



DEPARTMENT OF THE NAVY  
COMMANDER NAVAL AIR FORCES  
BOX 357051  
SAN DIEGO, CALIFORNIA 92135-7051

COMNAVAIRFORINST 3740.1  
N40

SEP 16 2003

COMNAVAIRFOR INSTRUCTION 3740.1

Subj: CARRIER QUALIFICATION (CQ) OPERATIONS

Ref: (a) NAVAIR 00-80T-104 (LSO NATOPS Manual)  
(b) NAVAIR 00-80T-105 (CV NATOPS Manual)  
(c) Aircraft NATOPS Flight Manuals  
(d) COMNAVAIRFORINST 3500.2

Encl: (1) List of Duties for Key CQ Personnel  
(2) CQ Requirements Request Message  
(3) Letter of Instruction (LOI) Guidelines  
(4) Sample Air Operations Summary Report

1. Purpose. To establish policy and prescribe procedures for conducting Carrier Qualification (CQ). This is a complete revision and should be read in its entirety.

2. Cancellation. COMNAVAIRPACINST 3740.2W/COMNAVAIRLANTINST 3740.12Q.

3. Applicability. The provisions of this instruction are applicable to both Pacific Fleet and Atlantic Fleet carriers and all aviation units involved in initial/refresher CQ operations, including Marine units and units assigned to Chief of Naval Air Training (CNATRA), except as modified in CNATRAINST 3740.9 series. Normal Air Wing carrier operations involving refresher or requalification landings shall be governed by the provisions of references (a) and (b) and Ship/Air Wing doctrine.

4. Responsibilities

a. CV Commanding Officer. Except as specifically directed by an embarked Flag Officer, the carrier Commanding Officer shall serve as the approving authority to grant waivers or approve deviation from references (a), (b), (d) and this instruction. Any deviations should take into consideration the recommendation of the CVW Commander (if embarked), senior embarked LSO, type aircraft, pilot experience and performance, weather conditions, CCA controller experience, condition of landing aids, carrier deck conditions, and divert weather.

b. CQ Officer-in-Charge. The Type Commander (TYCOM) shall designate a senior carrier aviator, usually an FRS Commanding Officer, to act as TYCOM Officer-in-Charge (OIC) for all CQ periods. The TYCOM OIC shall function as the embarked Air Wing Commander and shall report to the carrier Commanding Officer and Flag Officer, when embarked, and shall be responsible for the CQ evolution. Specific duties are delineated in enclosure (1).

c. Detachment OIC. Each squadron involved in CQ operations shall designate a detachment OIC who shall be responsible for all aspects of the detachment. Recommendations for deviations/waivers of CQ requirements or limitations shall be forwarded to the carrier Commanding Officer from the senior LSO via the OIC. Specific duties of the detachment OIC are delineated in enclosure (1).

d. Landing Signal Officer. Each aviation unit involved in CQ operations shall assign a qualified LSO to the detachment who shall be responsible for the detachment's CQ operations. The TYCOM LSO shall be the overall coordinator of the CQ evolution and assist the TYCOM OIC as necessary.

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Final designation for a pilot as "carrier qualified" shall be made by the TYCOM LSO, or senior embarked LSO as applicable. Specific duties are delineated in enclosure (1).

5. Scheduling

a. Carrier schedules. The respective TYCOM LSO shall schedule FRS and CNATRA periods, as necessary, in coordination with the TYCOM Carrier Operations Officer.

b. Submission of requirements. The submission of unit requirements shall be solicited by the cognizant TYCOM not less than four weeks prior to the scheduled CQ period. Requirements are to be sent to the TYCOM, the carrier, and the designated OIC, with an information copy to the appropriate Type Wing using the format in enclosure (2), no later than one week prior to the pre-sail conference.

c. Availability. Carrier qualification phase for Category I and II pilots should occur at the end of the FRS syllabus, so students can benefit from all other phases of the FRS syllabus. The experience gained in the other FRS phases greatly benefits the student in the challenging phase of carrier operations. This also provides for placement of Priority A pilots without additional landings prior to departure from the FRS. Fleet experienced replacement pilots, as defined in reference (a), shall normally be carrier qualified prior to detachment from the FRS. In the event that FRS CQ cannot be completed in a timely manner (e.g., due to deck availability), liaison shall be effected between the TYCOM, the cognizant Type Wing Commander, the recipient air wing and squadron to determine the practicality of completing the required CQ with the recipient air wing. Under these circumstances, the following provisions shall apply:

(1) CQ of these pilots is to be completed at the earliest opportunity and should follow guidelines and intent set forth in reference (a).

(2) Qualification should be conducted by a training-qualified LSO, but may be conducted by an air wing staff-qualified LSO per reference (a), with TYCOM LSO approval.

(3) A waiver shall be submitted by the cognizant air wing LSO to the TYCOM LSO prior to conducting FCLP and CQ of the pilot.

6. Preparation for CQ

a. Pre-Sail Conference. Approximately two weeks prior to the scheduled CQ period, the carrier shall convene and host a pre-sail conference for the purpose of finalizing all requirements and details regarding the evolution. The carrier shall provide the detachment Letter of Instruction (LOI) to all participants using enclosure (3) as a guide. Participating units shall be represented by the prospective detachment OIC and senior LSO, when available. The TYCOM participants shall be the designated OIC and the TYCOM LSO.

b. Pilot/Aircrew preparation

(1) CQ operations include aircrews of widely varying levels of experience from a variety of commands. It is essential that NATOPS procedures in references (a) through (c) be thoroughly understood by all aircrew and adhered to at all times.

(2) All pilots shall be designated in writing as Safe-for-CQ by their Commanding Officer prior to conducting CQ per reference (a). For initial

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qualification, a pilot's first CQ period should be completed no more than five days after their last FCLP period.

(3) Per references (a) and (b), aircrew shall receive briefings prior to the commencement of CQ operations. A thorough flight brief specifically focused on the unique procedural and safety aspects of CQ operations shall be conducted under the supervisor of an LSO prior to each CQ event.

7. Landing requirements. Landing requirements are delineated in references (a) and (d).

a. Priority A Pilots. Priority A Pilots, as defined in reference (d), require 2 day touch-and-go landings (T&Gs), 12 day arrested landings, 2 night T&Gs, and 8 night arrested landings for initial qualification. Reference (d) and enclosure (2) of this instruction are germane.

b. Touch-and-Go Landings (T&G). A T&G shall be a satisfactory pass which would have ended in an arrested landing had the hook been down. The following provisions also apply:

(1) Those pilots scheduled for T&Gs shall receive at least one T&G prior to making an arrested landing unless fuel considerations dictate otherwise.

(2) Category I pilots shall receive two night T&Gs. The preferred method for completing the night T&G landings is to make the first landing of each night a T&G. Once two satisfactory T&G landings are complete, no additional T&G landings are required on subsequent nights. These night T&G landings are for safety and are not to be used as a deck management tool. Category I pilots shall not exceed four night arrested landings in one night.

c. Hook-skip bolters. The following options are authorized when a hook-skip bolter occurs and the LSO has graded the approach as satisfactory:

(1) Pilots requiring either ten or twelve day arrested landings and either six or eight night arrested landings may count a maximum of two hook-skip bolters, day or night, as qualification landings.

(2) Pilots requiring four day and four night arrested landings may count a maximum of one hook-skip bolter, day or night, as a qualification landing.

(3) The decision to count hook-skip bolters as qualification landings shall be made by the controlling LSO and must be based upon pilot performance. This provision should be used with discretion and every attempt should be made to provide the proper number of arrested landings to each pilot.

d. Additional landings. The senior detachment LSO, with concurrence of the TYCOM LSO, may recommend additional day or night landings prior to final qualification. Use of T&Gs may be appropriate. Such recommendations should be made as an exception and must not impact qualification of other pilots to "build up" a weak or marginal pilot.

8. Conduct of operations

a. References (a) and (b) standardize general procedures for carrier air operations. All CQ operations shall be conducted per these directives.

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b. Flight time. Adherence to the provisions for flight time delineated in reference (a) is mandatory. Category I pilots shall have a minimum of 20 minutes of night flight time (comfort time) prior to their first night landing for every night that qualification landings are conducted. Pilots who have been flying as co-pilot shall also receive 20 minutes of comfort time after assuming duties as pilot in control of the aircraft. Fleet-experienced aviators require comfort time as per reference (a) on the first night of CQ. Comfort time on subsequent nights is at the discretion of the TYCOM OIC/LSO and carrier Commanding Officer. Category I pilots shall commence their first night CQ attempt from the Marshall Pattern.

c. Bingo/Divert. Any aircraft approaching low fuel state (bingo) shall be diverted to a land base to arrive with a safe fuel margin as directed by specific aircraft NATOPS. While hold-down fuel is predicated on ship's weather (Case I, II or III), bingo fuel is predicated on divert field distance and weather (VMC or IMC). It is the responsibility of each participating unit to provide the carrier with valid bingo information for their aircraft. Continuous monitoring of bingo distances, enroute and field weather, status of airfield and approach radar, and individual pilot experience is required.

d. Weather/Wind Over Deck (WOD) requirements

(1) Weather minimums and deck motion are delineated in references (a) and (b).

(2) The optimum WOD for both day and night operations is 25 knots, unless temperature correction requires more. Minimum WOD is 20 knots. Minimum WOD should be avoided due to the associated level of difficulty for the qualifying pilots. High wind conditions (35 knots or greater) may require changing the basic angle to a 3.75 or 4.0 degree glideslope. Maximum WOD for CQ is 40 knots per reference (a).

(3) Category I pilots shall not be qualified without demonstrating satisfactory performance in the day VMC landing pattern as described in reference (b). Case I or II operations meet the landing pattern requirement.

e. Night operations. All night aircraft operations shall be controlled by CATCC to include helicopter recoveries. Close control of aircraft shall be used and shall ensure that final bearing is intercepted at no less than four miles.

9. CQ Operations - General

a. Restrictions on daily flights, flight time and arrested landings are contained in reference (a) and OPNAVINST 3710.7. Supervisory personnel must be aware of the fatiguing nature of CQ evolutions, provide opportunity for aircrew rest during extended days, and be alert to curtail an individual's activities if necessary. A timely determination must be made to stop the pilot's operations, if necessary, in order to provide for debriefing and another attempt at qualification at a later time or day.

b. Pilots should be given at least two day and two night periods in which to qualify in order to demonstrate consistent performance. A waiver for six night arrested landings, authorized in reference (a), must be exercised with caution and based upon demonstrated pilot performance. It shall not be used for Category I pilots.

c. To day qualify, a pilot must demonstrate the ability to get aboard safely in NORDO or "zip-lip" conditions. To night qualify, a pilot must fly

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consistent Case III approaches, achieve a good start, and get aboard safely with the assistance of LSO "advisory" calls, but making his/her own corrections. Priority A pilots must demonstrate the ability to get aboard at night under NORDO conditions. If LSO talkdowns are required throughout CQ, the pilot should be disqualified regardless of GPA/BR. The pilot's own ability may be masked by the "team effort" to get him/her aboard. Priority B pilots, as defined in enclosure (2) of this instruction, require a minimum grade point average and boarding rate of 2.65/75 percent day, 2.60/65 percent night. Priority A pilot requirements are delineated in reference (d).

d. If a pilot is disqualified, that pilot shall discontinue carrier qualification landings as soon as possible and shall not participate in further carrier qualifications during that CQ evolution.

10. Action

a. All carriers and aviation units engaged in CQ operations shall comply with the provisions of this instruction.

b. The daily air operations summary, enclosure (4), shall be forwarded to the appropriate TYCOM upon completion of each day's CQ operations. An information copy shall be sent to the remaining TYCOM, CARGRU Commander, Air Wing Commander, appropriate Type Wing Commanders, participating units, and to CNATRA, and appropriate subordinates when their units are participating. For fleet units, submission of this report should be terminated upon the completion of TSTA II CQ. This report shall not be submitted for cyclic operations.

11. CNAF LSO has the responsibility of updating and reviewing this instruction annually, or as required.



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Chief of Staff

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LIST OF DUTIES FOR KEY CQ PERSONNEL1. TYCOM OIC

- a. Attend pre-sail conference, acting as the TYCOM representative.
- b. Act as liaison between embarked units and the carrier.
- c. Contact each participating unit concerning requirements/SOP for CQ operations.
- d. Coordinate with TYCOM LSO to establish requirements and plan of action for underway period.
- e. Assist the Air Operations Officer and the Air Boss with the conduct of CQ as required.
- f. Advise the Commanding Officer of any subject that may affect the detachment's successful completion.
- g. Embark the entire detachment.
- h. Call on the Commanding Officer and the Executive Officer of the carrier upon embarkation.
- i. Coordinate TAD requirements with the carrier Command Master Chief.
- j. Coordinate the administration of watches, berthing, and maintenance spaces for embarked detachments.
- k. Assist Air Operations in establishing the offload and COD priorities/requirements for all embarked units.
- l. Debrief the cognizant TYCOM via TYCOM LSO upon completion of the detachment.

2. TYCOM LSO

- a. Attend the pre-sail conference.
- b. Assist the OIC in the orderly completion of CQ requirements.
- c. Act as liaison between embarked units and the ship in concert with the TYCOM OIC.
- d. Schedule a meeting of LSOs, squadron representatives, the Air Officer and the Air Operations Officer prior to the commencement of CQ.
- e. Schedule air operations in concert with the Strike Operations Officer and with the assistance of detachment LSOs/OICs. Set and adjust scheduling priorities as necessary.
- f. Call on the Commanding Officer, Air Operations Officer and Air Officer of the carrier upon embarkation.
- g. Make recommendations to the Commanding Officer of the carrier and the TYCOM OIC when operating procedures, marginal weather, or other circumstances affect the conduct of CQ operations.

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h. As appropriate, grant qualification or disqualification to each pilot attempting CQ.

i. Submit a written report of the CQ operations to the TYCOM no more than one week after the completion of the CQ period. The report should include, but not be restricted to the following:

(1) Pilots not day/night qualified/complete.

(2) Circumstances/conditions which affected the conduct of the operations.

(3) Conclusion and recommendations.

3. Squadron Detachment OIC

a. Attend pre-sail conference.

b. Assume responsibility for detachment operations, administration, and maintenance support.

c. Assist the TYCOM OIC/LSO.

d. Monitor the progress of pilots, with particular regard to preventing incidents of pilot fatigue.

e. Report to TYCOM OIC/LSO for all matters pertaining to recommendations and changes to the CQ plan.

f. Perform the duties of CATCC observer which include:

(1) Have a working knowledge of all regulations concerning CQ contained in all references and this instruction.

(2) Maintain daily/cumulative records of pilot's traps/T&Gs via close coordination with Squadron LSO.

(3) Assist the Air Operations Officer as required.

g. Attend meetings as scheduled by TYCOM OIC/LSO.

h. Submit the daily air operations summary to the Air Operations Officer within 30 minutes of unit completion each day.

i. Submit the final report to the TYCOM OIC prior to departure from the carrier, if requested. The report shall include recommendations/comments on any aspect of CQ operations considered appropriate.

4. Senior Squadron LSO

a. Attend pre-sail conference.

b. Ensure all aircrew are fully trained and prepared to conduct CQ operations.

c. Make recommendations to the TYCOM LSO and squadron detachment OIC concerning unsatisfactory pilot performance.

d. Inform the TYCOM OIC/LSO of unsafe pilots and deck, platform, or weather conditions that may affect the conduct of CQ operations.

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e. Supervise LSO performance and training.

f. Advise the Air Officer/TYCOM LSO, when any equipment on the platform or associated landing aids are inoperative, unreliable, or when other conditions or circumstances are unsatisfactory for the continued conduct of CQ operations.



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CQ REQUIREMENTS REQUEST MESSAGE

FROM (Unit)  
 TO TYCOM//N40// TYCOM OIC// USS SHIP//  
 INFO TYPE WING  
 CARGRU (if applicable)  
 AIR WING (if applicable)  
 BT  
 UNCLAS//N03740//  
 MSGID/GENADMIN/(Unit)  
 SUBJ/(Unit) CQ INFORMATION FOR (Ship/CQ dates)//  
 REF/A/GENADMIN/(TYCOM)/(Date of tasking message)//  
 POC/(As applicable)

RMKS/1. THE FOLLOWING INFORMATION IS SUBMITTED PER REF A:

- A. Total number of pilots by priority (e.g., 3A/6B/3C) (Note 1)
- B. PRI A/PRI B day landings (T&G/trap)
- C. PRI A/PRI B night landings (T&G/trap)
- D. Total day landings (T&G/trap)
- E. Total night landings (T&G/trap)
- F. Total officers to embark (male/female)
- G. Total enlisted to embark (CPO male/female, E-6 and below male/female)

- H. Total aircraft to remain on board
- I. Remarks and specific unit requirements (Note 2)

## 2. PILOT AND A/C INFORMATION:

## A. Pilot requirements

NAME PRI T/G DAY T/G NIGHT  
 (List names by decreasing priority)

## B. Principal officers/DSN numbers

OIC

LSO

Maint rep

Other

## C. A/C information

(1) Type A/C basic weight total fuel

Max trap fuel

Max T/G fuel

(2) Fuel statistics

Day CQ

Night CQ

Fuel per pass (D/N)

Holddown fuel (#'s above bingo-day)

(#'s above bingo-night)

Bingo data (no wind)

Distance	Day/VFR	Night/VFR	Day/IFR	Night/IFR
200				
180				
160				
140				
120				
100				
80				
60				
40				

Fuel to be added for each 10 kts of head wind for 100 NM

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Notes:

1. The following classifications are to be used to designate individual pilot priorities. Specific fleet pilots identified as special cases requiring carrier landings shall be handled on a case-by-case basis and assigned priority (generally Priority B) commensurate with their Commanding Officer's/Air Wing Commander's desires. Appropriate number of traps shall be determined by the TYCOM LSO.

a. Priority A. This classification has the highest priority and includes those pilots who meet the guidelines set forth in reference (d).

b. Priority B. Pilots who shall be assigned to squadrons which are not scheduled for extended deployment within 90 days. This includes VAW/VRC instructor pilots requiring landings to renew currency prior to CQ per E-2/C-2 NATOPS or as part of an Instructor Under Training (IUT) syllabus for other FRSs.

c. Priority C. FRS/TYCOM LSO's obtaining refresher landings IAW reference (a.).

d. Priority D. Pilots obtaining landings in support of CNO projects.

e. Priority E. Naval Air Reserve pilots obtaining refresher or initial in-type qualification landings.

f. Priority F. Other FRS instructor pilots obtaining refresher landings.

2. Include desired detachment location (ashore/afloat) and detachment message PLAD (e.g., STKFITRON ONE TWO TWO DET ALPHA).

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LETTER OF INSTRUCTION (LOI) GUIDELINES

1. The LOI shall include, but not be limited to the following:
  - a. Statement of purpose and objectives
  - b. List of key points of contact on ship and in each participating squadron
  - c. Operating area
  - d. Expiration of liberty
  - e. Uniforms
  - f. Support equipment required of participating units
  - g. TAD personnel requirements to carrier
  - h. Schedule of major events
  - i. Air operations plan
  - j. Watch requirements, where applicable

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SAMPLE AIR OPERATIONS SUMMARY REPORT

IMMEDIATE PRIORITY  
 FROM USS SHIP//AIR OPS//  
 TO COMNAVAIRPAC SAN DIEGO CA//N3/N40/N40A/N40L//  
 INFO COMTHIRDFLT//N3//  
 COMCARGRU SEVEN  
 COMSTRKFIGHTWINGPAC LEMOORE CA//30//  
 COMVAQWINGPAC WHIDBEY ISLAND WA//30//  
 STRKFITRON ONE TWO TWO  
 VMFAT ONE ZERO ONE//S3//  
 VAQRON ONE TWO NINE  
 STRKFITRON ONE TWO FIVE  
 SEACONRON FOUR ONE  
 AIRTEVRON NINE DET PT MUGU CA  
 FLELOGSUPPRON THREE ZERO  
 USS SHIP  
 UNCLAS//N03740//  
 MSGID/GENADMIN/USS SHIP//  
 SUBJ/AIR OPERATIONS SUMMARY FOR 01 JAN 03//  
 REF/A/DOC/COMNAVAIRFORINST 3740.2//  
 POC/SMITH/CDR/AIOPS/POTS COM: XXX-XXX-XXXX/POTS  
 DSN: XXX-XXXX/EMAIL:AIOPSO@USSSHIP.NAVY.SMIL.MIL//  
 RMKS/1. REPORT AS FOL. READ IN SIX COLUMNS:

A	B	C	D	E	F
UNIT	TRAPS TODAY	DAILY BOARD RATE %	TOTAL TRAPS	REMAIN TRAPS	DAILY TOTAL PILOTS
	(D/N)	(D/N)	(D/N)	(D/N)	(D/N)
VFA-122	8/0	85/0	8/0	42/30	0/0
VMFAT-101	19/7	76/78	19/7	41/29	0/0
VFA-125	34/13	82/69	34/13	112/77	1/1
VAQ-129	29/8	94/80	29/8	43/36	0/0
VS-41	19/7	95/54	19/7	25/21	0/0
VX-9	0/0	0/0	0/0	6/4	0/0
VRC-30	18/0	100/0	18/0	4/0	11/0
TOTALS	139/47	89/72	139/47	369/261	18/7

2. PLANNED SCHEDULE FOR NEXT DAY (02JAN02):

CONTINUE WITH FRS CARRIER QUALIFICATIONS.

3. LSO REMARKS: FLY THE BALL! PRESSING ON TOMORROW, ETC. (ONLY REQUIRED WHEN TYCOM LSO EMBARKED.)//

BT