.

3.1.1.5 Flights Requested by Civilian Contractors. A civilian contractor request to use naval aircraft for flight(s) not directly associated with the terms of their contract shall be referred to CNO (N780) for authorization.

3.1.1.6 Aircraft Performance Record Attempts

a. Proposed aircraft performance record attempts shall be submitted to CNO (N780) for consideration. Appropriate details, including predicted performance and estimate of results, shall be submitted.

b. The Director, Air Warfare Division, will take appropriate action to obtain the approval of the Assistant Secretary of Defense through the Office of Information and will obtain National Aeronautics Association sanction for the proposed record attempt(s).

3.1.1.7 Celebrations. Rules for participation of naval aircraft in celebrations are currently contained in SECNAVINST 5720.44, Department of the Navy Public Affairs Regulations.

3.1.1.8 Shipment Orders. Shipment orders specifying transfer by air or aircraft do not imply orders or authority for the indicated flight.

3.1.1.9 Travel Orders. This instruction does not grant authority to issue orders to personnel for travel where expenses for the personnel are involved. Such authority originates from instructions issued by the Chief of Naval Personnel (CHNAVPERS) or U.S. Marine Corps, as applicable.

3.1.1.10 Embarkation of Passengers

a. No person shall be enplaned as a passenger nor shall any cargo be embarked on a naval aircraft unless authorization has been granted by competent authority in accordance with applicable directives. (See OPNAVINST 4630.25, and NAVSUP Publication 505.) Military Sealift Command personnel (i.e., CIVMARS), DOD civilian

employees, federal agency technical representatives (Tech Reps), and contract field services personnel may be authorized VOD/COD transportation with approval by competent authority in cases of official business. Reporting Custodians for helicopter detachments embarked onboard MSC/USNS ships may delegate this authority to the designated Officer in Charge embarked on MSC/USNS ships. No person shall be carried in a taxiing aircraft as a passenger unless such person is authorized to fly in it or has been authorized by competent authority to be embarked therein.

b. COMLANTFLT, COMPACFLT, COMUSNAVEUR, COMUSNAVSCENT, COMUSNAVSO, COMNAVEDTRACOM, CMC, COMNAVAIRFOR, COMNAVAIRSYSCOM, COMNAVRESFOR, and CNATRA may authorize Carrier Onboard Delivery/Vertical Onboard Delivery (COD/VOD) transportation for civilian guests and other designated personnel not otherwise qualified for government air transportation. Their authority may be delegated to numbered fleet commanders and type commanders and is granted for the specific purpose of facilitating embarkation/debarkation of these selected individuals when ships are at sea. It shall not be extended to include flights of convenience for the individual(s) concerned. Due consideration shall be given to the age and physiological characteristics of the individuals, particularly when catapult launchings or arrested landings are involved. (See 8.4.7 regarding aeromedical and survival training requirements for passengers.) Night overwater helicopter passenger flights to/from ships are prohibited except in cases of operational necessity. This does not preclude troop movement in support of amphibious exercises (operations) or special operations missions. A medical attendant who is current in approved water survival training (N9 or N13 as a minimum training requirement), and has been properly briefed on emergency egress procedures for that aircraft, may be transferred via return night flight to the ship with approval from the ship's commanding officer.

c. COD/tilt-rotor overwater flights at night are authorized. The following restrictions apply when carrying passengers:

(1) Ship launches and recoveries shall be made during daylight hours.

(2) Ship launches shall be conducted not less than 60 minutes prior to sunset. This time constraint may be waived to 30 minutes by the Battle Group Commander/Amphibious Squadron Commander/Officer in Tactical Command.

d. The pilots in command/mission commanders of a naval aircraft (while absent from home unit) may authorize air transportation for personnel and/or equipment not otherwise qualified for Government air transportation (i.e., civilian physicians, paramedic teams, sheriff department personnel, park rangers, search dogs, medical equipment, etc.) when required for the successful prosecution of a search and rescue (SAR), medical emergency evacuation (MEDEVAC), or disaster relief mission. This authority shall only be exercised when all practical means of obtaining authorization from competent authority in accordance with applicable directives (OPNAVINST 4630.25 and NAVSUP Publication 505) have proven unsuccessful or unavailable. Appropriate authority shall be notified of such air transportation as soon as practicable.

3.1.1.11 Flight Training. Flight training in Navy or Marine aircraft shall not be given to any individual without specific authorization of CNO or CMC.

3.1.1.12 Aircraft of Other Services. Naval aviators may fly aircraft of another service, provided the other service has no objection.

3.1.2 Nonessential Flights. The use of aircraft for nonessential flights shall not be authorized. Any flight open to misinterpretation by the public shall be avoided. Examples of flights that are considered nonessential are as follows:

a. Flights of a routine business nature for which commercial or other military transportation could be more economically substituted

b. Flights for any officer or group of officers, the sole purpose of which is the convenience and/or prestige of the officers concerned and not the performance of official duties or accomplishment of bona fide training

c. Repeated flights to the hometown area of flight personnel concerned

d. Flights coinciding with major sports events or civic celebrations.

3.1.3 Personnel Authorized To Pilot Naval Aircraft. When qualified in accordance with current directives, the following personnel may pilot Navy and Marine Corps aircraft.

Note

Requests for authorization required by the following subparagraphs shall be forwarded sufficiently in advance to allow for staffing through the chain of command prior to the proposed flight.

3.1.3.1 Regular and Reserve Personnel. Regular and Reserve personnel on active duty under appropriate orders to duty in a flying status including:

a. Naval aviators of the Navy and Marine Corps

b. Coast Guard aviators and aviation pilots

c. Students undergoing authorized courses of instruction in flight training

d. Rated pilots of the U.S. Air Force and U.S. Air Force Reserve

e. Army aviators

f. Rated pilots of the Air National Guard and National Guard

g. Aeromedical Dual Designators who are pilots and serving as such under the provisions of OPNAVINST 1542.4.

3.1.3.2 Other Military Personnel

a. Naval aviators under the cognizance of COMNAVAIRES or CG FOURTH MAW whose status as naval aviators has been confirmed by BUPERS or Headquarters, U.S. Marine Corps.

b. Coast Guard aviators and aviation pilots of the Coast Guard Reserve whose status has been confirmed by the Commandant, U.S. Coast Guard

c. Naval, Marine Corps, and Coast Guard Reserve students undergoing authorized courses of instruction in flight training.

d. Officers of the Naval and Marine Corps Reserve not designated as naval aviators, but specifically authorized to pilot aircraft by CHNAVPERS or the Commandant, U.S. Marine Corps.

3.1.3.3 Civilian Aircraft Pilots. Civilian aircraft pilots are those employed in a flight status by agencies or departments of or contractors to the U.S. Government when such flights are in the interest of the U.S. Government and the pilots have been cleared by COMNAVAIRFOR. Authority is delegated to the Commander, Naval Air Systems Command, to approve flights in COMNAVAIRSYSCOM aircraft or in contractor custody. Contractor pilots are not permitted to fly aircraft aboard U.S. naval vessels or to perform public demonstrations in Navy aircraft without specific COMNAVAIRFOR approval. Contractor flight operations and pilot qualifications are governed by NAVAIRINST 3710.1. Flights in naval aircraft other than those in the custody of COMNAVAIRSYSCOM shall be approved by COMNAVAIRFOR.

3.1.3.4 Foreign Military Personnel. Subject to security provisions in existing directives, physically and professionally qualified personnel of foreign nations may be authorized to pilot naval aircraft as follows:

a. The reporting custodian may authorize exchange personnel or personnel attending naval aviation training programs to pilot naval aircraft. Pilot time is not to exceed 110 hours per year except when attached to an operating squadron or as necessary in connection with a course of instruction. Personnel in this category can be designated as pilot in command.

b. Except as indicated in the preceding paragraph, foreign pilots must be accompanied by an U.S. pilot in command. The latter shall exercise all responsibility of command set forth in this instruction. Requests for such operations shall be submitted to COMNAVAIRFOR (N32) for approval.

c. All personnel shall meet the minimum NATOPS qualification for the model aircraft involved.

d. Authority is delegated to Commander, Naval Air Systems Command, to approve flights in COMNAVAIRSYSCOM aircraft or in contractor custody.

3.1.4 Personnel Authorized To Taxi Naval Aircraft

3.1.4.1 Fixed Wing. No one shall be permitted to taxi an aircraft except persons authorized to fly the aircraft or those specifically designated by their commanding officer as taxi pilots after appropriate training or checkout.

3.1.4.2 Helicopter. No one shall be permitted to taxi a helicopter except those persons who are authorized to fly helicopters.

3.1.4.3 Tilt-Rotor. No one shall be permitted to taxi a tilt-rotor except those persons who are authorized to fly tilt-rotors.

3.1.5 Personnel Authorized To Perform Crew Duties in Naval Aircraft

Note

Requests for authorization required by the following subparagraphs shall be forwarded sufficiently in advance to allow for staffing through the chain of command prior to the proposed flight.

3.1.5.1 Military Personnel. Regular and Reserve military personnel under orders by competent authority to active duty or active duty for training who are qualified in accordance with current directives are authorized as flightcrew or flightcrew under training.

3.1.5.2 Civilian Personnel. DOD civilian employees and contractors to DOD may be authorized embarkation as project specialists or selected passengers when required in conjunction with assigned duties or contractual responsibilities. Point-to-point transportation is not authorized under this paragraph. Authority to approve flights for civilian personnel is delegated to the CMC, COMNAVAIRFOR, COMPACFLT, COMLANTFLT, COMUSNAVEUR, COMUSNAVCENT, COMUSNAVSO, COMNAVEDTRACOM, COMNAVAIRSYSCOM, and COMNAVRESFOR for aircraft under their respective control. This authority may be delegated to numbered fleet commanders and type commanders with operational/administrative control.

Note

Civilian personnel authorized in accordance with this paragraph shall comply with the aeromedical and survival training requirements set forth in paragraph 8.4 of this instruction. Contractor flightcrews governed by NAVAIRINST 3710.1 shall meet the requirements of that instruction.

3.1.5.3 Foreign Military Personnel. Subject to security provisions in existing directives, physically and professionally qualified personnel of foreign nations may be authorized to perform crew duties in naval aircraft that is in the best interest of official DOD business. Embarkation may be authorized for the purpose of performing a crew duty such as operating installed equipment or observing aircraft or crew performance. Foreign military personnel must possess proper base or installation visitation authorization.

3.1.5.4 Civilian Law Enforcement Officials (LEO). Embarkation of civilian LEOs is authorized for helicopters and non-ejection seat aircraft. SECNAVINST 5820.7 provides specific guidance for authorized missions. Authority to approve flights for LEO personnel and responsibility for establishing operational procedures is delegated to CMC, COMNAVAIRFOR, COMLANTFLT, COMPACFLT, COMNAVEDTRACOM, COMNAVAIRSYSCOM, and COMNAVRESFOR for aircraft under their respective control. Authority to approve flights may be delegated to numbered fleet commanders and type commanders. Flight requests for high-performance, ejection seat aircraft shall be forwarded to COMNAVAIRFOR or CMC for approval.

Note

LEO personnel authorized in accordance with this paragraph should comply with the aeromedical and survival training requirements set forth in paragraph 8.4 of this instruction when time and facilities permit. The flight approval authority is authorized to waive Chapter 8 requirements. COMNAVAIRFOR (N32) shall be an information addressee on all such waiver requests and approvals.

3.2 ORIENTATION FLIGHTS

This section establishes policy, procedures, and approval authority for orientation flights and implements DOD guidance set forth in OPNAVINST 4630.25.

3.2.1 Purpose

a. Individuals are selected to participate in orientation flights for one of the following purposes:

(1) To familiarize them with an aircraft, its operation, capabilities, requirements, concept of employment, or limitations.

(2) To familiarize them with a base complex from the air for official purposes other than merely sightseeing or goodwill.

(3) To allow FAA personnel to perform official functions that require their infrequent embarkation on naval aircraft.

b. Orientation flights are typically one-time events for participants in a particular model aircraft. Orientation flight status shall not be used to circumvent normal training requirements for individuals required to fly multiple flights in naval aircraft. Orientation flights for midshipmen participating in official training programs may involve multiple flights.

3.2.2 Categories of Eligible Participants for Orientation Flight. Persons who may be authorized orientation flights include:

a. Active duty personnel, Federal employees, and civilian contractors when flights would materially improve job performance and are in the best interest of the Navy and/or Marine Corps.

b. U.S. citizens who, because of position and contacts with various public organizations, can make positive contributions to public understanding of the roles and missions of the Navy and/or Marine Corps (e.g., persons affiliated with the news media, entertainment personalities). Flights of this nature are designated public affairs orientation flights. Participants must be carefully selected to ensure that the greatest benefit to understanding Navy and/or Marine Corps missions can result from such flights. Individuals shall not be selected for public affairs orientation flights solely in an effort to engender goodwill or as a reward for unusual service to the Navy and/or Marine Corps.

c. Personnel who, because of their group affiliation, are authorized orientation flights by separate directives (e.g., Explorer Scouting Program Senior Explorers/leaders, Navy League Sea Cadets, Civil Air Patrol, Naval Academy Midshipmen, Reserve Officer Training Corps/Naval Reserve Junior Officer Training Corps (ROTC/NJROTC) students), officer students enrolled at the Uniform Services University of Health Sciences or in the Health Professions Scholarship Program and other such groups as may be designated by CNO.

d. Federal Aviation Administration (FAA) employees under the following conditions:

(1) FAA employees engaged in flight-checking local military air traffic control procedures and facilities, navigational aids, communications and approach and departure procedures only when such flights are coordinated by the appropriate regional Navy Representative, FAA.

(2) FAA flight examiners engaged in the evaluation or examination of rated aircrew personnel of the Military Department for civil pilot, navigator, or engineer certificates or ratings.

(3) FAA employees participating in approved military familiarization flights under existing arrangements between the Navy and the FAA, if seating position permits direct monitoring of aircrew duties.

e. U.S. Ambassadors or their senior deputies, within overseas theaters, when invited by the overseas unified or Component commander, when the commander determines that the orientation flight is primarily in support of the DOD mission.

f. Federal/local Government officials, foreign officials, and members of Congress and their staffs.

g. Foreign personnel, either military or civilian, who require orientation flights in military aircraft for

scientific research, development, test and evaluation (RDT&E) or training evaluation; and, to support the Military Assistance Program (MAP)/Foreign Military Sales (FMS).

h. Foreign military personnel of nations participating in and during the course of bilateral or multinational operations or exercises. Flights may be by shore-based aircraft or may originate and/or terminate on board ship. Fleet Commanders are authorized to approve night shorebased only orientation flights for foreign qualified aircrew.

3.2.3 Flight Prerequisites

a. All personnel participating in orientation flights shall receive an appropriate physical screening or examination. The scope of this screening or examination shall be determined by the reporting custodian flight surgeon but shall also include clearance for participation in high- and moderate-risk NASTP training.

b. Completion of Naval Aviation Survival Training Program (NASTP) is mandatory for all orientation flight passengers unless the individuals agree to participate in the flight without training and the training requirements are waived specifically by the approving authority. Waivers for selected passenger training will, in general, not be granted. COMNAVAIRFOR (N32) will be an information addressee on all waiver requests and approvals (except USMC).

c. VIPs, military non-aviators, and non-military personnel selected for orientation flights (flight period not to exceed 90 days) shall complete VIP NASTP N2/NP8 training.

d. All midshipmen participating in orientation flights or on a summer cruise with possibility of flying shall complete midshipmen NASTP N2/NP7 training.

e. Non-aviation designated personnel required to fly in an aircraft on a regular basis for mission accomplishment beyond a 90-day flying period shall complete N3/NP3 or N4/NP4 training as detailed in paragraph 8.4.7.1.

f. Non-DOD personnel are required to sign an Air Transportation Agreement, DD Form 1381, as set forth in Chapter 1 of enclosure (1) to OPNAVINST 4630.25 when the orientation flight originates in a foreign country. NATO member nation personnel are exempt from this requirement.

g. Prior to approval of flights by foreign nationals involving access to classified or controlled unclassified information, permission for the disclosure of such information shall be obtained from the Director of Naval Intelligence in accordance with SECNAVINST 5510.34.

h. Parental/legal guardian approval in writing is required prior to participation in orientation flights for anyone under 18 years of age.

i. Passenger briefing:

(1) Passengers shall be briefed on any information that may be pertinent for passenger safety and comfort. Each item should be fully explained to avoid passenger apprehension or confusion.

(2) Passengers occupying flight personnel positions shall be briefed on procedures, controls, and instrumentation.

3.2.4 Flight Limitations

a. Only highly qualified flight personnel shall be selected to conduct orientation flights.

b. All orientation flights shall be conducted within the local flying area and terminate at the point of origin. Flights outside the local flying area may be approved if the specific mission of the orientation flight cannot be accomplished within the local flying area. FAA personnel may be enplaned on a noninterference basis in order to conduct aircrew examinations or participate in familiarization flights (as defined in paragraph 3.2.2.d) for other than local flights within their own FAA region.

c. Orientation flights involving third-nation nationals into or over foreign countries will not be approved unless confirmation of entry and/or overflight clearance for such third-nation nationals has been received from the foreign government(s) concerned in accordance with the NIMA Foreign Clearance Guide.

d. Except for flights with FAA personnel, orientation flights shall be performed only during daylight and with weather minimums equal to or better than VFR.

e. FAA examiners shall not be permitted to pilot an aircraft without an assigned Navy or Marine Corps pilot in command who shall exercise all responsibility of command set forth in this instruction.

f. Formation flying shall not be performed unless required for a specific purpose and authorized by the controlling custodian of the aircraft to be used.

g. Orientation flights in high-performance jet aircraft shall not be approved except when the specific aircraft utilized is integral to the orientation flight purpose.

h. Orientation flights operating from an aircraft carrier are not encouraged because of the extra hazards inherent in carrier operations. Such flights may be authorized for midshipmen training, VIPs, MAP, FMS, or warranted within the provisions of paragraph 3.2.2.h. COD/VOD flights, used only as a means to embark or debark personnel at sea, are not orientation flights and are therefore exempt from the provisions of this paragraph.

i. An aircraft accepted into the naval inventory shall not be used for orientation flights by contractor flightcrews unless it has been provided to the contractor under a Naval Air Systems Command contract. The use of naval aircraft under lease to contractors for orientation flights is governed by terms of the lease agreement and may not be subject to the policy and procedures contained in this instruction.

j. Flights shall be conducted at no additional cost to the Government on a noninterference basis with operations and training unless a waiver is granted by the approving authority.

k. Orientation flights may not include those flights where a record attempt is made, a first flight is made on an aircraft just accepted into the inventory, a first flight over an isolated geographical area, or any other flight of a similar or special nature where abnormal conditions may exist.

l. Individuals occupying a seat with flight controls during orientation flights are permitted to fly the aircraft during non-critical phases of flight subject to Commanding Officer and pilot-in-command approval.

3.2.5 Approval Authority. Flight approval authority includes waiver authority for NASTP training and specific elements therein. This waiver authority shall be applicable only for orientation flights. Letters or messages authorizing orientation flights and training waivers shall contain specific verbiage on what is being approved and waived (e.g., NASTP aviation water survival elements). For all other NASTP waivers, Chapter 8 applies.

Note

Requests shall be forwarded sufficiently in advance to allow for staffing through the chain of command prior to the proposed flight.

a. Subject to the limitations in subparagraphs (1) through (4) for approval of certain types of orientation flights, the CMC; COMNAVAIRFOR, COMLANTFLT; COMPACFLT; COMUSNAVEUR; COMUSNAVCENT; COMUSNAVSO; COMNAVAIRSYSCOM; COMNAVEDTRACOM and COMNAVRESFOR are authorized to approve orientation flights in aircraft under their respective operational control, to act on requests involving shipboard catapult launches and/or arrested landings, and to act on requests for exceptions to the basic guidelines as set forth in the foregoing subparagraphs of this section. Delegation of approval authority to numbered Fleet Commanders, Type Commanders (TYCOM) and CNATRA is authorized.

(1) Orientation flights for members of Congress or their staffs require prior concurrence from the Chief of Legislative Affairs.

(2) Retiring members of Congress and retiring congressional staff members may be flown on orientation flights aboard military aircraft only upon the written approval of the Assistant Secretary of Defense for Legislative Affairs.

(3) Public affairs orientation flights or orientation flights for public figures where the resulting presentation or publicity will receive national or international distribution or interest require prior concurrence from the Chief of Information (except flights approved in paragraph 3.2.5.b (5)).

(4) Orientation flights for U.S. Ambassadors or their senior deputies within overseas theaters must be approved by the theater unified or component commander.

(5) Authority is delineated in OPNAVINST 4630.25 concerning specific procedures for approval of flights requested for diverse groups such as ROTC students, NJROTC students, Explorer Scouting Program Senior Explorers and leaders, and the Civil Air Patrol. Any flights so approved shall be subject to the provisions of paragraphs 3.2.3 and 3.2.4.

b. To expedite action and simplify procedures for approving certain routine flights, further delegations of approval authority are contained in subparagraphs (1) through (9).

(1) Reporting custodians or higher authority for military personnel on active duty or on active duty for training only for orientation flights in aircraft not equipped with ejection seats and/or personal oxygen systems (excluding emergency oxygen systems).

(2) Type-Wing Commander/Carrier Air Wing Commander/CMC (AVN) for active duty personnel as recognition for superior performance in aircraft equipped with ejection seats and/or personal oxygen systems. These flights shall not involve shipboard catapult launch and/or arrested landing. Commanders listed in paragraph 3.2.5 retain NASTP requirements approval and waiver authority.

(3) Reporting custodian or higher authority for Federal employees, government officials, or civilian contractors for the purposes of familiarization of a base complex or operating area in aircraft not equipped with ejection seats and/or personal oxygen systems (excluding emergency oxygen systems).

(4) COMNAVAIRSYSCOM for flights in aircraft under NAVAIRSYSCOM controlling custody and those aircraft that have been ordered but not accepted by the Navy from a manufacturer.

(5) CNATRA for all news media personnel to be given orientation flights by the U.S. Navy Flight Demonstration Squadron (Blue Angels).

(6) CNATRA orientation flights for contract flight instructors, faculty members, NROTC students, and non-NROTC senior college students participating in the NROTC Aviation Indoctrination Program.

(7) Appropriate COMFAIR of flag rank; CNATRA; MARFORLANT; MARFORPAC; CG FOURTH MAW; COMNAVAIRES; and their seniors in the chain of command for FAA air traffic control specialists and FAA examiners. CNATRA may delegate to reporting custodians the authority to approve requests for FAA examiner personnel to fly on local flights when engaged in the evaluation or examination of Naval Air Training Command (NATRACOM) military personnel.

(8) CNATRA or TYCOM for influential persons who have potential to directly influence local recruiting efforts. Commander, Navy Recruiting Command shall coordinate with appropriate authority for approval. A copy of approval letters shall be forwarded to COMNAVAIRFOR (N32), COMNAVEDTRACOM (00P), CNATRA (N-33), and COMNAVSAFECEN (Code 11). Flights in high performance aircraft are not authorized.

(9) Task force commanders of flag rank within the numbered fleets or the fleet commander for foreign military personnel authorized under paragraph 3.2.2.h.

3.3 FLIGHT DEMONSTRATIONS AND STATIC EXHIBITS

3.3.1 Naval Aircraft Participation. Participation of naval aircraft, other than the scheduled appearance of the flight demonstration squadron, in any airborne display is not encouraged and should only be approved in the most exceptional and carefully considered situations (e.g., occasional flights at unique aviation related events and station open houses; however, does not include routine changes of command, sporting events, etc.). Static displays by naval aircraft at aviation events are encouraged within the limits of available resources. The approving command shall ensure that a safe, professional and appropriate event is conducted weighing the risks against the benefits of any airborne demonstration (to include demonstration parachute jumps). Approval authorities are required to ensure event coordinators obtain necessary FAA/ICAO waivers in a timely manner. SECNAVINST 5720.44 further discusses participation of naval aircraft at public and private gatherings.

3.3.2 Approval Authority. The CMC, COMLANTFLT, COMPACFLT, COMUSNAVEUR, COMUSNAVCENT, COMUSNAVSO, COMNAVAIRSYSCOM, COMNAVAIRFOR, COMNAVEDTRACOM, and COMNAVRESFOR may authorize flight demonstrations sponsored by respective subordinate commands and activities. Their authority may be delegated to numbered fleet, type, and Echelon 3 commanders.

3.3.3 Regulations. The following regulations apply to participation in flight demonstrations and static displays:

a. Flight personnel assigned to participate in flight demonstrations should be those with the maximum training and experience. No pilot shall be permitted to participate who has not currently demonstrated to the commanding officers satisfaction complete familiarity with the flight characteristics by performing with precision and safety all maneuvers to be demonstrated.

b. No extra hazardous or unusual maneuvers shall be planned or permitted at the demonstration. Routine maneuvers shall not be conducted in a manner that could make them hazardous (i.e., at excessively low altitudes or with undue close interval between aircraft). Care shall be exercised in planning and conducting the demonstration to provide maximum safety to personnel and property in event of mishap. Any ordnance delivery or expenditure in connection with a demonstration ashore for nonmilitary personnel shall receive prior specific approval from the type commander concerned.

c. Coordination shall be achieved with air traffic control authorities exercising jurisdiction over the affected airspace.

d. When deciding whether to allow public access to naval equipment, any probability of risk must be considered. Any doubt shall be resolved by limiting or denying public access and strictly enforcing the decision once it has been made.

e. Personnel assigned to aircraft static displays shall be selected for their maturity, appearance, personality, demonstrated soundness of judgment, and knowledge of equipment. Commanding officers shall ensure that the pilot in command is particularly sensitive to any hazards that the aircraft might present to an uninformed spectator.

f. The aircrew of an aircraft used for static display shall be in attendance at the aircraft and dressed in appropriate flight clothing at all times the public has access to the aircraft. They shall take precautions to prevent damage to aircraft and ensure public is safeguarded from aircraft hazards.

g. The public shall be denied access to the interior of all aircraft employing ejection seats or other installed pyrotechnic devices that could cause injury.

h. Ancillary equipment (workstands, etc.) must be in good condition and suitable for the purpose for which use is intended. If in the case of workstands or platforms, sufficient aircrew or other competent supervisory personnel are not available to control spectator loading to safe limits, then access shall not be permitted.

i. Aircraft selected for static display shall be clean, well painted, and prepared for public inspection.

3.3.4 Exception. The U.S. Navy Flight Demonstration Squadron, which is specially trained for such flight exhibitions, is not bound by paragraph 3.3, but will be employed in accordance with the instructions of CNATRA and the on-scene commander in each instance.

3.3.5 NATO Flight Demonstrations. Flight demonstrations (including parachutists) involving aircraft of more than one NATO nation shall be conducted in accordance with NATO Standardization Agreement (STANAG) 3533, Safety Rules for Flying Displays.

3.3.6 NATO Live Weapons Demonstrations. For NATO standardization and safety purposes, the rules and procedures for the planning and conduct of live air weapons demonstrations as specified in NATO STANAG 3564FS, Rules for Live Weapons Demonstrations, shall be adhered to when the nation is either the operator of the weapon system or is responsible for the range on which the demonstration is being held.

3.4 EMPLOYMENT OF NAVAL AVIATORS BY CIVILIAN CONTRACTORS

Civilian contractors to the Federal Government cannot legally employ a naval officer on the active list to give flight demonstrations of aircraft intended for the United States Government.

3.5 COMMAND

A naval aircraft or formation of naval aircraft shall be flown under the command of a pilot in command, mission commander, or formation leader, as appropriate, and so designated by the reporting custodian or higher authority. The status of each individual participating in the mission or formation shall be clearly briefed and understood prior to takeoff and must be indicated as required by DOD FLIP General Planning. When a flight schedule is published, the pilot in command, mission commander, or formation leader shall be specifically designated for each aircraft or formation, as appropriate. Reporting custodians shall establish minimum requirements of initial qualification and requalifications for each model aircraft in their custody and for each flight phase and/or mission normal to the aircraft models (i.e., day solo, night solo, functional check, FCLP, air combat maneuvers (ACM), night combat air patrol (CAP), intercepts, airborne early warning (AEW), barriers, etc.). They shall be guided by the requirements of this instruction where applicable and by appropriate NATOPS manuals. Flight personnel meeting those requirements may be considered qualified in model and phase and are eligible for designation as pilot in command, mission commander, or formation leader for a specific mission.

3.5.1 Pilot in Command. Pilot in command refers to the pilot of an individual aircraft. The pilot in command is responsible for the safe, orderly flight of the aircraft and well-being of the crew. The pilot in command may also be the mission commander or formation leader when so designated. Pilot in command should not be confused with the various qualifications defined in Chapter 12. If there is no NATOPS manual for a particular model aircraft or if an existing manual fails to set forth specific initial qualifications and currency requirements, a pilot shall not be designated as pilot in command unless the pilot has made at least two takeoffs and landings and logged 5 hours of pilot time in the same model aircraft within the preceding 90 days. Also, lacking NATOPS guidance for a specific aircraft, 10 hours first pilot time in model is required for initial qualification. Pilots meeting the criteria may be considered qualified in model and phase and are then eligible for designation as pilot in command. In the absence of direct orders from higher authority cognizant of the mission, responsibility for starting or continuing a mission with respect to weather or any other condition affecting the safety of the aircraft rests with the pilot in command. The authority and responsibility of the pilot in command shall not be transferred during flight. It shall not be transferred to another individual except as required by emergency, operational necessity, or as directed by the commanding officer of the unit to which the aircraft is attached. The authority and responsibility of a pilot in command is independent of rank or seniority in relation to other persons participating in the mission or flight except for the following.

3.5.1.1 Officer in Tactical Command Embarked. Wing, group, or squadron commander, if embarked on a mission involving aircraft of their command, retains full authority and responsibility regarding command, including the mission in which participating.

3.5.1.2 Flag or General Officer Embarked. The pilot in command of an aircraft with a flag or general officer eligible for command at sea or in the field

embarked as a passenger shall be subject to the orders of such flag or general officer in accordance with U.S. Navy Regulations. When such an embarked passenger exercises authority to command the aircraft, that passenger thereby assumes full responsibility for the safe and orderly conduct of the flight. The embarked passenger shall give due consideration to the judgment of the pilot in command regarding items of flight safety such as hazardous weather and aircraft/crew limitations. Flying rule violations, accident reports, and any other actions arising out of the flight will be referred to the embarked passenger as the responsible commander of the aircraft.

Note

The provisions of paragraphs 3.5.1.1 and 3.5.1.2 shall not be used to circumvent normal NATOPS qualification procedures if the officer desires to physically pilot the aircraft. Flights that require a NATOPS-qualified crew shall not be physically piloted by any individual not so qualified; however, the flight may be directed by an officer in tactical command embarked who is not NATOPS qualified.

3.5.1.3 Flight Control Station. The pilot in command shall occupy a flight control station during critical phases of flight (i.e., takeoff, landing, formation flight, functional checkflight (FCF), degraded aircraft performance regimes, etc.). During an Instructor Under Training (IUT) flight in a multi-piloted aircraft, the pilot in command or a qualified IUT Instructor pilot shall occupy one of the flight control stations during critical phases of flight, provided the pilot in command remains in the flight station.

3.5.2 Formation Leader. A formation of two or more naval aircraft shall be under the direction of a formation leader who is authorized to pilot naval aircraft. The formation leader may also be the mission commander when so designated. The status of each member of the formation shall be clearly briefed and understood prior to takeoff. The formation leader is responsible for the safe and orderly conduct of the formation.

3.5.3 Mission Commander. The mission commander shall be a properly qualified naval aviator or NFO designated by appropriate authority. The mission commander may exercise command over single naval aircraft or formations of naval aircraft. The mission commander shall be responsible for all phases of the assigned mission except those aspects of safety of flight that are related to the physical control of the aircraft and fall within the prerogatives of the pilot in command. Mission commander qualifications shall be outlined in appropriate NATOPS manuals. The mission commander shall direct a coordinated plan of action and be responsible for effectiveness of the mission.

3.5.4 Instructors. In those aviation commands where training is conducted, the commanding officer is authorized to designate highly qualified naval aviators and NFOs as instructors. Instructor duties shall be specifically delineated by the unit commanding officer (CO) in formal directives. The instructor will be charged with authority and responsibility to provide appropriate direction to students (naval aviation or NFO) to ensure safe and successful completion of each training mission. The exact function, authority, and responsibility of the individual flight instructor are dependent upon the training mission and the crew assigned as issued in approved training syllabuses. On those training missions where a pilot under instruction is the pilot in command, instructor guidance shall be advisory in nature and under no circumstance shall pilots in command be relieved of their authority and responsibility as outlined in paragraph 3.5.1. Termination of the training or evaluation portions of the flight for reasons of safety, unsatisfactory performance, or material discrepancy shall be the instructor's prerogative.

3.6 AIRCREW COORDINATION/CREW RESOURCE MANAGEMENT

The objective of the Aircrew Coordination Training (ACT)/Crew Resource Management (CRM) Program is to integrate the instruction of specifically defined behavioral skills throughout Navy and Marine Corps aviation training, and to integrate the effective application of these behavioral skills into operational aviation procedures wherever appropriate. ACT will increase mission effectiveness, minimize crew preventable error, maximize aircrew coordination, and optimize risk management.

Commanders shall ensure that all personnel whose duties involve flying as an aircrew member in naval aircraft receive ACT. ACT shall be conducted annually, including an academic portion and a flight/simulator evaluation. Annual recurrency training shall be recorded in the NATOPS jacket in accordance with OPNAVINST 1542.7.

3.6.1 Critical Behavioral Skills. The critical behavioral skills that form the basis of ACT are:

a. Decision making. The ability to choose a course of action using logical and sound judgment based on available information. Effective decision making requires:

(1) Assessing the situation

(2) Verifying information

(3) Identifying solutions

(4) Anticipating decision consequences

(5) Making the decision

(6) Telling others of the decision and rationale

(7) Evaluating the decision.

b. Assertiveness. An individual's willingness to actively participate, state, and maintain a position, until convinced by the facts that other options are better. Assertiveness is respectful and professional, used to resolve problems appropriately, and to improve mission effectiveness and safety.

c. Mission Analysis. The ability to develop short-term, long-term, and contingency plans and to coordinate, allocate, and monitor crew and aircraft resources. Effective planning leads to flight conduct that removes uncertainty, increases mission effectiveness, and enhances safety.

d. Communication. The ability to clearly and accurately send and acknowledge information, instructions, or commands, and provide useful feedback. Effective communication is vital to ensure that all crewmembers understand aircraft and mission status.

e. Leadership. The ability to direct and coordinate the activities of other crewmembers or wingmen, and to encourage the crew to work together as a team. There are two types of leadership:

(1) Designated Leadership — Leadership by authority, crew position, rank, or title. This is the normal mode of leadership.

(2) Functional Leadership — Leadership by knowledge or expertise. Functional leadership is temporary and allows the most qualified individual to take charge of the situation.

f. Adaptability/Flexibility. The ability to alter a course of action based on new information, maintain constructive behavior under pressure, and adapt to internal and external environmental changes. The success of a mission depends upon the crew's ability to alter behavior and dynamically manage crew resources to meet situational demands.

g. Situational Awareness. The degree of accuracy by which ones perception of the current environment mirrors reality. Maintaining a high level of situational awareness will better prepare crews to respond to unexpected situations.

3.6.2 Ineffective ACT/CRM. Ineffective ACT/CRM can result in one or more of the following:

a. Loss of Aircraft/Aircrew

b. Flight/Ground Mishap

c. Violation of FAR 91

d. Violation of NATOPS/flight minimums

e. Violation of SOP

f. Poor Mission Effectiveness and Accomplishment

g. Degradation of Unit Readiness.

3.6.3 Effective ACT/CRM Training. Optimal ACT/CRM training is integrated, research-based, and skill-oriented, incorporating the Information, Demonstration, Practice, and Feedback Instructional Methodology. The success or failure of Crew Resource Management rests ultimately with each individual performing duties as an aircrew member in naval aircraft. Naval Aircrew shall exhibit thorough knowledge of self, aircraft, team, environment, the seven critical skills, and risk to employ sound and logical judgement in the prevention of human errors. More information is available through the U.S. Navy ACT/CRM website at www.act.navy.mil.

3.7 OPERATIONAL-RISK MANAGEMENT

Operational-Risk Management (ORM) is a systematic, decision making process used to identify and

manage hazards that endanger naval resources. ORM is a tool used to make informed decisions by providing the best baseline of knowledge and experience available. Its purpose is to increase operational readiness by anticipating hazards and reducing the potential for loss, thereby increasing the probability for success to gain the competitive advantage in combat. ORM is not just related to naval aviation; it applies across the warfighting spectrum.

3.7.1 ORM Process Description

a. ORM employs a five-step process:

(1) Identify hazards

(2) Assess hazards

(3) Make risk decisions

(4) Implement controls

(5) Supervise.

b. The ORM process is utilized on three levels based upon time and assets available.

(1) Time-critical: A quick mental review of the five-step process when time does not allow for any more (i.e., in-flight mission/situation changes).

(2) Deliberate: Experience and brain storming are used to identify hazards and is best done in groups (i.e. aircraft moves, fly on/off).

(3) In-depth: More substantial tools are used to thoroughly study the hazards and their associated risk in complex operations (i.e., Weapons Det).

c. The ORM process is guided by the four principles:

(1) Accept risk when benefits outweigh the costs

(2) Accept no unnecessary risk

(3) Anticipate and manage risk by planning

(4) Make risk decisions at the right level.

3.7.2 Enhancing ORM. To enhance ORM awareness and standardization, the NATOPS model manager shall incorporate risk management concepts and wording into crew coordination and flight planning sections of the individual aircraft NATOPS manuals.

3.8 FUNCTIONAL CHECKFLIGHTS

The requirements for functional checkflights are stated in OPNAVINST 4790.2. Commanding officers shall ensure compliance with the following.

3.8.1 Crew Composition. Functional checkflights shall be conducted with the minimum crew required for safe flight. All flight personnel shall be fully qualified in accordance with this instruction and the applicable NATOPS manual. Appropriate maintenance quality assurance and project specialist personnel required to accomplish the functional check may be utilized, provided they meet minimum aviation physiology and water survival training requirements. Passengers shall not be carried. The pilot in command shall be designated in writing by the commanding officer as a functional check pilot for either a full-system check or the partial system(s) to be checked.

3.8.2 Weather Criteria. Functional checkflights should be conducted during daylight hours within the local flying area in VMC. If necessary to accomplish the assigned mission, unit commanders may authorize checkflights under conditions other than the above if in their opinion the flight can be conducted with an acceptable margin of safety under the existing conditions. The authority shall not be delegated. Those portions of the flights that are considered critical shall be conducted in the vicinity of a suitable landing area.

3.9 REPORTING AND RECORDING OF DEVIATIONS AND VIOLATIONS OF FLYING REGULATIONS AND MISHAP INFORMATION

This section details the procedures for alleged violations of service or Federal flying regulations. Generally, commanders or commanding officers will receive notification of an alleged deviation by a member of their command via a copy of FAA 8020-11, Federal Aviation Administration Incident Report. Paragraph 3.9.6 delineates the responsibility of the command for flight incidents. Reports of alleged violations received from the Federal Aviation Administration will be

forwarded to CNO (N785F) and will be processed as a major infraction. Major infractions are those that have general public, Congressional, or service interest (i.e., any infraction that cannot be resolved administratively at the command level).

3.9.1 Reports of Investigations of Violations of Flying Regulations

3.9.1.1 Responsibility. An alleged violation of flying regulations falls within the purview of U.S. Navy regulations. The responsibility to conduct the investigation into an alleged flight violation belongs to the immediate superior in the chain of command of the individual involved. However, activities whose base facilities and/or aircraft are used by pilots not attached to those activities are responsible for conducting the investigation and for notifying the commanding officer of the individual involved.

3.9.1.2 Procedures. Investigation and reporting procedures shall be in JAGMAN format using the guidelines and rules contained in JAGINST 5800.7, Manual of the Judge Advocate General. Each fact must be supported by testimony, documentary, or real evidence. Statements of the pilots concerned should be included along with maintenance action forms, flight schedules, and other documentary evidence. The report of violation of flying regulations is administrative in nature, and statements taken thereunder may not be the basis of subsequent legal or disciplinary proceedings unless the provisions of Uniform Code of Military Justice (UCMJ) Article 31 have been observed.

3.9.1.3 Intent. Lack of intent does not in itself constitute absence of culpability. One can be so grossly negligent as to equate omission with commission. The question is whether the pilot in command or the formation leader could reasonably have been expected to avoid the violation.

3.9.1.4 Content of Report. In making a report of an alleged violation of flying regulations, the commanding officer shall state a conclusion as to whether the alleged violation actually occurred, and if so:

a. A conclusion as to whether or not the pilot in command was culpable in the light of pilot responsibilities and any mitigating or extenuating circumstances that may have existed.

b. Any action taken, pending, or recommended.

Note

The authority to issue a flight violation lies solely with the Chief of Naval Operations.

3.9.1.5 Forwarding of Report. With the exception of alleged air defense identification zone (ADIZ) violations, reports regarding naval personnel shall be forwarded to CNO (N785F) via the chain of command. Alleged flight violations involving USMC personnel shall be forwarded through CMC (ASM) prior to final processing by CNO (N787F). Each endorser shall indicate concurrence/non-concurrence with the commanding officers report. Under no circumstances shall a report of investigation be released to any agency outside the Navy without prior approval of CNO (N78). Direct communication with commands (activities/agencies) outside the naval service in connection with violations shall be limited to that authorized in the basic instruction.

3.9.1.6 Time Limits on Action of Each Report of Investigation

a. To expedite action on a report of an investigation of an alleged violation, investigation by military agencies are limited as follows:

   (1) By the investigating unit — within 14 duty days from time of receipt.

   (2) By each intermediate command — within 7 duty days from time of receipt.

b. Each report will reach the appropriate final addressee within 60 days except in the following cases:

   (1) When a commander cannot complete an investigation within the above time schedule, the commander will notify the final addressee of the reason for the delay and give an estimate of when the investigation will be forwarded.

   (2) When Field Naval Aviator Evaluation Board (FNAEB) or Field Flight Performance Board (FFPB) proceedings are involved, the commander will be governed by current regulations (NAVMILPERSMAN ART. 3410300) or Marine Corps Order 1000.6 (ACTS) Manual as appropriate. Inform CNO (N785).

A FNAEB or FFPB does not relieve the command of the requirement to conduct a JAGMAN investigation.

(3) When a commander takes UCMJ action as a result of a flying violation, the commander will promptly forward the report of investigation and inform the final addressee of any pending action. An officer who exercises general court-martial jurisdiction will inform the final addressee of the final appellate action taken in each general and special court-martial case involving a violation of flying regulations.

c. The final addressee for flight violation processing is CNO (N785F).

3.9.2 FAA Reports and Cooperation. When requested to do so by FAA, commands:

a. Shall not release the names of the aircrew; names are to be released only by CNO.

b. May furnish only factual information (excluding aircrew names) that would normally be available to air traffic facilities; this response shall not contain any conjectures, assumptions, or hearsay.

Note

Each command shall ensure that all attached/ assigned aircrew and air operations personnel understand that:

(1) They may make oral or written statements to FAA personnel, but that such a statement is voluntary and may be used against the individual making the statement.

(2) Reports required by Part 91 of the FARs are mandatory; they are not included in the foregoing policy.

3.9.3 Applicability of Flying Regulations Other Than Naval. Pilots flying naval aircraft are responsible for compliance with flying regulations of other agencies, military or civil, only to the extent specifically provided by OPNAV directives (see paragraphs 1.2.4 and 1.2.5).

3.9.4 Alleged Air Defense Identification Zone Violations. Commanders receiving a report of an alleged ADIZ violation will investigate the report promptly. Results of such an investigation will be forwarded to the immediate superior. Reports shall contain the following:

a. Conclusions

b. The action(s) taken or recommended to prevent a recurrence

c. The nature of any disciplinary action taken.

3.9.5 Flight Personnel Training/Qualification Jacket Entry/Aviators Flight Log Book Entry. An entry of a violation into Flight Personnel Training/ Qualification Jacket and Aviators Flight Log Book will be made at the sole direction of CNO and will be made in accordance with paragraph 10.5.2 and Appendix A. Care shall be exercised to avoid the use of information from aircraft mishap board members, mishap reports, and endorsements, including the COMNAVSAFECEN endorsement, as a basis for the entries.

3.9.6 Incident Reports

a. Pilots in command and local commanders will ensure that deviations from ATC clearances and instructions, which result because of emergency or operational necessity, are reported to FAA immediately. Refer to FAR, Part 91 Sections 91.3 and 91.123.

b. Incident reports (FAA 8020-11) are sent from FAA to the Department of the Navy Representatives (NAVREPs). The NAVREPs shall forward the reports to the appropriate commands for information.

c. Subsequent FAA investigation of flight incidents may reveal that the deviation involved a violation of the FARs. If a violation is found, the incident is further processed as an alleged flight violation and FAAs investigation is sent to CNO ((N785F) for processing in accordance with paragraph 3.9.1. Because of the lengthy FAA investigative process, as much as a 1-year delay may occur before the responsible naval commands receive notification of an alleged flight violation. Because of such delays, commands are advised to make and retain statements concerning incidents in the

event the incidents are subsequently processed as flight violations.

3.10 CROSS-COUNTRY PLANNING

3.10.1 Cross-Country Flight. A cross-country flight is any flight that either does not remain in the local flying area or remains in the local flying area and terminates at a facility other than an active military facility. This includes out and ins. Commanding officers must ensure that these flights contribute to the mission of the command and the naval service, achieve training requirements, and can be completed safely. Commanders/commanding officers shall ensure a thorough risk assessment has been conducted for the proposed cross-country flight. The following preflight planning checklist provides additional factors which should be considered by the approving authority. These risk considerations are not intended to impose unnecessary restrictions on those flights that are deemed necessary for the training and experience of aviators/aircrew or those evolutions which contribute to the missions of the naval service.

a. Does the cross-country flight achieve training objectives as established in a training syllabus or training/readiness matrix?

b. Does the flight contribute to the mission of the command or the naval service?

c. Could this flight be perceived by the public as not in the best interest of the U.S. Government?

d. If the flight is exclusively for the transportation of the aircrew, is the purpose to meet operational commitments? If so, is alternate transportation, commercial or military, readily available? More economical?

e. Is this flight planned exclusively for the convenience and/or to enhance the prestige of the officers concerned?

f. Is there a major sporting or civic event scheduled at the destination? Cross-country flights are not authorized to these destinations.

g. Is the cross-country destination the home town of any of the crewmembers? A flight to ones home town is legal, provided repeated flights are not performed (refer to paragraph 3.1.2). Is there a personal event such as a wedding, family reunion, graduation, etc. that a member of the flight is trying to attend? Is it in the hometown of anyone on the aircraft or a destination that has been repeatedly flown to by the aircrew?

h. Has the aircrew thoroughly planned all aspects of the flight? Are they qualified and properly designated to conduct the flight?

i. Is proper security for the aircraft adequate at the intended destination? The alternate?

j. Does the flight meet squadron, wing, and TYCOM directives?

k. Have adequate maintenance precautions been planned to ensure proper servicing and maintenance of the aircraft is performed?

3.10.2 Risk Assessment. The above checklist is derived from policy guidance contained in other sections of this manual. This list is not all-inclusive, since it does not cover unique risk factors determined by squadron mission, employment, operating environment, geographical location, aircraft type, model, series, and aircrew personal factors. However, it should provide a starting point for conducting a thorough risk assessment of each intended flight. The commanding officers written authorization and the signature of the pilot in command on the flight plan indicate that a thorough risk assessment has been conducted.

3.10.3 Implementation. This guidance is not intended to reduce the frequency and/or value of a unique and productive training opportunity, nor is it intended as a substitute for thorough planning, sound airmanship, and good headwork. Type, wing, and squadron commanders shall ensure appropriate procedures are in place for consistent implementation and monitoring of full compliance with this guidance.

3.11 TERMINAL INSTRUMENT PROCEDURES

3.11.1 General. Except when this requirement is waived for a flight in support of a nonstandard operation, aircrews flying passenger and/or troop-carrying aircraft shall not fly an instrument approach that

has not been validated as safe and accurate by an U.S. Agency in accordance with:

a. U.S. TERPS — FAA Order 8260.3 (OPNAVINST 3722.16 (NOTAL))

b. ICAO Procedures for Air Navigation Services-Aircraft Operations PANS-OPS or

c. NATO criterion for the preparation of an instrument approach that has been validated to be safe and accurate by another U.S. Government (USG) service in accordance with these standards, categorizes the procedure as a U.S. Government procedure and constitutes authority for use of the procedure by the other service.

3.11.1.1 Nonstandard Operation. A non-standard operation is defined as when an urgent requirement exists to fly a short-notice mission in support of a humanitarian, contingency, MEDEVAC, special access or state department requirement. Commanders (0-8 or above) exercising Operational Control (OPCON) of aircraft operating in support of nonstandard operations are responsible for mission risk assessment and therefore may waive the requirement for a TERPS review of a Non-USG instrument procedure. If aircraft and aircrew are chopped to a Joint Task Force (JTF) and a waiver is required, the JTF Commander shall request the waiver, and if operationally feasible, the commander issuing the waiver shall consult with the appropriate service component before granting the waiver. When a waiver is issued, the Commander issuing the waiver shall immediately notify the National Military Command Center's On-Duty Deputy Director for Operations (DDO) DSN 225-0098 or COMM 703-695-0098, of the extent of the waiver and provide, at a minimum, the mission identification, the time and date the waiver was granted, and the circumstances that precipitated the decision.

3.11.2 U.S. Civil Airports. Activities or commands having a requirement for instrument procedures to civil airports in the U.S. that are not published in the DOD FLIP Terminal Procedures shall submit a request for the procedure(s) desired, with justification, through the type commander to Naval Flight Information Group (NAVFIG) for publication. The justification will include a statement indicating that the procedure is needed to support an operational or contingency requirement and the expected annual usage of the procedure. NAVFIG address is contained in DOD FLIP General Planning, Chapter 11.

All FAA-approved civil instrument departures and arrivals for the U.S. are published through NOS. They are not published in the DOD FLIP.

3.11.3 Other Than U.S. Airports. Activities or commands having a requirement for terminal instrument procedures to airports in areas other than the U.S. that are not publicized in DOD FLIP, not validated by NAVFIG or by other service components as conforming to U.S. TERPS, ICAO (PANS-OPS) or NATO (APATC-1), shall coordinate requirements with NAVFIG [Washington Navy Yard, DSN 285-3473, Comm (202) 433-3473] and appropriate type commander. The request shall be forwarded with justification to NAVFIG, designating the specific host government procedure desired and indicating type commander concurrence. Approach under consideration must be approved to U.S. standards (i.e., proper obstacle clearance, etc.).

3.11.4 Conformance to TERPs. NAVFIG is the only Naval Authority authorized to validate instrument approaches and shall evaluate all such requests, review procedures (other than those approved by the FAA) for conformance with TERPs, and arrange for publication of the procedure in the appropriate FLIP. Instrument approach minimums published in FLIP shall be those specified by TERPs criteria application or the host government minimums, whichever are higher.

3.11.5 Annual Revalidation. In order that FLIP terminal publications contain only those procedures for which an operational or contingency requirement exists, originating activities shall annually revalidate their requirement for procedures published pursuant to this paragraph. This will be accomplished by direct coordination between the establishing activity or command and NAVFIG.

CHAPTER 4

Flight Authorization, Planning, and Approval

4.1 FLIGHT AUTHORIZATION

4.1.1 Authority. Naval aircraft shall not be flown by any person unless authorized by the reporting custodian or other commander exercising operational control over the aircraft concerned. All flights shall be in the national interest with fleet readiness receiving the highest priority. Efficient utilization of aircraft and available funds is the responsibility of the reporting custodian.

4.1.2 Documentation. Authorization for a flight shall be documented by a published flight schedule or other similar directive signed by COs or their delegated authority. As a minimum, the document shall contain the following elements:

a. Names and flight function of all flight personnel

b. Designation of the pilot in command, mission commander, and/or formation leader as appropriate

c. Chain of command for formation flights in the event of an abort by the designated flight leader

d. Aircraft model assigned

e. Total mission or requirement code

f. Point of departure, destination, and en route stopover points

g. Date and estimated time of departure (ETD)

h. Estimated time en route (ETE) or estimated time of arrival (ETA).

Note

For missions such as strip alert, SAR alert, etc., the words as directed or to be assigned (TBA) may be entered for ETD and ETE/ETA.

4.1.3 Flightcrew Requirements. Prior to authorizing flight in naval aircraft, commanders shall ensure that the person designated as pilot in command is in all respects qualified for flight in model and that minimum flightcrew requirements are met.

4.2 MINIMUM FLIGHTCREW REQUIREMENTS

The minimum flightcrew requirements for naval aircraft are set forth in the applicable NATOPS manual for individual aircraft models. CNATRA may modify such requirements and the requirements set forth below as necessary for training purposes.

4.2.1 Aircraft Commander Requirement. An aircraft commander (paragraph 12.2.2.3) shall be designated for the following multipiloted aircraft missions:

a. Operational/tactical missions

b. Administrative missions in helicopters/tilt-rotors

c. Training flights, except those that are within the capabilities of pilots of lower classification and which, in the opinion of the commanding officer, are best suited to teach such pilots self-reliance and command responsibility

d. Flights in which the transport of passengers is involved.

4.2.2 Insufficient NATOPS Guidance. Where individual NATOPS manual guidance is lacking, the minimum flightcrew requirements for multipiloted aircraft are as follows:

a. A pilot in command possessing a valid instrument rating designated in accordance with paragraph 3.5.

b. A copilot qualified to perform all the assist functions required for the flight conditions and mission. If passengers are embarked, the copilot shall be qualified in model.

c. Other flightcrew necessary for the safe conduct of the flight.

4.2.3 Helicopters Not Requiring a Copilot. For helicopters that are configured with either dual or single-flight controls but do not require a copilot, the minimum crew requirements will be specified in the appropriate NATOPS manual. If a lookout is required, the lookout will be capable of performing internal communication and all assist functions required for the mission. The designation of the pilot in command shall be pilot qualified in model (PQM).

4.2.4 Use of Lookouts. Use of a qualified lookout in lieu of a copilot for those aircraft specified in paragraph 4.2.3 shall be limited to flights conducted under VMC.

4.2.5 Rescue Helicopters Operating Over Water. Any naval helicopter that is assigned the primary mission to operate as a rescue vehicle over water shall have as a member of its crew one aircrewman who is completely outfitted for water entry as required in paragraph 8.2.1.2 and has completed an approved CNO/CMC rescue swimmers school.

Note

Where SAR/plane guard is briefed as a primary mission, or when it becomes the primary mission, the rescue air crewman shall be prepared for immediate water entry.

4.3 FLIGHT PLANNING

4.3.1 Preflight Planning. Before commencing a flight, the pilot in command shall be familiar with all available information appropriate to the intended operation. Such information should include but is not limited to available weather reports and forecasts, NOTAMs, fuel requirements, terminal instrument procedures (to include proper use of non-DOD approaches), alternatives available if the flight cannot be completed as planned, and any anticipated traffic delays. In addition, the pilot in command and mission commander (when there is one designated) shall conduct a risk assessment prior to the flight.

4.4 AUTHORIZED AIRFIELDS

4.4.1 Aircraft Operations

4.4.1.1 General. The intent of this section is to encourage the use of military airfields by Navy and Marine Corps aircraft unless a requirement exists to use a civil airfield. Pilots shall not be cleared for airfields other than those listed in the DOD Flip En Route Supplement unless such flights are necessary for the accomplishment of a mission assigned by higher authority. The pilot in command is responsible for ensuring that airfield facilities, servicing, and security are adequate for the type of aircraft involved.

4.4.1.2 Exceptions. All naval aircraft operating in CONUS are prohibited from landing at or taking off from civil airfields listed in the DOD FLIP Enroute Supplement. Exceptions to this prohibition are as follows:

a. Civil airfields on which military units operate aircraft.

b. Flights requiring a weather alternate may use civil airfields when military airfields are not available.

c. Flights that conduct official business at or near a civil airfield. Written orders are not required.

d. Flights required for procurement, acceptance, modification, test, and delivery of aircraft. Ferry flights are included in this category to allow necessary flexibility to accomplish the ferry mission.

e. Flights necessary for the accomplishment of a units mission, providing prior coordination has been effected with the civil airfield authorities and the TYCOM has granted waivers to permit the use of the airfield.

f. Transport, turboprop training aircraft, patrol class aircraft, and helicopters.

g. Civil airfields may be used for instrument-approach and low-approach training.

4.4.1.3 Closed Airfields. All naval aircraft are prohibited from taking off or landing at closed airfields except in the case of an emergency or under the following conditions. A takeoff and/or a landing may be conducted at a closed airfield when the tower and crash crew are unmanned with the authorization of the commanding officer of the airfield concerned and with the prior or concurrent approval of the aircrafts reporting custodian.

4.4.2 Helicopter, Tilt-Rotor, and VSTOL/ STOL Landing Areas. Helicopter, tilt-rotor, and VSTOL/ STOL aircraft are authorized to land at other than airfield locations (such as fields, highways, and parks), provided:

a. A military requirement exists for such landing.

b. Adequate safeguards are taken to permit safe landing and takeoff operations without hazard to people or property.

c. There are no legal objections to landing at such nonairfield sites.

Note

COs are authorized to waive the provisions in items a through c when dispatched helicopters, tilt-rotor, or VSTOL/STOL aircraft is engaged in SAR operations.

4.4.3 Fuel Purchase. Aircraft fuel and oil are made available to military users through military, Government contract, and commercial sources. There is no economical justification for pilots to purchase fuel/oil from commercial sources. The cost of such fuel is considerably higher than that purchased from either military or contract sources. Navy and Marine Corps flight personnel are not authorized to purchase aircraft fuel/oil from other than military or contract sources except under the following circumstances:

a. Flight is classified as official business.

b. Flight is terminated as a result of a bona fide emergency.

c. Flight terminates at alternate airport in lieu of filed destination.

d. Flight is made by aircraft with limited range and purchase of aircraft fuel or oil from other than military or contract (Government) sources is necessary to complete the assigned mission.

4.4.4 Flight Plans

4.4.4.1 General. A flight plan appropriate for the intended operation shall be submitted to the local air traffic control facility for all flights of naval aircraft except the following:

a. Flights of operational necessity.

b. Student training flights under the cognizance of CNATRA conducted within authorized training areas. CNATRA shall institute measures to provide adequate flight following service.

4.4.4.2 Forwarding Flight Plans to ARTCC/ Flight Service Station (FSS). Delivery of a properly prepared flightplan form to duty personnel at an established base operations office at the point of departure assures that the appropriate ARTCC/FSS will be furnished with:

a. Essential elements of the flight plan as initially approved

b. A takeoff report.

4.4.4.3 No Communication Link. If no communication link exists between the point of departure and the ARTCC/FSS, the pilot may relay the flight plan to an appropriate FSS by commercial telephone. When unable to file in person or by telephone, the flight plan may be filed as soon as possible by radio after takeoff. Flight in controlled airspace in IMC without ATC clearance is prohibited. Filing by radio after takeoff is not permitted when it will involve unauthorized IMC flight. In any case, the pilot's responsibility is not fulfilled until a completed flight plan and passenger manifest have been deposited with the airport manager or other suitable person.

4.4.4.4 Direct User Access Terminal Service (DUAT). DUAT is not intended to provide flight-plan service to the military and, therefore, is not designed to format the flight notification messages mandated for the military user or for any aircraft filing to a military destination. DUAT shall not be used to file a flight plan to a military destination.

4.4.4.5 Flight Plan Forms. The forms listed below are used to submit flight plans in the circumstances indicated:

a. The DD-175, military flight plan, completed in accordance with FLIP General Planning, is used for other than local flights originating from airfields in the United States at which a military operations department is located (see FAR 91.153 and 91.169 for mandatory items). A daily schedule containing an approved stereo (ARTCC computer stored)/canned flight plan code may be used in lieu of a DD-175 for other than local flights provided the point of departure is a military facility and the stereo/canned flight plan conforms to agreements with the parent ARTCC.

b. A daily schedule or abbreviated single-copy DD-175 may be authorized by the approval authority for use when the flight will be conducted within the established local flying area and adjacent offshore operating/training areas provided that:

(1) Sufficient information relative to the flight is included to satisfy the needs of the local ATC/FSS facility that guards the flight.

(2) Facility operations maintain cognizance of each flight plan and are responsible for initiating any overdue action or issuing in-flight advisory messages as specified for handling point-to-point flight plan messages in accordance with FAA 7110.10. Termination of local flights at facilities other than the point of departure is authorized only in those cases where local flight plans may be closed out by direct station-to-station communication.

(3) Completed flight schedules are retained in operations files for 3 months.

(4) The flight shall not be conducted in IMC within controlled airspace except as jointly agreed to by the local naval command and the responsible air traffic control agency. When making such agreements, naval commands shall ensure that they do not conflict with policies and directives established by CNO.

(5) When an abbreviated DD-175 is utilized, items 1, 2, 3, 4, 6, 7, 9, 10, 11, 12, 20, 21, 24, and 25 of the flight plan (see FLIP general planning) shall be completed as a minimum. For VFR flights within the local flying area, the term "local" may be entered as route of flight (item 9). For day VFR and IFR flights that penetrate or operate within an ADIZ (unless an authorized exception, see FLIP (En Route) IFR Supplement), the estimated time and point of penetration(s) shall be entered in the remarks (item 12).

c. An FAA flight plan, FAA 7233-1, may be filed in lieu of a DD-175 at airfields in the United States at which a military operations department is not located.

d. An ICAO flight plan or military version thereof is used when applicable for flights conducted in international airspace in accordance with ICAO rules and procedures. For flights that originate in the United States and are conducted in accordance with ICAO rules and procedures, it is not intended that both an ICAO flight plan and DD-175 be submitted. Base operations shall specify the form desired in order that flight plan information may be passed to the appropriate ATC/FSS.

e. The flight plan form specified by the local authorities shall be used for flights originating at points of departure outside the United States.

4.4.4.6 Shore-to-Ship and Ship-to-Shore Operations. For shore-to-ship and ship-to-shore operations, the following procedures apply:

a. Prior to flight from a shore activity to a ship operating in offshore areas when a landing aboard the ship is intended, the pilot in command shall file a flight plan. For flights conducted in IMC, a DD-175 or daily flight schedule with approved stereo (ARTCC computer stored)/canned flight plan code shall be filed. Flights conducted under VFR may use an abbreviated DD-175 or daily schedule.

b. Flight plans must be filed when flights originating from offshore operating areas will penetrate controlled airspace or terminate at shore activities. Ships shall relay flight plans to appropriate ATC facilities in a timely manner and pilots shall confirm their flight plans with an appropriate ATC facility ashore as soon as practicable.

c. Timely handling of flight movement information for each shore/ship operation is essential.

d. Flight suspense for SAR purposes becomes the responsibility of the destination activity after acknowledging receipt of a flight plan.

e. Procedures for flights penetrating or operating within a coastal or domestic ADIZ or defense early warning identification zone (DEWIZ) are prescribed in FLIP (En Route) IFR Supplements.

4.4.4.7 Stopover Flights Within the United States. NAs are authorized to utilize one DD-175 to plan flights involving en route stops, subject to compliance with the following procedures and limitations:

a. The flight plan (DD-175) shall be prepared in accordance with the applicable instructions contained in the DOD FLIP (planning).

b. NOTAM and weather briefing shall be obtained at point of origin for the entire route of flight. The weather information entered on the DD-175-1 shall clearly indicate the forecast weather (en route) for each leg of the flight, each destination, and each alternate (if required). Separate DD-175-1s may be utilized for each leg. Pilots shall periodically determine that the intended route of flight remains clear of aviation severe weather watch (WW) bulletins and that weather forecasts for each successive intermediate destination (and alternates when required) continue to satisfy the minimums established in paragraph 4.6.4 or 5.2 as applicable.

c. No change shall be made in the pilot in command.

d. A corrected manifest shall be left with a responsible person at each intermediate base at which a change of passengers or crew occurs (see paragraph 4.6.2).

e. Weight and balance must remain within limits (see paragraph 4.6.6).

f. A revised flight plan void time shall be filed with Flight Service when appropriate.

g. The pilot shall close out the balance of the original flight plan if the flight is terminated at an intermediate base.

Note

Stopover flights outside of the United States are governed by the procedures contained in the appropriate area FLIP (planning) publication.

4.4.5 Signing the Flight Plan

4.4.5.1 Pilot in Command/Formation Leader. Except when a daily flight schedule is used in lieu of a flight plan form, the pilots in command/formation leaders shall sign the flight plan for their flight. For multipiloted aircraft, the pilot in command/formation leader may choose to delegate this responsibility to a NATOPS qualified pilot/NFO. Regardless, the pilot in command/ formation leader is responsible for compliance with items a through h.

a. The flight has been properly authorized.

b. Adequate flight planning data, including NOTAM service, was available for complete and accurate planning.

c. The flight will be conducted in accordance with governing directives and adherence to criteria for fuel requirements and weather minimums.

d. Each pilot in a formation flight has received the required weather briefing.

e. The pilot in command/each pilot in a formation flight possesses a valid instrument rating if any portion of the flight is to be conducted under IMC or in positive control areas or positive control route segments.

f. Passengers have been properly briefed and manifested.

g. Proper weight and balance forms, if applicable, have been filed.

h. The pilot in command acknowledges responsibility for the safe and orderly conduct of the flight.

4.4.5.2 Daily Flight Schedule. A signature by the reporting custodian or other appropriate authority on the daily flight schedule, when used in lieu of a flight plan form, signifies that preceding items a through h shall be assured prior to flight.

4.4.5.3 Flight Plan Approval. The pilots in command of a naval aircraft or formation leaders are authorized to approve the flight plan for their proposed flight or modification thereof.

4.5 FLIGHT PLAN MODIFICATION

Modification of a written flight plan shall be accomplished only with the concurrence of the pilot in command.

4.6 OTHER PREFLIGHT REQUIREMENTS

4.6.1 Call Sign Requirements. Call sign selection for cross-country flights shall be made in accordance with DOD FLIPs. It is strongly recommended that squadron modex (NJ213, DB214) be used in flight planning. If the use of tactical/squadron call signs is necessary, call signs shall be the approved JANAP 119 call sign for the unit concerned. Abbreviations or contractions of these call signs is not authorized.

4.6.2 Manifest Requirements. The pilot in command of a naval aircraft flight shall ensure that a copy of the manifest is on file with a responsible agency at the point of departure prior to takeoff. The manifest shall include an accurate list of personnel aboard the aircraft, showing names, serial numbers, grade and service if military, duty station, and status aboard the aircraft (passenger or crew). All persons aboard other than flight personnel are passengers and shall be manifested as such. When initial transmission of a flight plan by radio is permitted after takeoff in accordance with this instruction, depositing such a personnel list continues to be a mandatory pretakeoff requirement of the pilot in command of the flight. The pilot shall state the location of the required personnel list when filing by radio or telephone. Helicopter and tilt-rotor pilots engaged in SAR missions, lifting reconnaissance parties, patrols, and outposts during field problems are released from manifest responsibilities when there is no proper agency available with whom a passenger manifest could be deposited.

4.6.3 Weather Briefing

4.6.3.1 General. Pilots are responsible for being thoroughly familiar with weather conditions for the area in which flight is contemplated. Where Naval Meteorology and Oceanography Command (NMOC) or United States Marine Corps Weather Services are locally available, a flight weather briefing shall be obtained from a qualified meteorological forecaster. Weather briefings may be obtained in person, by telephone, by facsimile, or by remote computer-based weather briefing system. If NMOC or USMC Services are not locally available, an FAA-approved weather briefing from either a Flight Service Station (FSS) or Direct User Access Terminal System (DUATS) may be substituted.

4.6.3.2 Flight Weather Briefing Form. Navy and Marine Corps Forecasters are required to provide flight weather briefings using either DD-175-1 forms, or VFR Certification Stamps when VFR flight is an acceptable alternative. A DD-175-1 flight weather briefing form shall be completed whenever an IFR flight plan is filed. The forecaster will complete the form for briefings conducted in person, by facsimile, or by remote computer-based weather briefing system. It is the pilot's responsibility to complete the form for briefings conducted by telephone. For a VFR flight using a DD-175 form, the following certification stamp on the flight plan may be used in lieu of a completed DD-175-1:

"BRIEFING VOID _____Z, FLIGHT AS PLANNED CAN BE CONDUCTED UNDER VISUAL FLIGHT RULES. VERBAL BRIEFING GIVEN AND HAZARDS EXPLAINED. FOLLOWING SIGMETS ARE KNOWN TO BE CURRENTLY IN EFFECT ALONG PLANNED ROUTE OF FLIGHT."

_____
(Signature of Forecaster)

Note

- Weather briefings may be conducted at any time prior to departure and all will include briefing number and void time. However, briefing-void time cannot exceed 2.5 hours past briefing time or ETD plus one-half hour. Briefings received more than 2.5 hours prior to takeoff will be void and require rebriefing prior to departure.

- If the intended VFR flight plan includes a mission (e.g., Olive Branch) or an airfield with VFR minimums higher than the basic VFR 1000-foot ceiling and 3-statute-mile visibility, it is the responsibility of the pilot to advise the weather briefer of the higher minimums.

- Pilots planning to fly canned or stereo routes shall consult their local forecast activity to verify acceptable weather conditions. Verification may be obtained in person, by telephone, by facsimile, or by remote computer-based weather briefing system.

4.6.3.3 Flight Weather Packet. A flight weather packet, including a Horizontal Weather Depiction (HWD) chart, may be requested where Navy and Marine Corps weather services are available. Pilots should normally allow a minimum of 2 hours for preparation of the packet. Items provided in the flight weather packet are listed in NAVMETOCCOMINST 3140.14.

4.6.4 Weather Criteria for Filing. Flight plans shall be filed based on all the following:

a. The actual weather at the point of departure at the time of clearance

b. The existing and forecast weather for the entire route of flight

c. Destination and alternate forecasts for a period 1 hour before ETA until 1 hour after ETA.

4.6.4.1 VFR Flight Plans. The pilot in command shall ascertain that actual and forecast weather meets the criteria specified in paragraph 5.2.4 prior to filing a VFR flight plan.

4.6.4.2 IFR Flight Plans. Regardless of weather, IFR flight plans shall be filed and flown whenever practicable as a means of reducing midair collision potential. In any case, forecast meteorological conditions must meet the weather minimum criteria shown in Figure 4-1 for filing IFR flight plans and shall be based on the pilot's best judgment as to the runway that will be in use upon arrival. IFR flight plans may be filed for destination at which the forecasted weather is below the appropriate minimums provided a suitable alternate airfield is forecast to have at least 3,000-foot ceiling and 3-statute- mile visibility during the period 1 hour before ETA until 1 hour after ETA.

4.6.4.3 Alternate Airfield. An alternate airfield is required when the weather at the destination is forecast to be less than 3,000-foot ceiling and 3-statute-mile visibility during the period 1 hour before ETA until 1 hour after ETA.

Note

If an alternate airfield is required, it must have a published approach compatible with installed operable aircraft navigation equipment that can be flown without the use of two-way radio communication whenever either one of the following conditions is met:

a. The destination lacks the above described approach.

b. The forecasted weather at the alternate is below 3,000-foot ceiling and 3-statute-mile visibility during the period 1 hour before ETA until 1 hour after ETA.

4.6.4.4 Icing and Thunderstorm Conditions. Flights shall be planned to circumvent areas of forecast atmospheric icing and thunderstorm conditions whenever practicable.

DESTINATION WEATHER ETA plus and minus 1 hour	ALTERNATE WEATHER ETA plus and minus 1 hour		
0 — 0 up to but not including Published minimums	NON-PRECISION	PRECISION	
Published minimums up to but not including 3,000 — 3 (single-piloted absolute minimums 200 — 1/2)		ILS	PAR
	*Published minimums plus 300–1	Published minimums plus 200–1/2	*Published minimums plus 200–1/2
3,000 — 3 or better	No alternate required		
*In the case of single-piloted or other aircraft with only one operable UHF/VHF transceiver, radar approach minimums may not be used as the basis for selection of an alternate airfield.			

Figure 4-1. IFR Filing Criteria

4.6.4.5 Severe Weather Watch Bulletins. The National Weather Service Storm Prediction Center issues unscheduled Weather Watch (WW) bulletins as graphical advisories for the Continental United States whenever a high probability exists for severe weather. The Air Force also issues scheduled Military Weather Advisories (MWA) in graphical form for the same geographic areas. Both provide estimates of the potential for convective activity for a specific time period, will be provided to pilots or certified crewmembers upon request, and are included with all briefings. An Air Force MWA does not constitute a Storm Prediction Center WW. Except for operational necessity, emergencies, and flights involving all-weather research projects or weather reconnaissance, pilots shall not file into or through areas for which the Storm Prediction Center has issued a WW unless one of the following exceptions apply:

a. Storm development has not progressed as forecast for the planned route. In such situations:

   (1) VFR filing is permitted if existing and forecast weather for the planned route permits such flights.

   (2) IFR flight may be permitted if aircraft radar is installed and operative, thus permitting detection and avoidance of isolated thunderstorms.

   (3) IFR flight is permissible in positive control areas if VMC can be maintained, thus enabling aircraft to detect and avoid isolated thunderstorms.

b. Performance characteristics of the aircraft permit an en route flight altitude above existing or developing severe storms.

Note

It is not the intent to restrict flights within areas encompassed by or adjacent to a WW area unless storms have actually developed as forecast.

4.6.5 Minimum Fuel Requirements

4.6.5.1 Fuel Planning. All aircraft shall carry sufficient usable fuel, considering all meteorological factors and mission requirements as computed below:

a. If alternate is not required, fuel to fly from takeoff to destination airfield, plus a reserve of 10 percent of planned fuel requirements.

b. If alternate is required, fuel to fly from takeoff to the approach fix serving destination and thence to an alternate airfield, plus a reserve of 10 percent of planned fuel requirements.

c. In no case shall the planned fuel reserve after final landing at destination or alternate airfield, if one is required, be less than that needed for 20 minutes of flight, computed as follows:

   (1) Reciprocating engine-driven aircraft. Compute fuel consumption based on maximum endurance operation at normal cruise altitudes.

   (2) Turbine-powered fixed-wing/tilt-rotor aircraft. Compute fuel consumption based on maximum endurance operation at 10,000 feet.

(3) Turbine-powered helicopters. Compute fuel consumption based on operation at planned flight altitude.

d. Minimum fuel reserve requirements for specific model aircraft shall be contained in the appropriate NATOPS manual.

4.6.5.2 In-Flight Refueling. Aircraft shall carry sufficient usable fuel to fly from takeoff point to air refueling control point(s) (ARCP), thence to a suitable recovery field in the event of an unsuccessful refueling attempt. In no case shall the fuel reserve at rendezvous point be less than 10 percent. For multiple in-flight refuelings, the aircraft must have the required reserve at each rendezvous point. After the last in-flight refueling is completed, the fuel reserve required for the remainder of the flight shall be in accordance with paragraph 4.6.5.1.

4.6.5.3 Delays. Any known or expected traffic delays shall be considered time en route when computing fuel reserves. If route or altitude assigned by air traffic control causes or will cause planned fuel reserves to be inadequate, the pilot shall inform ATC of the circumstances, and, if unable to obtain a satisfactory altitude or routing, alter destination accordingly.

4.6.6 Weight and Balance Control

4.6.6.1 Requirements. Requirements for aircraft weight and balance control are contained in the current NA-01-1B-40 weight and balance data and N0-01-1B-50 USN aircraft weight and balance control manuals. Maximum operating weights, restrictions, and center-of-gravity limitations are delineated in the applicable NATOPS manual.

4.6.6.2 Responsibility. With the exception of aircraft to be ferried, the responsibility for ensuring safe loading of Class 1A, 1B, and Class II aircraft is assigned to reporting custodians. The responsibility for safe loading of aircraft to be ferried rests with the activity preparing the aircraft for ferry movement.

4.6.6.3 Filing. By the signature on the DD-175, the pilot in command certifies that aircraft weight and center of gravity will be within safe limits at time of takeoff and remain so for the duration of the flight. Additionally, the pilot in command certifies that:

a. A completed weight and balance clearance form (DD 365-4) presented with the DD-175 represents the actual aircraft loading.

b. A completed DD 365-4 representing the actual aircraft loading is on file at the aircrafts home base.

4.6.6.4 Records. DD 365-4 originals shall be retained for a period of 3 months.

4.7 CLOSING OF FLIGHT PLAN

It is the responsibility of the pilot in command/ formation leader to ensure that the proper agency is notified of flight termination.

4.7.1 Military Installations. At military installations, the pilot either shall verbally confirm the closing of the flight plan with tower or base operations personnel or deliver a copy of the flight plan form to base operations.

4.7.2 Nonmilitary Installations. At nonmilitary installations, the pilot shall close the flight plan with flight service through any means of communication available. Collect, long-distance telephone service may be used if required. When appropriate communication links are known or suspected not to exist at the point of intended landing, a predicted landing time in lieu of the actual landing shall be reported to an appropriate aeronautical facility while airborne.

Note

Cancellation of an instrument flight plan does not meet the requirement for closing out the flight plan. When a landing report has been properly delivered, the flight plan will be considered closed out.

CHAPTER 5

Flight Rules

5.1 GENERAL FLIGHT RULES

5.1.1 Aircraft Lighting. Except when the nature of operations requires different lighting displays (i.e., formation flight, aerial refueling, carrier operations, night vision device (NVD) operations, FCLP pattern, emergency signals, etc.) or the model aircraft configuration precludes compliance, the following rules shall apply.

Note

Flight operations with NVDs are specifically addressed in paragraph 5.7.

5.1.1.1 Position Lights. Standard position lights shall be displayed during the period 30 minutes before official sunset until 30 minutes after official sunrise or at any time when the prevailing visibility as seen from the cockpit is less than 3 statute miles. During these conditions, they shall be displayed:

a. Immediately before engine start and anytime the engine(s) is running.

b. When the aircraft is being towed unless the aircraft is otherwise illuminated.

c. When an aircraft is parked and likely to cause a hazard unless the aircraft is otherwise illuminated or marked with obstruction lights.

5.1.1.2 Anti-collision Lights. Anti-collision lights shall be used immediately before engine start and at all times when the aircraft engine(s) is in operation, except when the use of such lights adversely affects ground operations (i.e., arming and dearming, refueling operations, etc.). They may be turned off during flight through clouds when the rotating light reflects into the cockpit. The use of green anti-collision lights for the specific purpose of identifying airborne tankers is authorized, provided that standard position lights are also displayed.

5.1.1.3 Landing/Taxi Lights. The use of landing/taxi lights is an effective means of illuminating surface hazards during taxi movements at night and alerting all concerned of an aircrafts presence/position in flight. Landing/taxi lights should be utilized for all taxi movements ashore during the hours of darkness unless a taxi signalman is directing the aircraft. Use of those lights during landing approaches (both day and night) within class B, C, or D airspace is recommended when meteorological conditions permit.

Note

- Good judgment should be exercised to avoid blinding pilots of other aircraft that are either airborne or on the ground.
- Use of landing/taxi lights is recommended in areas of high bird concentration.

5.1.1.4 Formation Flight Lighting. To the extent necessary for safety, lighting configuration for formation flights may be varied according to aircraft model and mission requirements. Normally, all aircraft in the flight shall have external lights on and at least one aircraft in the flight shall have lights on bright and the anti-collision light on when aircraft lighting is required.

Note

Aircraft engaged in drug interdiction operations are granted relief from FAR 91.209(a) provided each operation is conducted using a dedicated on-board observer, electronic/radar equipment, or an observer in a spotter aircraft, all of which must be capable of detecting the presence of other aircraft operating in proximity to the interdiction aircraft and alerting the pilot to those aircraft locations. Additionally, interdiction aircraft will be required to operate the aircraft position lights to the maximum extent possible when instructed by ATC and will be authorized to operate without lights only when necessary to avoid detection by illegal elements.

5.1.2 Right-of-Way Between Single and Formations of Aircraft. When a single naval aircraft is converging with an aircraft formation at approximately the same altitude (except head-on, or nearly so), the formation flight has the right of way. In other cases, the formation shall be considered as a single aircraft and the right-of-way rules of FAR 91.113 apply.

5.1.3 Unusual Maneuvers Within Class B, C, or D Airspace. Pilots shall not perform or request clearance to perform unusual maneuvers within class B, C, or D airspace if such maneuvers are not essential to the performance of the flight. ATC personnel are not permitted to approve a pilot's request or ask a pilot to perform such maneuvers. Unusual maneuvers include unnecessary low passes, unscheduled fly-bys, climbs at very steep angles, practice approaches to altitudes below specific minimums (unless a landing is to be made), or any so-called flat hatting wherein a flight is conducted at a low altitude and/or a high rate of speed for thrill purposes.

5.1.4 Aircraft Speed

5.1.4.1 FAR 91. To reduce midair collision hazards associated with high aircraft speeds at low altitudes, FAR, Part 91.117, imposes a maximum airspeed limitation of 250 knots indicated airspeed (KIAS) on all aircraft operating below 10,000 feet mean sea level (MSL) in airspace where FAR, Part 91, applies and a maximum of 200 KIAS for aircraft operating: (1) at or below 2,500 feet above the surface within 4 nm of the primary airport of a Class C or D airspace area, or (2) in the airspace underlying a Class B airspace area designated for an airport or in a VFR corridor designated through such a Class B airspace area. The regulation grants exception for operations that cannot safely be conducted at airspeeds less than the prescribed maximum airspeed. The FAA has authorized the DOD to exceed 250 KIAS below 10,000 feet MSL for certain military requirements.

Note

Aircraft engaged in drug interdiction operations are exempted from the general speed limit of 250 knots below 10,000 feet MSL. However, pilots of aircraft so involved are required to establish and maintain two-way radio communication with the tower prior to entering the class B, C, or D airspace and, unless otherwise authorized by ATC, avoid the traffic patterns for any airport in class B, C, or D airspace.

5.1.4.2 Policy. In accordance with FAA authorization, flight operations below 10,000 feet MSL at an indicated airspeed in excess of 250 knots are authorized under the following conditions:

a. Within restricted areas.

b. Within military operations areas.

c. When operating on DOD/FAA mutually developed and published routes.

d. When operating on DOD-developed and DOD-published VR routes. Such routes shall be established for specific missions and used only by designated units when the provisions of a through c above will not accommodate the required national defense mission. Routes shall be developed and published in accordance with DOD/FAA mutually developed criteria.

e. When operating within large-scale exercises or on short-term special missions approved by commanders listed in paragraph 5.1.4.3. Such exercises or missions may be authorized provided that coordination is effected to ensure awareness on the part of the nonparticipating flying public.

f. If the airspeed required or recommended in the aircraft NATOPS manual to maintain safe maneuverability is greater than the maximum speed described in FAR, Part 91.117, the aircraft may be operated at that speed. Where the required or recommended speed is given as a range, the lower part of the speed range consistent with good operating practice should be used. The primary purpose of this provision is to accommodate climbs, descents, and terminal area operations and shall not be used to circumvent the provisions of subparagraphs above. Under no circumstance will this safe maneuverability provision be construed as authorization for individual pilots or mission commanders to conduct other flights below 10,000 feet in excess of 250 knots.

5.1.4.3 Approval Authority. Approval Authority for paragraph 5.1.4.2.e is as follows: CMC; COMNAVAIRFOR, COMNAVAIRPAC; COMNAVAIRLANT; COMMARFORPAC; COMMARFORLANT; CNATRA; COMNAVAIRES; CG FOURTH MAW; or COMNAVAIRSYSCOM, as appropriate. Such operations may be approved providing full consideration is given to mission requirements and the safety of nonparticipating aircraft. The above commanders must review and approve each route established in accordance with paragraphs 5.1.4.2.c and 5.1.4.2.d within respective areas of responsibility. Coordination will be effected with the appropriate NAVREP at the FAA Regional Office to ensure that notice to the aviation public is provided.

Note

When an altitude below 10,000 feet MSL is assigned to aircraft requiring a higher operating speed for safe maneuverability, as indicated in the NATOPS manual for that aircraft, the pilot shall notify the controlling ATC facility of that higher minimum speed.

5.1.5 Special Use Airspace. When operating within Special Use Airspace (SUA), ATC Assigned Airspace (ATCAA), or altitude reservations (ALTRVs), flights shall be conducted under the prescribed operational area procedures appropriate to the airspace area and mission/operation. Procedures and separation standards may be contained in a letter of agreement between the FAA and the military, or other applicable military or FAA directives.

Military Assumes Responsibility for Separation of Aircraft (MARSA) may be applied between military aircraft as specified by letter of agreement or other appropriate military and FAA documents. However, MARSA may not be invoked by individual aircraft or between flights of aircraft.

Note

- It is of the utmost importance that aircraft operating independently or under the control of a ground, ship, or airborne controller remain within the specified vertical and horizontal limits of assigned airspace. Remaining within assigned airspace can only be achieved by maintaining a total awareness of details depicted in current charts, publications, and military directives, coupled with a continual assessment of the accuracy of the controlling agency's radar. It may be required to operate with self-imposed vertical and horizontal buffers to remain within assigned airspace.

- When operating in designated SUA, aircrews should be aware that civilian aircraft may not honor the existence of such areas, nor monitor radio frequencies to receive appropriate warning/advisories.

5.1.6 Military Training Routes (MTRs)

5.1.6.1 General. MTRs have been developed to accommodate high-speed, low-level tactical training in excess of 250 KIAS. Operations shall be conducted at the minimum airspeed compatible with mission requirements. General information concerning MTRs is contained in OPNAVINST 3722.33 (FAA Order 7610.4, Special Military Operations). Specific route information is contained in FLIP AP/1B (Military Training Routes). Safety of flight is of prime consideration during all phases of low-altitude training.

MTRs that include one or more segments above 1,500 feet AGL are identified by a three-digit identifier; those with no segment above 1,500 feet AGL are identified by four digits.

Flight operations conducted along these routes or segments of these routes shall conform to the direction of traffic flow indicated in the route description.

5.1.6.2 Preflight Planning

a. Low-altitude, high-speed navigation training can be safely conducted by the execution of carefully planned flights. It is the responsibility of each crewmember to maintain professionalism in low-level operations and exercise a thorough knowledge of MTRs and operating constraints to ensure safe and meaningful training.

b. Low-level flying requires extensive preflight planning. A thorough review of FLIP AP/1B, temporary route advisories, Chart Updating Manual (CHUM), and Chart Updating Manual Supplement (CHUMSUPP) is essential to ensure flight safety and maximum training from each

sortie. Check with the scheduling agency for unpublished restrictions and low-altitude charts for airspace restrictions.

c. A 1:500,000 scale chart, current tactical pilotage chart (TPC) or sectional aeronautical chart, should be used for flying low-level navigation.

d. Review the route corridor to identify all significant obstacles and high terrain. Note the avoidance criteria for airfields and the need to remain clear of published noise-sensitive areas.

e. Compute a route abort altitude. This altitude shall provide obstruction clearance. Aircrew must be aware of route structure.

5.1.6.3 Operating Procedures

5.1.6.3.1 General

a. Unless otherwise delineated in a MTRs special operating procedures, aircrew shall avoid charted, uncontrolled airports by 3 nm or 1,500 feet.

b. Aircrew shall avoid Class B, C and D airspace.

c. Aircrew shall minimize disturbance to persons/property on the ground.

d. All route entries shall be accomplished at published entry/alternate entry points only.

e. Adherence to scheduled entry times provides for safe separation from other aircraft on the route or aircraft on conflicting/crossing routes.

f. Pilots shall be responsible for remaining within the confines of the published route width and altitude. If in an emergency it should become necessary to exceed the route parameters, the 250-knot speed restriction of FAR 91.117 applies.

g. MTR Segment Transition

(1) Pilots transitioning from one MTR segment to another segment with a lower minimum altitude must cross the fix defining the next leg no lower than the preceding segments minimum altitude. Example: “05 AGL B 15 AGL to “E” 02 AGL B 15 AGL to ...” indicates “E” must be crossed no lower than 500 feet AGL.

(2) Pilots transitioning from one MTR segment to another segment with a higher minimum altitude must cross the fix defining the next leg no lower than the subsequent segments minimum altitude. Example: “02 AGL B 15 AGL to “B” 10 AGL B 15 AGL to ...” indicates “B” must be crossed no lower than 1,000 feet AGL.

(3) Pilots transitioning from one MTR segment to another segment with a lower maximum altitude must cross the fix defining the next leg no higher than the subsequent segments maximum altitude. Example: “10 AGL B 60 MSL to “D” 02 AGL B 15 AGL to ...” indicates “D” must be crossed no higher than 1,500 feet AGL.

(4) Pilots transitioning from one MTR segment to another segment with a higher maximum altitude must cross the fix defining the next leg no higher than the preceding segments maximum altitude. Example: “10 AGL B 40MSL “B” 02 AGL B 70 MSL to ...” indicates “B” must be crossed no higher than 4,000 feet MSL.

h. Pilots shall be responsible for adhering to the provisions of FAR 91.119 (Minimum Safe Altitude, General).

i. All route exits shall be accomplished at published exit/alternate exit points only.

j. When exiting an MTR below 10,000 feet MSL, the flight shall comply with FAR 91.117 (Aircraft Speed).

5.1.6.3.2 IR Procedures

a. All IFR Military Training Route (IR) operations shall be conducted on IFR flight plans.

b. Pilots shall be responsible for obtaining a specific ATC entry clearance from the appropriate ATC facility prior to entering an IR route.

c. Contour flight on IRs is outlined in FLIP AP/1B. Refer to Terrain Following Operation entry for applicable IR routes.

d. Pilots shall be responsible for obtaining an IFR ATC exit clearance prior to exiting an IR route.

5.1.6.3.3 VR Procedures

a. Flight plan requirements for VFR Military Training Route (VR) usage:

(1) Pilots departing on IFR clearances to fly VRs are required to file to the fix/radial/distance of their route entry/alternate entry point.

(2) Pilots transitioning to IFR upon exiting a VR are required to have on file a previously filed IFR flight plan from the appropriate fix/radial/distance of their exit point.

b. Operations on VRs shall be conducted only when the weather is at or above VFR minimums except that:

(1) Flight visibility shall be 5 miles or more and

(2) Flights shall not be conducted below a ceiling of less than 3,000 feet AGL.

c. For VR routes, the nearest Flight Service Station will be notified (255.4 MHz) by the pilot upon entering the route with: entry time, number/type aircraft, exit fix and estimated exit time.

d. Pilots of aircraft operating on a VR route will adjust their transponder to code 4000 unless otherwise assigned by ATC.

5.1.6.4 Communication Failure

a. If the failure occurs in VMC, or if VMC are encountered after the failure, each pilot shall continue the flight VFR and land as soon as practicable. Refer to FAR 91.185b and DOD FLIP Flight Information Handbook.

b. If the failure occurs in IMC or if paragraph a above cannot be complied with, each pilot shall:

(1) Maintain to the exit/alternate exit point the higher of the following:

(a) The minimum IFR altitude for each of the remaining route segment(s)

(b) The highest altitude assigned in the last ATC clearance.

(2) Depart the exit/alternate exit point at the altitude determined in (1) above, then climb/descend to the altitude filed in the flight plan for the remainder of the flight.

c. Adjust transponder to reply on Mode 3/A Code 7600.

5.1.6.5 Emergency. If aircrews are unable, during an emergency, to continue on a VR or IR at the published altitude(s), they shall immediately squawk 7700 and contact the appropriate ATC facility.

Note

Climbing above the MTR structure may place aircraft in close proximity to airways traffic; caution is advised.

5.1.7 Flight Over the High Seas. International law recognizes the right of aircraft of all nations to fly in airspace over the high seas. By convention, procedures for international flight are prescribed and certain nations have agreed to provide air traffic services in designated airspace over the high seas. Naval aircraft should operate in accordance with ICAO procedures presented in OPNAVINST 3770.4 (Use of Airspace by Military Aircraft and Firing Over the High Seas) and DOD FLIP General Planning, which address use of airspace by U.S. military aircraft and define due regard operations for military aircraft.

During flight operations at sea, tower or radar control by a ship, Fleet Area Control and Surveillance Facility (FACSFAC), or other suitable agency, shall be used to the maximum extent practicable. The degree of control shall be appropriate to the nature of the operation, classification of airspace, number of aircraft involved, and the requirement to coordinate aircraft ingress and egress to/from the operating area.

When operating offshore within domestic ARTCC boundaries, airspace of the Hawaiian Islands, and the San Juan Domestic Control Area, Navy policy is to use

domestic air traffic control services and procedures to the maximum extent practicable consistent with mission requirements.

Note

When radar control of fixed-wing aircraft is being provided by a Navy ship or shore station in airspace managed by a FACSFAC, continuous two-way communication is required between that ship or shore station and the FACSFAC. Also the FACSFAC must maintain two-way communication with the appropriate FAA facility as required.

5.1.8 Supersonic Flight Operations

5.1.8.1 General. COs assigned aircraft capable of supersonic flight shall ensure that aircrews are thoroughly familiar with the shock wave phenomenon peculiar to supersonic flight. Serious damage, annoyance, and mental stress have resulted from sonic booms. It is incumbent on every pilot flying aircraft capable of generating sonic booms to reduce such disturbances and damage to the absolute minimum dictated by operational/training requirements.

5.1.8.2 Policy. Supersonic flight operations shall be strictly controlled and supervised by operational commanders. Supersonic flight over land or within 30 miles offshore shall be conducted in specifically designated areas. Such areas must be chosen to ensure minimum possibility of disturbance. As a general policy, sonic booms shall not be intentionally generated below 30,000 feet of altitude unless over water and more than 30 miles from inhabited land areas or islands. Deviations from the foregoing general policy may be authorized only under one of the following:

a. Tactical missions that require supersonic speeds

b. Phases of formal training syllabus flights requiring supersonic speeds

c. Research, test, and operational suitability test flights requiring supersonic speeds

d. When specifically authorized by CNO for flight demonstration purposes.

5.1.8.3 Reports, Inquiries, and Investigations. The Department of the Navy must accept responsibility for restitution and payment of just claims for damage resulting from sonic booms determined to have been caused by naval aircraft. To assist in determining validity of claims, all supersonic flights conducted over the continental United States or within 50 miles offshore shall be logged as to time, date, location, speed, and altitude of occurrence and retained at the unit level for 24 months.

Section 0910f of the Manual of the Judge Advocate General (JAGINST 5800.7) provides information and instructions concerning investigations into sonic boom complaints and alleged damage claims.

5.1.9 Aerobatic Flight

5.1.9.1 General. CNO does not desire to discourage or curtail aerobatic training; however, it is of the utmost importance that aerobatic training be well regulated as to time, place, and conditions that enhance safety of flight.

5.1.9.2 Aerobatic Flight Precautions. Aerobatic flight maneuvers, as defined in the Glossary, shall not be performed:

a. If prohibited by the NATOPS manual or other directives applicable to a particular model aircraft.

b. Over any congested area of a city, town, or settlement;

c. Over an open air assembly of persons;

d. Within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport;

e. Within 4 nautical miles of the centerline of any Federal airway;

f. Below an altitude of 1,500 feet above the surface; or

g. When flight visibility is less than 3 statute miles.

5.1.9.3 Designated Aerobatics Areas. Appropriate commanders shall establish and designate areas in which aerobatics may be performed in compliance with the above restrictions and, under FAR, Part 91.303, in airspace where FARs apply. Pilots are encouraged to conduct aerobatic flight within the limits of designated aerobatic areas whenever the assigned mission permits.

5.1.10 Simulated Air Combat Maneuvering (ACM) Training Rules

5.1.10.1 General

a. ACM is defined as the following:

(1) Aggressive three-dimensional maneuvering between two or more aircraft simulating offensive or defensive aerial combat where the potential for a role reversal exists.

(2) Defensive maneuvers or other combat avoidance maneuvers by one or more aircraft.

Note

- Aerobatic maneuvers in accordance with NATOPS manuals on scheduled training flights approved by competent authority are not considered to be ACM. However, single aircraft practicing ACM maneuvers shall comply with the appropriate portions of the training rules (decks, cloud clearance, area, g warmup, etc.).

- Air intercepts, performed in accordance with NATOPS manuals or as prescribed by cognizant TYCOMs are not considered to be ACM. These intercepts shall result in no more than 180° of turn by any aircraft postmerge and shall be terminated prior to any potential role reversal; however, applicable portions of the training rules (intercept/element deconfliction) shall be briefed.

- The following maneuvers are considered to be ACM. This list should not be considered to be all inclusive.

  (a) Neutral starts (to include butterfly starts)

  (b) Offensive/defensive perches

  (c) Scissors maneuvers (roller, flat, looping)

  (d) Gun defenses

  (e) Missile defenses to full blown engagements.

- The following maneuvers are not considered to be ACM. However, ACM flight leads should use prudent headwork to ensure that adequate separation from clouds can be maintained during any three-dimensional maneuvering:

  (a) Snapshot drill (guns weave, weapons weave)

  (b) Tail chase (heat-to-guns drill)

  (c) Forward quarter missile defenses that are terminated at the merge.

b. ACM qualification proficiency requirements and a training syllabus shall be issued by COMNAVAIRLANT, COMNAVAIRPAC, COMNAVAIRES, or CMC. Pilots and naval flight officers flying ejection seat aircraft shall complete out of control flight (OOCF)/spin training for currently assigned aircraft, as deemed appropriate by TYCOMs. Training flights shall be conducted under a formal training syllabus under direct supervision of mature, experienced flight leaders and only after all participants have been thoroughly briefed on the conduct of the flight. Unscheduled and/or unbriefed simulated combat between naval aircraft or between naval aircraft and aircraft of any other service or registry is prohibited.

c. Pilots of naval aircraft shall not make simulated attacks on any aircraft that has troops or passengers embarked except as may be authorized by fleet commanders for exercises where coordinated and scheduled simulated attacks against military troop transport aircraft are desired for training purposes.

d. Squadron commanders will ensure that all participants are qualified and current in accordance with applicable directives in order to participate in ACM.

e. Prior to commencing ACM maneuvering, fixed-wing aircrews shall perform a “g” awareness maneuver. This maneuver shall consist of a total of 180° of turn and should be used to operationally check g-suits and to practice straining maneuvers up to an amount of g’s approaching the maximum amount anticipated on that particular flight.

f. If an aircrew experiences g loss of consciousness (GLOC) during any portion of the flight, the flight shall immediately terminate and that aircraft shall return to base.

g. Departure/spin recovery procedures shall be covered for all ACM participants during the preflight brief.

h. A face-to-face brief shall be conducted by collocated ACM participants with a minimum one individual from each participating unit. For units not collocated, a telephone brief shall be conducted to satisfy face-to-face briefing requirements. A pre-exercise brief, memorandum of agreement, e-mail, or fax may be used to complement or finalize prior face-to-face or telephone coordination between participating units. Hard and/or soft documents such as these are encouraged to add depth to training rules, special instructions, and conduct of flight coordination; however, they shall not replace the requirements mandated in a face-to-face or telephone brief. the following guidelines for telephone briefs and debriefs apply:

(1) A flight representative shall conduct the coordination/special instructions brief.

(2) All applicable training rules shall be covered during the telephone brief and included in the pre-exercise brief, memorandum of agreement, email, or fax.

(3) The flight representative receiving the brief for composite or joint force training will brief all other participating aircrews prior to their flights.

5.1.10.2 ACM Training

a. The nature of ACM demands that pilots be thoroughly familiar with the performance capabilities and limitations of the aircraft being flown. Rapid changes in heading, altitude, and the wide range of velocities generated greatly increase the possibility of collisions between aircraft. ACM must be closely supervised and training rules (TR) (formerly rules of engagement) applied that will provide a high degree of safety for all concerned.

b. Such training shall be conducted in airspace as nearly free from other aircraft as practicable. It shall be conducted only in designated warning/restricted areas, in controlled airspace as assigned by ATC, or in other designated areas where safe separation from non-participants can be maintained. As a minimum, designated ACM areas shall be clear of Federal airways, Class B, C, or D airspace, and other areas of traffic congestion unless established under a letter of agreement with the FAA or host nation. TYCOMs or officers in tactical command (OTCs), when deployed, shall designate ACM training areas and establish procedures to ensure that entering flights are aware of the existence of other scheduled flights operating there.

c. The ACM training rules set forth here are minimum requirements. Supplementary directives shall be issued as required by responsible commanders delineating syllabus contents, proficiency levels required, communication procedures, safety precautions, and other applicable areas of concern.

5.1.10.3 ACM Training Rules. The following rules are intended to provide guidance for conducting safe, accident-free ACM training:

a. Always assume the other aircraft does not see you.

b. Aircraft shall maneuver to maintain at least 500 feet of separation from all other aircraft during engagements, including aircraft within the same division/section.

c. During a forward quarter or head-on pass (track crossing angle greater than 135°), both aircraft shall maintain the established trend. Where no established trend exists, each aircraft shall give way to the right to create a left-to-left pass. When operating on the same radio frequency, aircrew should broadcast their own intentions if the direction of pass is in doubt. When operating on dual frequencies, exaggerate aircraft movements to ensure that the other aircraft recognizes your intentions.

d. The “up-sun” aircraft has responsibility for maintaining flight separation. If the up-sun aircraft loses sight, it shall broadcast lost sight and maintain a predictable flight path. If the “down-sun” aircraft

loses sight, it shall break off the attack, lag the up-sun aircraft, and broadcast that it has lost sight. If the up-sun aircraft still has sight of the down-sun aircraft and safe separation can be maintained, the up-sun aircraft shall immediately broadcast "continue," otherwise a knock-it-off shall be initiated.

e. An aircraft pursuing another aircraft in a descent shall monitor the defensive aircraft's altitude/attitude and break off the attack with a turn away prior to either aircraft descending through the applicable altitude deck based on airspeed and angle of attack.

f. Nose-high aircraft on converging flightpaths shall deconflict with the higher nose attitude aircraft going high unless unable because of energy state or aircraft performance. The low or nose-low aircraft has the responsibility for maintaining flight separation.

g. A lead turn conducted while on converging flightpaths that causes the attacking aircraft to lose sight is prohibited.

h. With an offensive aircraft approaching gun parameters, defensive aircraft shall not dispense flares as part of a gun defense or as a distraction.

i. Fixed wing versus fixed-wing training rules:

(1) Missile attacks — All fixed-wing, forward-quarter missile attacks (attempts to obtain AIM-9 tone rise or self-track from boresight, or attempts to obtain a radar lock from boresight) within 20 of the targets nose shall be broken off at a minimum of 9,000 feet. Inside 9,000 feet, the pilots undivided attention shall first be devoted to maintaining flight separation. Inside 9,000 feet, off-boresight missile attacks may be prosecuted down to missile minimum range provided that flight separation has already been established.

(2) Gun attacks — Fixed-wing gun attacks shall be broken off at a minimum of 1,000 feet so as not to pass any closer than 500 feet to the defensive aircraft. Gun attacks in excess of 135° track crossing angle (approaching head-on) are prohibited.

(3) Intercept deconfliction

(a) Aircrews conducting ACM or intercepts shall establish assigned blocks by 10 nm of the merge without situational awareness (SA) of the aircraft/formation being intercepted.

(b) Altitude blocks shall normally be MSL-definable in 4,000 foot intervals (e.g., Blue Air 5 to 9's, Red Air 0 to 4's) for all aircraft not equipped with radar altimeters. In mountainous terrain for Blue Air aircraft with training objectives that require operation in a low altitude arena, a 3,000 foot AGL definable block (i.e., Blue Air 1,000 to 4,000 feet AGL) for radar altimeter equipped aircraft is permissible. For situations where weather is less than 10,000 feet of clear air, Red Air will own the top 2,000 feet of the defined clear airspace, and Blue Air will own all clear airspace below the Red Air block (e.g., Blue Air 0 to 5, Red Air 6 to 8). In all cases where significant terrain, low level ingress routes, or nonmaneuvering intercepts (e.g., 1V1 all-weather intercepts) are involved, any adjustments to Red and Blue air altitude block deconfliction shall be thoroughly briefed.

(4) Element deconfliction —Blind aircraft within an element shall immediately transmit "blind", and wingman shall respond visual with his position. If the wingman is simultaneously blind, he shall transmit "blind" with his altitude and maintain a level flight plan. It is the responsibility of the first aircraft in the element that calls "blind" to establish altitude deconfliction. If communications are prohibited, each aircraft that remains blind shall maintain a level and predictable flight path, and his priority shall be to clear his flight path.

(5) Engagement deconfliction

(a) The maximum number of aircraft allowed in an ACM engagement is 8.

(b) Blue and Red Air roles shall be clearly defined for each prior to fights on.

(c) Blue Air shall not turn at an engagement unless they have sufficient SA to clear

their flight path. This SA may be obtained from onboard sensors, communication with element members/AIC, or tally (sight of adversary/visual (sight of wingmen). Without a tally visual on all fighters and bandits, aircraft shall conduct belly checks at a minimum of every 90° of turn.

(d) Red Air shall have a more restrictive mindset to provide predictability than required of Blue Air. If tally not obtained on all fighters, Red Air shall maintain a predictable flight path in their block until positive SA assures that they are clear of the merge/engagement. This SA may be obtained from onboard sensors, communication with element members/AIC, and or tally/visual.

j. Fixed wing versus helicopter training rules:

(1) All aircrew shall have completed initial low-altitude flight training as outlined by appropriate COMNAVAIRPAC, COMNAVAIRLANT, COMNAVAIRES, or CMC directives.

(2) Supersonic flight is not authorized.

(3) If aircraft lose sight, they shall disengage. Fixed-wing aircraft will climb to at least 3,000 feet AGL. Helicopters shall climb to at least 300 feet AGL.

(4) Fixed-wing gun attacks shall be broken off at a minimum of 1,000 feet.

k. Helicopter versus helicopter training rules:

(1) All aircrew shall have completed initial low altitude flight training as outlined by appropriate COMNAVAIRPAC, COMNAVAIRLANT, COMNAVAIRES, or CMC directives.

(2) During prebriefed tail chase maneuvers, aircraft shall maintain a minimum of 200 feet of separation.

(3) An engagement shall be terminated if all aircrews unintentionally lose sight of each other. The engagement shall not be resumed until all participants have reacquired each other.

(4) Close range helicopter engagements shall involve no more than two 360° turns.

(5) Pilots shall not attempt to counter an adversary's altitude advantage with erratic or excessive climbing maneuvers.

(6) Astern gun attacks shall be broken off at a minimum of 500 feet.

5.1.10.4 ACM Communication Requirements. To facilitate positive control of aircraft and provide adequate safety measures, the following shall apply for the conduct of flights involving ACM training:

a. All aircraft participating in ACM shall have two-way radio communication. All multiplace aircraft shall have an operable intercommunication system (ICS).

b. Guard frequency shall be monitored throughout all engagements.

c. A single aircraft engaging another single aircraft shall monitor a common radio frequency.

d. Multiple flights:

(1) Flights of two or more aircraft engaging another flight of one or more aircraft may operate on assigned separate frequencies using either of the following control measures: each flight is under positive radar control of separate controllers and a senior air director (SAD) in the supervisory role is monitoring both frequencies, or each flight is under the positive control of separate range training officers (RTOs) or a tactical aircrew combat training system (TACTS) instrumented range. When a potentially dangerous situation develops, a call to "Knock it off"/terminate shall be relayed by the SAD or RTO on both frequencies. TYCOMs may waive this restriction as requirements dictate.

(2) Dual-radio-equipped aircraft may elect to use a discrete intraflight frequency without separate GCI/TACTS control provided one radio is used to monitor the opposing section frequency.

e. Any no-radio (NORDO) aircraft shall rock its wings and assume 1g flight to signal loss of

communication. If an aircraft rocks its wings or assumes a wings-level 1g condition during an encounter, that engagement shall be terminated.

f. If any aircrewman observes an unsafe or potentially dangerous situation developing, he/she shall announce it by transmitting, "Knock it off/terminate", and shall maneuver appropriately to terminate the engagement.

5.1.10.5 ACM Weather Criteria. All ACM engagements shall be conducted in daylight VMC using the following criteria:

a. ACM shall not be conducted into or through an overcast or undercast.

b. The top of the undercast or broken cloud layer is the simulated ground level.

c. Fixed wing versus fixed wing ACM shall be conducted with:

(1) At least 2,000 feet vertical and 1-nm horizontal separation from clouds at all times.

(2) Five miles minimum visibility with a defined horizon.

d. Fixed wing versus helicopter ACM shall be conducted with:

(1) A minimum ceiling of 3,000 feet above ground level (AGL).

(2) Five miles minimum visibility with a defined horizon.

e. Helicopter versus helicopter ACM shall be conducted with:

(1) A minimum ceiling of 1,000 feet AGL.

(2) Three miles minimum visibility with defined horizon.

5.1.10.6 Fixed Wing Versus Fixed-Wing ACM Altitude Restrictions. To ensure standardization and provide an adequate margin of safety, the following restrictions shall apply:

a. No sustained maneuvering shall occur below a 5,000-foot hard deck above the terrain or undercast (e.g., over 4,000-foot terrain or a 4,000-foot undercast, the hard deck shall be adjusted to 9,000 feet). If the terrain or undercast is not of uniform height in the area of engagement, the deck shall be adjusted to reflect the highest terrain/undercast. Aircrew shall also brief that visual altitude and attitude cues are not accurate under these circumstances.

b. High angle of attack (AOA)/slow-speed maneuvering shall be terminated passing through 10,000 feet AGL (soft deck). If the 5,000-foot AGL hard deck has been raised because of an undercast, high AOA/slow speed shall be raised and maneuvering shall be terminated at the appropriate altitude AGL (i.e., with a 4,000-foot AGL undercast, the hard deck shall be 9,000 feet AGL and the soft deck shall be 14,000 feet AGL). An aggressive, nose low, out of plane gun defense maneuver to defeat an attackers gun solution shall not be executed below the soft deck.

c. Offensive and defensive maneuvering below the 5,000-foot deck shall be conducted in accordance with the following:

(1) For aircrews not low-altitude-flight-training qualified and current in accordance with appropriate service directives, the minimum altitude shall be 500 feet AGL.

(2) For aircrews low-altitude-flight-training qualified and current in accordance with appropriate service directives, the minimum altitude shall be 200 feet AGL.

(3) Functional wing/operational/group commanders may request waivers from such minimum altitudes from COMNAVAIRLANT, COMNAVAIRPAC, COMNAVAIRES, or CMC as appropriate.

(4) When an offensive/defensive relationship is established, the defensive aircraft shall react with a wing rock, an extension or separation maneuver, or the continuation of a level or climbing defensive turn of not more than 180° as measured from the heading at the beginning of the turn. The engagement shall also be terminated if a role reversal occurs.

(5) When during the initial maneuvering neither aircraft can be assessed as defensive, the

engagement shall be terminated when any aircraft has turned a maximum of 180° as measured from the heading at the beginning of the maneuvering.

(6) If the attacking aircraft's initial conversion turn is undetected, the engagement needs not be terminated until the defensive aircraft reacts and turns a maximum of 180°.

(7) If a low-flying, fixed-wing aircraft wishes to maneuver in excess of 180° of turn, the initial turn shall be made so as to carry the pilot above the 5,000-foot deck. Once above 5,000 feet, ACM may be continued only if each aircraft meets the appropriate airspeed and AOA requirement for ACM below the soft deck. Any aircraft not meeting those requirements shall terminate ACM.

WARNING

The flightpath behind a low-flying aircraft, co-altitude, should be avoided because of the effects of wake turbulence, jet or propeller wash, and the possibility of ordnance release. In addition, extended maneuvering precipitated by defensive reactions to repeated attacks can result in a depleted energy state such that continued maneuvers are unsafe because of ground proximity.

5.1.10.7 Fixed Wing Versus Helicopter and Helicopter Versus Helicopter ACM Altitude Restrictions

a. No fixed-wing (F/W) high AOA/slow-speed maneuvering below 10,000 feet AGL is authorized.

b. The following are the minimum altitudes for aircraft by type engagement:

(1) Helicopter versus helicopter — 100 feet AGL both aircraft.

(2) Helicopter versus F/W (low attack angle 0° to 10°) — 100 feet AGL, 500 feet AGL respectively.

(3) Helicopter versus F/W (high attack angle greater than 10°) — 100 feet AGL, 1,000 feet AGL respectively.

5.1.10.8 Fixed Wing Versus Fixed-Wing ACM and Ground Attack Interface. The following additional ACM related rules apply to multimission and composite force training where ground attack and escort aircraft may come under attack:

a. Aggressor aircrew shall be briefed on target location for any ordnance drops. The briefing shall include planned weapon delivery maneuvers and type ordnance, as appropriate. Aggressors shall break off an attack on strike aircraft below 10,000 feet AGL at a minimum of 3 nm prior to the designated target area. In no case shall strike aircraft be attacked while executing an ordnance delivery maneuver.

b. Aircraft carrying live external A/G ordnance shall not engage in ACM. A wing rock or a defensive hard turn, not to exceed 180°, may be made to acknowledge an attack. Aircraft carrying inert ordnance (including captive carry air-to-ground missiles) may engage in ACM at the discretion of the squadron CO based on weight/drag and specific aircraft performance.

c. Aggressor aircraft shall discontinue attack on a strike/escort aircraft following the strike/escort aircrafts wing rock or defensive turn (maximum of 180°).

5.1.10.9 Termination of ACM Engagements

a. ACM shall cease when:

(1) Any training rule is violated.

(2) "Knock it off/terminate" is called by any aircrew or controller.

(3) Any dangerous situation develops or there is a loss of situational awareness.

(4) Any out-of-control flight situation develops.

(5) Radio failure by any aircraft.

(6) Bingo fuel state is reached.

(7) Training objectives have been accomplished.

(8) An unbriefed aircraft enters the engagement area and is detrimental to flight safety.

(9) When an aircraft rocks its wings (fixed or rotary).

b. At the completion of engagement, aircraft shall maneuver appropriately to deconflict with all other aircraft and should extend beyond visual range prior to any reattack, consistent with the briefed training objectives. The intent is to prevent visual repositioning and repeated attacks against defending aircraft that are pursuing a different mission.

c. All ACM participants have responsibility for termination of ACM training engagements when a dangerous or rapidly deteriorating situation is recognized.

d. "Knock it off" means that all participating elements in an exercise shall cease maneuvering. Terminate applies to individual elements or engagements within an overall exercise and means the individual units involved in a localized engagement shall cease maneuvering for that particular engagement without knocking off the entire exercise. After terminating a localized engagement, the affected aircraft are free to pursue additional missions within the exercise in accordance with prebriefed instructions. Knock it off calls shall be acknowledged via UHF radio calls by all participating pilots using individual call signs.

WARNING

High midair collision potential exists following "Knock it off" calls.

5.1.11 Simulated Instrument Flight

5.1.11.1 Chase Aircraft Requirement. A chase aircraft shall be used for all simulated instrument flight in single-piloted aircraft when a vision restricting device is being used. A chase plane shall also be required for simulated instrument flight in multipiloted aircraft if adequate cockpit visual lookout cannot be maintained. Visual lookout is considered adequate:

a. For side-by-side seating configurations, when two crewmen in addition to and having positive communication with the pilot are aboard. One crewman must be in a suitable position to monitor the flight instruments and both crewmen together must be able to clear the aircraft from potential midair collision hazards.

b. For tandem seating configurations, when the vision-restricting device is being used only in the rear seat.

5.1.11.2 Chase Aircraft Position and Communication. The chase plane should fly in a position 500 feet aft and 500 feet to either side of the aircraft being chased so as to ensure clearance in all quadrants. Positive communication must be maintained at all times between the two aircraft and any controlling agency. If communication is lost, the pilot practicing simulated instruments shall immediately go contact and remain contact until positive communication is reestablished.

5.1.11.3 Altitude Limitations. Pilots of single-seat aircraft may not use a vision restricting device below 1,000 feet AGL except on a precision approach. The vision restricting device may be used down to 500 feet AGL. In single-piloted aircraft, with dual sets of flight controls and in multipiloted aircraft, a vision restricting device may be used by one pilot for simulated instrument takeoffs and down to minimums for the approach being flown, provided the other pilot is NATOPS qualified in model. Helicopters equipped with automatic hover equipment are specifically waived from simulated instrument altitude restrictions during low level ASW/ SAR training, provided the pilot not on the controls is NATOPS qualified in model.

5.1.12 Formation Flying

5.1.12.1 General. Formation flying is authorized only for units and types of aircraft for which a valid requirement exists. Appropriate commanders shall ensure issuance of and adherence to specific instructions and standard operating procedures for all aspects of formation flying.

5.1.12.2 Preflight. The formation leader shall execute one flight plan for the entire formation and shall:

a. Sign the flight plan form as pilot in command.

b. Ensure that all pilots are briefed on en route weather and navigational aids.

c. Ensure that each pilot holds a valid instrument rating if any portion of flight is to be conducted under IMC.

d. Ensure that a flight leader formation brief is conducted to include, but not to be limited to, loss of sight, lost communication, inadvertent IMC, and emergency procedures.

e. Ensure that necessary maps, charts, and publications are in the possession of each pilot.

f. Ensure that formation integrity is maintained in flight.

5.1.12.3 Formation Takeoffs. Section takeoffs for fixed-wing aircraft of similar performance are authorized only for units and types of aircraft whose military missions require formation flying, including essential pilot training. On ground roll, safe lateral separation shall be maintained (in event of blown tire, aborted takeoff, etc.) with leading aircraft on downwind side (if crosswind exists). Differences in flying characteristics, especially stall speeds because of gross weight and/or configuration, shall be considered.

Note

Lateral separation for required minimum interval takeoff (MITO) shall be governed by local directives.

5.1.12.4 Instrument Departures. Two-plane formation for subsequent flight into instrument conditions is authorized provided the weather (ceiling and visibility) is at or above the published circling minimums for the runway in use. In the event a circling approach is not authorized, ceiling and visibility must be at least 1,000 feet and 3 statute miles.

5.1.12.4.1 Radar Trail Departures. For aircraft equipped with operable air-to-air radar capability, formations of up to four aircraft are authorized to depart as a nonstandard formation (radar trail departure) when existing weather conditions are other than prescribed in paragraph 5.1.12.4 and that nonstandard formation has been approved by the ATC Facility responsible for providing instrument separation (i.e., departure control, ARTCC).

5.1.12.5 Joining Formations. Unless specifically ordered, a single aircraft shall not join a formation in the air. One formation shall not join another formation. The order for joining formation in the air shall be given prior to takeoff of the aircraft concerned or by radio, and the leader of the formation to be joined shall be informed that the order has been given. Exceptions to this paragraph may be made when the leader of a formation signals another aircraft to join the formation.

When about to join a formation, the pilot of a single aircraft or leader of other formations shall approach their formation position from a safe altitude and from the side. They shall not take their final position until their presence has been acknowledged by the leader of the formation to be joined.

Whenever a lead change is required in a formation of two or more aircraft, it will be accomplished in an unambiguous manner. Pilots shall ensure that both aircraft exchanging the lead are aware of the change through positive acknowledgment by visual signals or voice transmissions.

5.1.12.6 Approach Criteria for Aircraft in Formation

a. Instrument approaches with or without intent to land in IMC by formations of more than two aircraft are not authorized. Penetration of IMC to obtain VMC by formations of more than two aircraft is authorized.

b. Formation flights shall not commence an instrument approach when the reported weather is less than circling minimums for the runway in use. In the event a circling approach is not authorized, the ceiling and visibility must be at least 1,000 feet and 3 statute miles. Once an approach has been commenced, leaders may, at their discretion, continue the approach in formation to the minimums prescribed in paragraph 5.3.4 for the type aircraft being flown.

c. Whenever feasible, aircraft making section instrument penetrations/approaches should transition to landing configuration above the overcast whenever existing weather is below VFR minimums. Aircraft in formation shall not obtain interval by slowing to less than normal approach speed by "S" turning. If safe landing interval cannot otherwise be obtained, a waveoff shall be executed. When landing interval will result in two or more aircraft on the runway at the same time, staggered landings on alternate sides of the runway shall be made. When crosswind conditions dictate or when centerline landings are preferred, landing interval shall be the same as that required for aircraft proceeding independently.

d. Formation approaches by aircraft of markedly different approach performance characteristics are not recommended.

e. Formation touch-and-go landings are prohibited.

5.1.12.7 Dissimilar Formation Flight. Pilots involved should perform a preflight brief delineating all aspects of the pending formation flight. Items to be briefed in addition to those identified above shall include items peculiar to either aircraft community (e.g., limitations/capabilities/hazards affecting the flight/ rendezvous/joinup/separation).

5.1.12.8 Unplanned Formation Flight. In the event unscheduled formation flight becomes necessary, every attempt shall be made by the aircrew involved to conduct a sufficient in-flight brief prior to joinup.

5.2 VISUAL FLIGHT RULES PROCEDURES

5.2.1 Compliance With Directives. The pilot in command shall ascertain that the contemplated flight can be conducted in accordance with the visual flight requirements of FAR, other governing regulations, and flight rules set forth in this instruction. Visual meteorological conditions are the flight weather conditions that permit military aircraft operations under VFR. If weather conditions are not VMC, military aircraft operations must be either under special VFR or IFR (excluding special military operations).

5.2.2 Judgment. Although the choice of flight rules to be followed is normally dictated by weather and mission considerations, sound judgment plays a most important role. There are occasions when VFR may be legally followed by applying the appropriate visibility and cloud clearance criteria. That prerogative should be exercised with reasonable restraint. The established weather criteria are minimums. The pilot should allow a greater margin of safety when operational requirements permit, particularly in terminal areas or when reduced visibility or cloud conditions make flight under VFR questionable. Pilots shall file and retain an IFR clearance to the maximum extent practicable consistent with mission accomplishment. (See paragraphs 5.3.1 and 6.4.)

5.2.3 See and Avoid. The see-and-avoid concept applies to visual flight conditions, thus eliminating the need for specific route clearance from ATC agencies under most circumstances. Since pilots are responsible for their own separation from other aircraft, conditions must exist that permit ample opportunity to see and avoid other air traffic and maintain obstruction clearance. The following measures shall serve as additional precautions when separation is maintained through the see-and-avoid concept, provided no degradation of the assigned mission will result.

a. Excepting single-seat aircraft, electronic equipment such as airborne radar should be used where feasible.

b. Where available, radar advisory service shall be requested especially when VFR flight is required through high-density traffic areas.

5.2.4 Weather Minimums. Within airspace where FAR, Part 91, pertains, cloud clearance and visibility minimums shown in Figure 5-1 shall prevail throughout a VFR flight. In addition, ceiling and visibility minimums within Class B, C, D, or E surface areas must be at least 1,000 feet and 3 statute miles. If more stringent VFR minimums have been established for the point of departure or destination, as noted in the supplementary airport remarks section of the DOD FLIP AP/1, AP/2, AP/3, or AP/4 then ceiling and visibility must be at or above those minimums in the applicable Class B, C, D, or E surface area. Existing and forecast weather must be such as to permit VFR operations for the entire duration of the flight. Destination weather shall be at least 1,000-foot ceiling and 3-statute mile visibility (or such higher minimums as noted in the supplementary airport remarks section of the DOD FLIP AP/1, AP/2, AP/3, or AP/4) and forecast to remain at or above those minimums during the period 1 hour

before ETA until 1 hour after ETA. Exceptions to the minimums are as follows:

a. Deviations under FAR 91.157, Special VFR Weather Minimums, are permitted except at those airports where special VFR is not authorized in fixed-wing aircraft. For special VFR within controlled airspace, the pilot must obtain authorization from air traffic control; ceiling must be a minimum of 500 feet; visibility must be a minimum of 1 statute mile; aircraft must remain clear of clouds, and (except for CNATRA helicopter operations) the pilot and aircraft must be certified for instrument flight. Aviation commanding officers in the chain of command may authorize tilt-rotors in helicopter conversion mode and helicopter special VFR flights in conditions below 500 feet/1 mile for missions of operational necessity. The authority granted by this paragraph shall not be delegated.

b. Outside of controlled airspace, tilt-rotors in helicopter conversion mode and helicopters may be operated below 1,200 feet AGL, clear of clouds, when the visibility is less than 1 statute mile if operated at a speed that allows the pilot adequate opportunity to see and avoid other air traffic and maintain obstacle clearance.

Note

FLIP General Planning, Chapter 6 (International Rules and Procedures), outlines the general flight rules for operation of military aircraft in airspace where FAR 91 does not apply.

5.2.5 Weather Conditions Precluding VFR Flight. When weather conditions encountered en route preclude compliance with visual flight rules, the pilot in command shall take appropriate action as follows to:

a. Alter route of flight so as to continue under VFR conditions or

b. Remain in VFR conditions until a change of flight plan is filed and IFR clearance obtained or

c. Remain in VFR conditions and land at a suitable alternate.

5.2.6 Additional Requirements.

a. Except when necessary for takeoff and landing or when the mission of the flight requires otherwise, flights in fixed-wing aircraft shall not be conducted below an altitude of 500 feet above the terrain or surface of the water.

b. For aircraft to operate on a VFR clearance above broken clouds or an overcast, climb to and descent from such on top flight shall be made in accordance with VFR and aircraft shall be equipped and pilots qualified for instrument flight.

c. A simulated instrument approach to an airport for which an approved instrument approach exists shall not be commenced until prior approval has been obtained from the appropriate approach control or, in the case of nonapproach control locations, the airport traffic control tower. At nontower airports, the associated flight service station, if applicable, shall be notified of the simulated instrument approach.

5.3 INSTRUMENT FLIGHT RULES AND POSITIVE CONTROL PROCEDURES

5.3.1 General Requirements

5.3.1.1 IFR Filing and Positive Control. To decrease the probability of midair collisions, all flights in naval aircraft shall be conducted in accordance with IFR to the maximum extent practicable. This shall include all point-to-point and round-robin flights using Federal airways and other flights or portions thereof, such as flights to and from target or operating areas accessible through IFR filing. All other flights shall be conducted under positive control to the maximum extent possible. This shall apply in the following areas:

a. In the airspace over the United States and adjacent coastal waters within the 12-mile limit.

b. Within offshore operating areas of CONUS and Alaska outward to the limit of the domestic Air Route Traffic Control Center (ARTCC), airspace in the Hawaiian Islands, and in the San Juan Domestic Control Area.

c. Airspace in the vicinity of other U.S. territories and overseas airfields as prescribed by local area commander policies.

AIRSPACE	FLIGHT VISIBILITY	DISTANCE FROM CLOUDS
CLASS A	NOT APPLICABLE	NOT APPLICABLE
CLASS B	3 STATUTE MILES	CLEAR OF CLOUDS
CLASS C	3 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
CLASS D	3 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
CLASS E LESS THAN 10,000 FEET MSL	3 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
AT OR ABOVE 10,000 MSL	5 STATUTE MILES	1,000 FEET BELOW 1,000 FEET ABOVE 1 STATUTE MILE HORIZONTAL
CLASS G 1,200 FEET OR LESS ABOVE THE SURFACE (REGARDLESS OF MSL ALTITUDE)		
DAY, EXCEPT AS PROVIDED IN §91.155(b)	1 STATUTE MILES	CLEAR OF CLOUDS
NIGHT, EXCEPT AS PROVIDED IN §91.155(b)	3 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
MORE THAN 1,200 FEET ABOVE THE SURFACE BUT LESS THAN 10,000 FEET MSL		
DAY	1 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
NIGHT	3 STATUTE MILES	500 FEET BELOW 1,000 FEET ABOVE 2,000 FEET HORIZONTAL
MORE THAN 1,200 FEET ABOVE THE SURFACE AND AT OR ABOVE 10,000 FEET MSL	5 STATUTE MILES	1,000 FEET BELOW 1,000 FEET ABOVE 1 STATUTE MILE HORIZONTAL

Figure 5-1. Basic VFR Flight Minimums

Note

- Commanding officers shall ensure compliance with the intent and spirit of this requirement and shall scrutinize all flight operations as to mission and purpose to assure they are conducted in accordance with IFR or positive control to the maximum extent practicable without mission degradation.

- Global positioning system (GPS) shall not be used as the means of navigation to file or fly in the National Airspace System unless that aircraft has been certified for GPS use in the National Airspace System.

- Aircrew operating in visual conditions under IFR should be aware that they are in a see and avoid environment. ATC provides separation only from other IFR aircraft.

5.3.1.2 Waiving IFR Requirement. Where VFR conditions exist, pilots may waive this requirement for specific flights when necessary to circumnavigate or otherwise avoid severe weather or when dictated by an in-flight emergency.

5.3.1.3 ATC Clearance Requirement. Flights shall not be made in IFR conditions within controlled airspace until an ATC clearance has been obtained.

5.3.1.4 Instrument or Composite Flight Plan. An instrument or composite (VFR/IFR) flight plan shall be filed for all flights that may reasonably expect to encounter in-flight IFR conditions during any portion of the planned route. The VFR portion of the flight shall meet VFR criteria set forth in paragraph 5.2.

5.3.1.5 Compliance With Directives. The pilot in command shall ascertain that the clearance requested is in accordance with the instrument flight requirements of FAR, other governing regulations, and flight rules set forth in this instruction.

5.3.1.6 Minimum Altitude

a. When out of controlled airspace and only when the mission of the flight requires otherwise, an aircraft shall not be flown less than 1,000 feet above the highest terrain, surface of the water, or obstacle within 22 miles of the intended line of flight.

b. When out of controlled airspace and over designated mountainous terrain, as shown in appropriate DOD FLIPs, an aircraft shall not be flown less than 2,000 feet above the highest terrain or obstacle within 22 miles of the intended line of flight.

c. In controlled airspace, an aircraft shall not be flown at less than the minimum en route altitude or the altitude specified by the agency exercising control over the airspace concerned when operating in IFR conditions.

d. Authorized missions may be flown at lower altitudes than specified above when operating on published IFR military training routes (IRs) that have been developed in accordance with OPNAVINST 3722.33 (FAA Order 7610.4, Special Military Operations).

5.3.2 Aircraft Equipment Requirements. Preflight procedures will be established and monitored to assure that communication, navigation, and identification equipments required for the flight are operative at takeoff. Preflight/in-flight malfunctions of such equipment shall be construed as adequate cause to cancel/abort missions other than those of operational necessity. The pilot shall ensure that ATC is advised of any limitations of the pilot's aircraft and equipment that will necessitate special handling.

5.3.2.1 Instrument Flight Equipment

a. The pitot heater and all vacuum pressure or electrical sources for the pilot flight instruments must operate satisfactorily.

b. The aircraft shall be equipped with the following instruments in proper operating condition:

(1) Airspeed indicator

(2) Altimeter

(3) Turn-and-slip indicator

(4) A clock displaying hours, minutes, and seconds with a sweep-second pointer or digital readout

(5) Attitude indicator

(6) Magnetic compass with current calibration card

(7) Heading indicator or gyrostabilized magnetic compass

(8) Vertical speed indicator.

c. Aircraft shall be equipped with deicing or icing control equipment for sustained or continuous flight in known or forecast icing conditions.

d. Navigation lights must operate satisfactorily.

5.3.2.2 Communication, Navigation, Identification (CNI) Equipment

a. The aircraft shall have two-way radio communication equipment and operating navigation equipment required for the en route and approach navigation aids to be used and on which the clearance is predicated.

b. Pilots planning to operate in or through areas that require special communication frequencies shall ensure that the frequencies are available in the aircraft.

c. A functioning radar beacon transponder is required for flight in airspace where FAR specify such equipment.

d. When operating with a servoed altimeter below FL 180, use either the STANDBY or RESET mode and use only the RESET mode when operating above FL 180.

e. Any GPS receiver may be used as an aid to visual navigation only.

Note

- Current military GPS avionics have neither an integrity monitoring capability nor a navigation waypoint database. Therefore, current military GPS is not authorized for supplemental, primary, or sole means of air navigation for instrument flight in controlled airspace. Commercial FAA approved GPS naval aircraft integration is authorized for use up to the level of navigation approved by the FAA. Specific procedures are contained in appropriate NATOPS manuals.
- Navigation with handheld receivers during instrument conditions is prohibited.

5.3.2.3 Instrument Navigation Packet. The following items constitute the minimum required articles to be included in instrument navigation packets. Additional items may be included when required by local operating procedures.

a. Appropriate FLIPs

b. Navigation computer

c. Navigation flight log forms

d. Appropriate aeronautical charts.

5.3.3 Instrument Departures

5.3.3.1 Takeoff Minimums

a. Special instrument rating — No takeoff ceiling or visibility minimums apply. Takeoff shall depend on the judgment of the pilot and urgency of flights.

Note

Only an Aircraft Commander with a special instrument rating, who is also on the flight controls, is authorized to make departures from an airfield when weather conditions are below minimum.

b. Standard instrument rating — Published minimums for the available non-precision approach, but not less than 300-foot ceiling and 1-statute mile visibility. When a precision approach compatible with installed and operable aircraft equipment is available, with published minimums less than 300/1, takeoff is authorized provided the weather is at least equal to the precision approach minimums for the landing runway in use, but in no

case when the weather is less than 200-foot ceiling and 1/2-statute-mile visibility/ 2,400-foot runway visual range (RVR).

5.3.3.2 Departure Procedure (DP). At locations where DPs are available, pilots are encouraged to utilize them for each IFR departure, provided no unacceptable flight degradation will ensue. An appropriate DP procedure should be selected during preflight planning for pilots to realize the greatest benefit from standardization of instrument departures and to have a clear course of action to follow in the event of communication failure.

Note

For formation instrument departures and approach procedures, see paragraph 5.1.12.

5.3.4 Instrument Approaches and Landing Minimums

5.3.4.1 General. Approved instrument approach procedures for use at other than U.S. airports are published in DOD FLIPs (Terminal). For U.S. airports, approved instrument approach procedures are published in DOD FLIPs (Terminal) or other similar type publications. For straight-in approaches, pilots shall use RVR, if available, to determine if visibility meets the weather criteria for approaches, which are published in DOD FLIP Terminal Approach Procedures. Prevailing visibility shall be used for circling approach criteria. Helicopters and tilt-rotor-required visibility minimum may be reduced to one-half the published visibility minimum for Category A aircraft, but in no case may it be reduced to less than one-fourth mile or 1,200 feet RVR. Helicopter procedures visibility may not be reduced. Helicopter procedures and reduced Category A visibility recognize the unique maneuvering capability of the helicopter and tilt-rotor are based on airspeeds not exceeding 90 knots on final approach.

Note

Determination that existing weather/visibility is adequate for approach/landing is the responsibility of the pilot.

5.3.4.2 Non-Precision Approach Criteria. Minimums for a non-precision approach are 300–1 or as published. For helicopter and tiltrotor minimums see paragraph 5.3.4.1.

5.3.4.3 Approach Criteria for Multipiloted Aircraft. When reported weather is at or below published landing minimums for the approach to be conducted, an approach shall not be commenced in multipiloted aircraft unless the aircraft has the capability to proceed to a suitable alternate in the event of a missed approach.

5.3.4.4 Approach Criteria for Single-Piloted Aircraft

a. An instrument approach shall not be commenced if the reported weather is below published minimums for the type approach being conducted. When a turbojet en route descent is to be executed, the approach is considered to commence when the aircraft descends below the highest initial penetration altitude established in high altitude instrument approach procedures for the destination airport. Once an approach has been commenced, pilots may, at their discretion, continue the approach to the approved published landing minimums as shown in the appropriate FLIP for the type approach being conducted. Absolute minimums for a single-piloted aircraft executing a precision approach are 200-foot ceiling/height above touchdown (HAT) and visibility 1/2-statute-mile/2,400 feet RVR or published minimums, whichever is higher. For helicopter and tiltrotor minimums see paragraph 5.3.4.1.

b. Single-piloted aircraft that are configured for and assigned all-weather missions with side-by-side seating occupied by the pilot in command and an assisting NFO may operate within the same filing, clearance, and approach criteria specified above for multipiloted aircraft provided:

(1) The assisting NFO is instrument qualified in accordance with this instruction and NATOPS qualified in the model aircraft in which NFO duties are being performed.

(2) Cockpit configuration is such that the assisting NFO can:

(a) Monitor the pilot flight instruments

(b) Monitor and control communication

(c) Assist the pilot in acquiring the runway visually.

5.3.4.5 Criteria for Continuing Instrument Approaches to a Landing. Pilots shall not descend below the prescribed minimum descent altitude (MDA) or continue an approach below the decision height (DH) unless they have the runway environment in sight and in their judgment a safe landing can be executed, either straight-in or from a circling approach, whichever is specified in their clearance.

a. Precision Approaches — A missed approach shall be executed immediately upon reaching the decision height unless the runway environment is in sight and a safe landing can be made. On precision radar approaches, the pilot may expect control instructions until over landing threshold; course and glidepath information given after decision height shall be considered advisory in nature.

b. Non-precision Approaches — A missed approach shall be executed immediately upon reaching the missed approach point if visual reference is not established and/or a landing cannot be accomplished. If visual reference is lost while circling to land from a published instrument approach, the missed approach specified for that particular procedure must be followed. To become established on the prescribed missed approach course, the pilot should make an initial climbing turn toward the landing runway and continue the turn until he/she is established on the missed approach course.

5.3.4.6 Final Approach Abnormalities During Radar Approaches. The controller shall issue instructions to execute a missed approach or to climb and maintain a specific altitude and fly a specified course whenever the completion of a safe approach is questionable because one or more of the following conditions exist:

a. Safe limits are exceeded or radical aircraft deviations are observed.

b. Position or identification of the aircraft is in doubt.

c. Radar contact is lost or a malfunctioning radar is suspected.

d. Field conditions, conflicting traffic, or other unsafe conditions observed from the tower prevent approach completion.

5.3.4.7 Execution of the Missed Approach.

a. Execution of the missed approach by the pilot is not necessary for paragraphs 5.3.4.6.a through 5.3.4.6.c above if the pilot has the runway or approach/runway lights in sight. In these cases, controller phraseology shall be: "(reason). If runway/approach lights/runway lights are not in sight, execute missed approach (alternate instructions)." Reasons may include radar contact lost, too high/low for safe approach, or too far right/left for safe approach.

b. Execution of the missed approach is mandatory for paragraph 5.3.4.6.d above. Controller phraseology is "Execute missed approach," and the reason for the order (i.e., Aircraft ahead of you has taken the arresting gear); or the controller may issue instructions to climb and maintain a specific altitude and fly a specified heading and the reason for such instructions.

Note

Pilots may execute a missed approach at their own discretion at any time.

5.3.4.8 Practice Approaches. The provisions of this section are not intended to preclude a single-piloted aircraft from executing practice approaches (no landing intended) at a facility where weather is reported below published minimums when operating with an appropriate ATC clearance. The facility in question must not be filed destination or alternate and the weather at the filed destination and alternate must meet the filing criteria for an instrument clearance as set forth in this instruction.

5.3.4.9 Tower/Approach Control Responsibilities. A Navy or Marine Corps tower/approach control facility serving an airport shall keep the pilot informed of the latest reported weather and actual field conditions. Every effort shall be made to inform the pilot as well as the controller (in case of radar

approaches) of the most current ceiling, runway visibility, surface wind, and runway conditions. That is particularly important during periods of rapidly changing weather conditions such as fog, snow, and other phenomena that reduce visibility and braking action.

Note

Certain naval air traffic controllers certified in accordance with the guidance contained in NATOPS Air Traffic Control Manual are authorized to record and disseminate changing tower visibility observations directly to the pilot when prevailing visibility is less than 4 miles.

5.4 HELICOPTER/TILT-ROTOR OPS

5.4.1 Helicopter/Tilt-Rotor Operations in Class B, C, or D Airspace

5.4.1.1 Tower Clearance. When operating within class B, C, or D airspace, either tower frequency or an appropriate control frequency shall be monitored at all times.

5.4.1.2 Autorotations. Practice autorotations shall be conducted within the limits of the field boundary over a surface upon which a full autorotation can be safely completed and that is readily accessible to crash, rescue, and firefighting equipment. Practice autorotations shall require the specific approval of the tower.

5.4.1.3 Altitude. Helicopter/tilt-rotor flights within class B, C, or D airspace shall be in accordance with the local Air Operations Manual. Where no other guidance is provided, pilots of helicopters and tilt-rotors (which are operated in conversion mode) shall not exceed 500 feet AGL unless specifically cleared by the tower or other control agency. Pilots shall avoid flying over areas at altitudes where their rotor or prop-rotor wash could result in damage to aircraft, property, or personnel. Tilt-rotors in airplane mode shall comply with fixed wing procedures.

5.4.1.4 Ground Operations. Air taxi/ground operations shall be conducted with sufficient horizontal separation to preclude damage to aircraft, property, or personnel. Pilots shall operate with the minimum required power while on the ground and shall be particularly alert to prevent foreign object damage (FOD) and/or gust damage to their own and other aircraft.

5.4.2 Helicopter/Tilt-Rotor Terrain Flight Operations. Terrain flights (low level, contour, nap of the Earth (NOE)) shall be conducted only as operational necessity dictates, in training scenarios executed within designated training areas, or as published procedures and clearances prescribe.

5.4.3 Helicopter/Tilt-Rotor Night Hover Operation Over Water. Night/low visibility hover operations over water shall be conducted using aircraft equipped with operable automatic hover systems (i.e., coupler/Doppler/AFCS equipment) on all occasions when a natural horizon visible from the cockpit is not available to assist the pilot in establishing/maintaining a stable hover.

5.5 REDUCING FLIGHT-RELATED DISTURBANCES

5.5.1 Annoyance to Civilians and Endangering Private Property. Flights of naval aircraft shall be conducted so that a minimum of annoyance is experienced by persons on the ground. It is not enough for the pilot to be satisfied that no person is actually endangered. Definite and particular effort shall be taken to fly in such a manner that individuals do not believe they or their property are endangered. The following specific restrictions apply in view of the particularly unfavorable effect of the fear, extreme annoyance, and damage that can be inflicted.

5.5.1.1 Noise Sensitive Areas. Breeding farms, resorts, beaches, and those areas designated by the U.S. Department of Interior as national parks, national monuments, and national recreational areas are examples of noise sensitive areas.

5.5.1.2 Noise Sensitive and Wilderness Areas. These areas shall be avoided when at altitudes of less than 3,000 feet AGL except when in compliance with an approved:

a. Traffic or approach pattern

b. VR or IR route

c. Special use airspace.

Noise sensitive areas shall be avoided in the development of IR and VR routes and additional special use airspace unless the 3,000-foot criteria can be observed.

5.5.1.3 Aerial Refueling. Aerial refueling over densely populated areas shall be avoided whenever possible.

5.5.1.4 External Stores/Cargo. Pilots carrying external stores/cargo shall avoid overflying populated areas whenever possible.

5.5.1.5 Temporary Flight Restrictions. Aircraft shall not be operated within an area designated by a NOTAM within which temporary flight restrictions apply except as permitted in FAR 91.137.

5.5.1.6 Flat Hatting. Flat hatting or any maneuvers conducted at low altitude and/or a high rate of speed for thrill purposes over land or water are prohibited.

5.5.2 Disturbance of Wildlife

5.5.2.1 General. Commanding officers of aviation units shall take steps to prevent aircraft from frightening wild fowl or driving them from their feeding grounds. When it is necessary to fly over known wild fowl habitations, an altitude of at least 3,000 feet shall be maintained, conditions permitting. During hunting season, pilots shall avoid flying near wildlife haunts except as noted above.

5.5.2.2 Firing. Firing at large fish, whales, or any wildlife inhabiting the land or sea is prohibited.

5.5.3 Zooming of Vessels. Restrictions on zooming are not intended to hamper standardized shipping/ASW surveillance rigging and photography procedures as defined in appropriate fleet operating instructions.

5.5.4 Avoidance of Commercial Carriers and Aircraft of Civil Registry. At a minimum, such aircraft shall be avoided by a margin of at least 500 feet vertically or 1 mile laterally unless ordered otherwise by competent air traffic control authority. Under no circumstances shall aircraft be flown erratically or aerobatically in the close vicinity of civil aircraft. Civil aircraft carrying 10 or more passengers are equipped with Traffic Alert and Collision Avoidance System (TCAS). TCAS may activate when it detects an aircraft within 1,200 feet vertically, and 6 nm horizontally. If the passenger-carrying aircraft is not aware of the traffics intentions or does not have the traffic in sight, the passenger-carrying aircraft may take abrupt, evasive actions in response to a TCAS Resolution Advisory. This could cause injury to those on board the passenger-carrying aircraft. TCAS is activated by transponder when aircraft are squawking mode "S" or "C." TCAS provides a protected volume of airspace around an aircraft. The dimensions of this airspace are not based on actual distance but rather on the time to closest point of approach (CPA). Thus, the size of the protected volume depends on relative closure rate. Generally, the system begins to alert the flightcrew of a potential conflict when targeted aircraft are within 6 nm and 1,200 feet vertically of the TCAS-equipped aircraft. The system is designed to operate out to a maximum of 14 nm and identifies possible conflicting air traffic in three basic ways:

a. Tracking TCAS alerts the crew to all targets (transponder equipped) within range of the TCAS equipment.

b. Traffic Advisory (TA) TCAS declares a targeted aircraft an intruder. The flightcrew is alerted that vertical separation will be less than 1,200 feet at CPA.

c. Resolution Advisory (RA) TCAS declares a targeted aircraft as a threat. The crew is commanded to change the altitude of their aircraft to provide vertical separation from the targeted aircraft.

5.5.5 Avoidance of Installations Important to Defense. Although a "special use airspace" designation has not been assigned to all ammunition depots, magazines, oil refineries, and other plants considered important to national defense, naval aircraft shall avoid flying over such areas when their location is known.

5.5.6 Jettisoning Fuel. Whenever practicable, fuel shall not be jettisoned (dumped) below an altitude of 6,000 feet above the terrain. Should weather or emergency conditions dictate jettisoning at a lower altitude, every effort shall be made to avoid populated areas. When under positive control, the pilot in command should advise the air traffic control facility that fuel will be jettisoned.

5.5.7 Air-to-Air Missile Training Flights. Aircraft carrying live missile components other than guidance and control heads are prohibited from utilizing piloted aircraft as targets for training unless all participants have been thoroughly briefed on the conduct of the flight.

5.5.8 Expenditure of Airborne Stores Through Extensive Cloud Cover

5.5.8.1 Naval Commands. Pilots of Navy and Marine Corps aircraft are only authorized to expend ordnance, fire missiles, or drop other airborne stores through cloud cover sufficiently extensive to preclude visual clearance of the air and surface area under the following conditions:

a. When operating over the high seas, provided area air and surface clearance can be ensured through radar surveillance or visual means. The operational commander conducting the exercise is responsible for the safeguarding of airborne and surface traffic. The fact that the firing is conducted in a warning area or that a NOTAM has been issued does not relieve the operational commander of his/her responsibility.

b. When operating over land (including over territorial waters), provided that the firing or drop is conducted within an activated restricted area and the impact is within a designated surface target/range. The restricted area controlling authority must specifically approve such usage and is responsible for coordination of airspace and target/range scheduling to ensure protection of other restricted area users and target/range personnel. The operational commander conducting the exercise is responsible for ensuring the firing or drops are conducted in the specified airspace and impact the scheduled surface target/range.

5.5.8.2 Nonnaval Commands. Nonnaval commands may be authorized to expend ordnance in restricted or warning area airspace for which Navy or Marine Corps commands are designated controlling authority, provided the criteria specified above are observed and the using service, by written agreement, assumes complete responsibility for any damages resulting from such use.

5.5.8.3 Emergency Jettisoning. Nothing in the above precludes emergency jettisoning of external stores through extensive cloud cover; pilots are directly responsible for their actions and must take every possible precaution to minimize danger to other aircraft and persons/property on the surface.

5.6 FLAMEOUT APPROACHES

5.6.1 Actual Flameout Approaches. Actual flameout approaches shall not be attempted unless it is impossible/impractical to abandon the aircraft.

5.6.2 Simulated Flameout Approaches. Simulated flameout approaches are prohibited, unless specifically authorized by individual NATOPS manuals.

5.7 FLIGHT OPERATIONS WITH NIGHT VISION DEVICES

5.7.1 General. NVDs greatly expand the capability and survivability of night tactical flight profiles flown against modern threats. Flying with NVDs is authorized for units and types of aircraft for which a valid requirement exists. Appropriate commanders shall ensure issuance of and adherence to specific instructions and standard operating procedures for all aspects of NVD flying.

5.7.2 Operating Limitations

a. NVD operations using image-intensifying devices, such as AN/AVS-9, AN/AVS-6, or MXU-810/U (CATSEYEs), shall be conducted in VMC. Flight in IMC for purposes of conducting standard instrument departures and instrument approaches is permitted while under positive radar control. Entering IMC during VFR training is prohibited. Inadvertent IMC procedures shall be briefed for all NVD flights.

b. Aircraft interior lighting should be NVD compatible to the maximum extent possible.

c. Aircraft exterior lighting shall comply with applicable FAA regulations unless exemptions have been approved. However, the anti-collision lights need not be lighted when the pilot in command determines that, because of operating conditions, it would be in the interest of safety to turn the lights off. In restricted areas, position

lights of multiaircraft flights of up to four aircraft on NVDs may fly with lead through dash threes navigation and anti-collision lights off. If applicable, formation and blade tip lights shall be on at the highest intensity consistent with NVD compatibility. The last aircraft in each flight shall have navigation lights on at the highest intensity consistent with NVD compatibility and anti-collision lights on.

d. Minimum illumination requirements shall be established by CNO/CMC for the conduct of NVD training flights/missions. The approved methods of deriving illumination levels are the Solar/Lunar Almanac Program (SLAP) computer program or as determined by a CNO/CMC-approved study of the illumination level under various conditions. The SLAP Computer Program is available on the MAWTS-1 (www.tediv.usmc.mil/mawts1), NAVOCEANO www.navo.navy.mil) and SIPRNET Websites. Illumination levels must be tempered with sound judgment and the effects of cloud cover, humidity, haze, dust, low moon angles, etc., considered. For characterization purposes, low light as used in Appendix H, paragraph H.3, is defined as light level less than 0.0022 lux. Other than low light is defined as light level greater than or equal to 0.0022 lux.

e. NVD aircrews shall complete an approved NVD training syllabus and be certified by the commanding officer with a NATOPS flight qualification jacket entry for NVD operations. Training should include demonstrations of the limits to NVD capabilities imposed by environmental conditions and human factors. A Night Imaging and Threat Evaluation (NITE) Lab shall be completed for initial qualification and is strongly recommended for refresher training.

f. NVD instructors shall complete an approved NVD IUT training syllabus and be certified by the commanding officer with a NATOPS flight qualification jacket entry for NVD instructional flights.

g. NVD-designated aircrew shall meet currency requirements as specified in the individual aircraft NATOPS manual, functional wing directives, and/or the USMC Aviation Training and Readiness manual (MCO 3500.14). Qualification/currency requirements may vary for different mission areas, (i.e., shipboard operations, overland navigation, NOE navigation, strike rescue, etc.) and should be identified in the appropriate manual/instruction. Simulators may be used to support the training program, but shall not replace aircraft flight hour requirements.

h. For NVD training syllabus flights, the pilot in command (PIC) shall be current for the mission. For all other flights, both the PIC and copilot shall meet appropriate currency requirements.

i. Mixing different types of NVDs between aircrew within individual aircraft is not authorized. The use of AN/AVS-6 and MXU-810/U (CATEYES) within multiple aircraft flights is authorized.

j. Shipboard and ground operation involving groundcrews using NVDs shall be dictated by the platform NATOPS manual (i.e., CV NATOPS, LHA/LHD NATOPS) or the applicable NWP.

5.8 OPERATION OF UNMANNED AERIAL VEHICLES (UAVS)

5.8.1 General Precautions. The operation of UAVs shall be conducted with due consideration of the potential hazard presented when they are out of control. Whenever practicable, UAVs shall be operated at such an altitude and on such paths that danger to personnel and property on the surface is reduced to a minimum. In operating UAVs, due consideration shall be given to avoiding other aircraft in flight.

5.8.2 Specific Operating Limitations. In planning and conducting the flightpath to, in, and from operating areas, all activities operating UAVs shall select and adhere to those tracks and altitudes that completely minimize the possibility of UAVs falling into a congested area in the event of electronic or material malfunction.

Aerobatics shall not be performed unless required for operational exercises of test or evaluation of operational designs.

5.8.3 Displays and Demonstrations. Participation of UAVs in public demonstrations, except for static display, is prohibited unless expressly authorized by COMNAVAIRFOR.

5.8.4 Overall Use and Control. Subject to the foregoing instructions and insofar as is practicable, the use and control of UAVs shall be the same as for piloted aircraft.

CHAPTER 6

Air Traffic Control

6.1 APPLICABILITY

This chapter supplements the sources listed in paragraph 1.2 and provides additional rules and procedures of particular importance for the operation and control of naval aircraft.

6.2 AIR TRAFFIC CONTROL PROCEDURES

6.2.1 Authorized Personnel. Only personnel properly qualified in accordance with the NATOPS Air Traffic Control Manual shall exercise control over aircraft exclusive of actual/simulated shipboard or tactical operations under the control of non-ATC certified personnel.

6.2.2 Control Tower. At airfields with an operating control tower, the control tower shall exercise control of all aircraft operating to, from, or on the airfield and within class B, C, or D surface area. Prior approval from the tower shall be obtained for all taxi, takeoff, landing, towing, and related operations. Preventive control may be provided to eliminate repetitious, routine approval of pilot action; in that case, the controller will issue instructions or advice only if a situation develops that needs corrective action. Prior to preventive control service being provided, appropriate directives shall be issued to ensure that affected ATC personnel and aircraft operators being afforded preventive control are aware of the procedures being used.

6.2.3 Control of Formation Flights

a. Formation flights shall be controlled/ cleared as a single aircraft unless the formation leader requests otherwise.

b. Responsibility for landing interval between elements of a formation flight rests with the pilots in the formation.

6.2.4 Taxi Instructions

a. Taxi Clearance. Taxi clearance shall be obtained prior to taxiing. Formation leaders may obtain taxi clearance for their entire flight. A clearance to taxi to the runway authorizes the aircraft to cross all runways/taxiways that the taxi route intersects except the assigned takeoff runway. This does not authorize the aircraft to enter or cross the assigned takeoff runway at any point. Ground control shall clear aircraft from the parking area to the warm-up areas. Pilots shall read back all hold/hold short instructions received during taxi. Aircraft shall remain on ground control while in the warm-up area until cleared to change frequency or until ready for takeoff clearance.

b. Overtaking. No taxiing aircraft shall overtake or pass another aircraft except with tower approval.

c. Taxi Speed. All aircraft shall be taxied at a safe rate of speed and under positive control of the pilot at all times.

d. Emergencies. When the tower is controlling an aircraft in an emergency, aircraft on the ground shall taxi clear of the runway. Those on the taxiway shall hold until authorized to proceed. All aircraft shall exercise radio discipline for the duration of the emergency. Pilots of taxiing aircraft sighting emergency vehicles displaying the flashing red light on the field shall stop and hold their positions until authorized to proceed by radio or light signals from the tower.

6.2.5 Departure Instructions

a. ATC Clearance. Aircraft departing on IFR flight plans will receive their ATC clearance on ground control or designated clearance delivery frequency. Departing pilots shall read back clearances differing from the filed flight plan.

b. Takeoff Clearance. Aircraft shall hold well clear of the duty runway until cleared by the tower for

takeoff or position and hold, and the aircrew has ensured that there is no conflicting traffic for runway use. Pilots shall read back position and hold and hold short instructions. When cleared for takeoff, aircraft shall take off without undue delay or clear the duty runway.

c. Unrestricted Climb. An unrestricted climb may be authorized for such reasons as noise abatement, fuel conservation, reduction of icing, or elimination of traffic conflicts. An unrestricted climb is authorized to climb directly to a cruise/en route altitude without an interim stop. It does not relieve the pilot of the responsibility to comply with applicable FARs, aircraft NATOPS and wing/squadron doctrine. Clearance for an unrestricted climb is not authorization for an aerobatic flight maneuver.

d. Frequency Changes. Single-piloted aircraft shall not be required to change radio frequency and/or transponder code settings until reaching an altitude of 2,500 feet above surface except when the aircraft is to level off and operate at an altitude below 2,500 feet. In that event, changes will be made after level off.

e. Intersection Departure. Pilots may be cleared either at controller discretion or at pilot request for an intersection departure to expedite air traffic and reduce delays unless local directives (i.e., Air Operations Manual) prohibit use of the applicable intersection. When clearing an aircraft for an intersection departure, controllers shall issue the measured distance from the intersection to the runway end. Issuance of the measured usable runway remaining may be omitted if appropriate directives (i.e., Air Operations Manual, letter of agreement, etc.) are issued to ensure that pilots and controllers are thoroughly familiar with these procedures, including usable runway length from the applicable intersection. Pilots still retain the prerogative to use the full runway length, provided they inform the tower of their intentions. It is the pilot's responsibility to determine that sufficient runway length is available to permit a safe takeoff under existing conditions.

6.2.6 Minimum Fuel. Minimum fuel is an advisory term indicating that in the judgment of the pilot the fuel state is such that no undue delay can be accepted en route to the destination. It is not an emergency situation, but undue delay may result in an emergency. If at any time the remaining usable fuel supply suggests the need for traffic priority to ensure a safe landing, the pilot shall declare an emergency and report fuel remaining in minutes. Both minimum fuel advisories and emergency fuel state shall be reported each time control is transferred to a new controller.

Note

Pilots declaring minimum fuel should not expect special handling from FAA controllers.

6.2.7 Handling of VIP Aircraft

a. Priority. Although priority is not normally given to VIP aircraft, controllers may give consideration to such aircraft provided safety of other aircraft is not affected. Controllers shall not request priority from FAA for VIP flights.

b. Estimated Time of Arrival. Persons charged with meeting and making arrangements for VIP flights may be embarrassed if such a flight arrives prior to the ETA. Every effort should be made to provide updated ETAs to interested parties. Except in unusual circumstances, pilots of VIP flights should not arrive prior to the ETA.

6.2.8 Approach Instructions. Single-piloted aircraft arriving on an IFR flight plan shall be provided single frequency approach (SFA) to the maximum extent that communications capabilities and traffic will permit. Those activities without SFA capabilities shall keep frequency and/or transponder code shifts to an absolute minimum below 2,500 feet above the surface.

6.3 LANDING INSTRUCTIONS

a. VFR Arrivals. Contact the appropriate controlling agency (e.g., approach control, tower, etc.) prior to entering Class B, C, or D airspace. Notify the controlling agency as soon as possible after initial contact of special handling requirements (e.g., hung ordnance, etc.).

b. Waveoff. A waveoff is mandatory when ordered by the control tower, runway duty officer, or wheels watch unless the pilot is experiencing an emergency. The waveoff may be given by radio, light signals, red flares, or hand/flag signals.

c. Wheels Down Report. A wheels down report shall be given as the aircraft turns onto the base leg

or after lowering the landing gear on straight-in approach. The controller shall remind the pilot to check wheels down at an appropriate position in the pattern unless the pilot has previously reported wheels down.

d. Lost Communication. If unable to establish radio communication, comply with the procedures contained in the Flight Information Handbook. Flashing of the landing/taxi lights is recommended in addition to the wing rock procedure.

6.3.1 Reduced Same Runway Separation. Strict adherence to the separation criteria for arriving and departing aircraft set forth in FAA Handbook 7110.65 may, in some circumstances, cause operational/training delays and airport congestion. Factors such as mission of the facility, airfield design, and aircraft models being supported may indicate that reduced separation standards are feasible and can be applied while maintaining adequate margins of safety. Subject to prior approval by the immediate senior in the chain of command, naval aviation shore facility commanders are authorized to establish and apply reduced separation criteria for Navy and Marine Corps aircraft at the airfields under their command with the following stipulations:

a. Such action is necessary to meet operational/training requirements.

b. In the case of formation instrument approaches, ceiling and visibility minimums stated in paragraph 5.1.12.6 apply.

c. Reduced separation criteria are applied only between aircraft of similar performance characteristics or when the preceding aircraft has higher performance than the following.

d. Prior to application of reduced separation criteria, appropriate directives are issued delineating the specific standards to be applied (i.e., distance between aircraft using alternate sides of the runway, distance between aircraft using centerline, aircraft model/classes to which reduced standards apply, etc.).

e. Appropriate measures have been instituted to ensure that affected ATC personnel and aircraft operators are aware of the criteria being applied.

6.3.1.1 Aircraft of Other Military Services. The conditions of paragraph 6.3.1 may also apply to aircraft of other military services when such conditions are agreed to in writing by the cognizant operational commander of the other service and the Navy or Marine Corps shore facility commander.

6.3.2 Procedure for Checking Wheels Down and Locked. When a pilot has any doubt as to the gear being down and locked, the pilot shall promptly notify the controlling agency. Further, the pilot should request an airborne visual check, preferably by a similar model aircraft if one is available and such a procedure is considered practicable and safe. If not possible, the pilot should request a ground visual check by the most qualified personnel available (e.g., LOS, RDD, etc.). If doubt exists as to gear being down and locked, the pilot shall notify the control tower, which will in turn direct the pilot to perform a low pass in front of the tower for the purpose of a visual check. Pilots should be aware, however, that air traffic control personnel may only comment on the appearance of the landing gear (e.g., wheels appear down). Should doubt exist after a visual check, crash and rescue equipment shall be available for precautionary landing. After a landing rollout, the aircraft shall not turn off the runway until ground personnel have made a visual check of the gear and gear pins have been installed. If a known not locked or up condition exists, normal crash alert procedures shall be instituted.

6.3.3 Runway Braking Action Advisory/ Condition Readings. ATC facilities shall issue runway braking action advisories when braking action reports received from pilots or authorized airport operations personnel indicate braking action is poor or nil. The Flight Information Handbook contains the necessary information for converting the numerical runway condition readings (included in the remarks portion of the weather sequence) to descriptive terms used in braking action advisories.

6.4 LETTERS OF AGREEMENT

The NATOPS Air Traffic Control Manual contains procedures for executing letters of agreement between FAA/USN air traffic control facilities concerning the control of air traffic. This guidance may also be used by wings/squadrons in effecting local letters of agreement with FAA facilities. The Navy Representative to the FAA Regional Headquarters (NAVREP) should be

consulted in these cases. Information copies of local letters of agreement not specifically addressed in the NATOPS Air Traffic Control Manual shall be forwarded to CNO (N785F) and the appropriate type commander.

6.5 VITAL MILITARY OPERATIONS

6.5.1 Priority. OPNAVINST 3722.30 (Security Control of Air Traffic and Air Navigation Aids (SCATANA)) states there are certain military operations vital to national defense. These operations include active air defense interceptor missions, active undersea warfare missions, and active airborne early warning and control missions. These operations are to be given priority over all other military and civil aircraft by procedural handling by ATC for the particular operation as specified in coordinated agreements or authorizations. Joint Letters of Agreement (LOAs) between naval commands and FAA become the coordinating agreements specified in SCATANA.

6.5.2 Letters of Agreement. Each naval aviation shore activity from which active alert missions are conducted shall develop and implement a joint LOA with the appropriate FAA or host nation agency to prevent air traffic control delays for active missions. Wing/squadrons that routinely stand alert status at non-U.S. Navy airfields should execute an appropriate LOA at those airfields. Items that must be addressed in LOAs include but are not limited to:

a. Procedures to notify ATC at least 5 minutes prior to the flight to allow for clearing of traffic from the departure corridor.

b. Provision for ATC release of the active mission aircraft to an appropriate tactical control agency upon request with due regard for safety of flight.

c. Provision of Military Assumes Responsibility for Separation of Aircraft (MARSA) within the same mission. Refer to OPNAVINST 3722.33 (FAA Handbook of Special Military Operations 7610.4).

Prior to signing and implementing any agreement, the proposed LOA shall be forwarded to the cognizant force commander for review and approval. NAVREPs should be consulted for assistance and advice in developing or revising joint LOAs and shall be provided copies of such agreements.