Civil Aviation Authority of Sri Lanka

AVIATION SAFETY NOTICE

ASN No: 070	Ref No: OPS/2005/07	File Ref: OP/21/10/2

Recipients	:	1. Holders of Air Operator Certificate issued by DGCA, 2. Prospective applicants for Air Operator Certificate for commercial Air Transport Operations.
01. Subject	:	Line Operational Simulations: Line-Oriented Flight Training, Special Purpose Operational Training.
02. Nature	:	Compulsory
03. Issue No	:	01
04. Status	:	New
05. Effective Date	:	With immediate effect
06. Validity	:	Until further notice
07. Contact Person	:	Inquiries may be directed, preferably by letter to, Deputy Director Operations, Civil Aviation Authority, No. 64, Galle Road, Colombo 3, Sri Lanka. Telephone: 94 11 2 441 523
08. Availability	:	A copy of this document is available for reference at the technical library of the Civil Aviation Authority. Copies can be collected at reproduction cost.
09. Applicability	:	Holders of Air Operator Certificate issued by DGCA for commercial air transport operation.
10. Comments	:	Comments (if any) on the contents of this Aviation Safety Notice may be forwarded to the contact person. However the Aviation Safety Notice will come into effect on the date shown therein notwithstanding any objection or comment made by any person or party unless and until an amendment to the Aviation Safety Notice is issued afresh by the Director General.

11. Notice	:	Holders of Air Operator Certificates issued by DGCA for operation of aircraft for commercial air services are hereby instructed to take appropriate measures to give effect to the requirements specified in the attachment hereto.
12. Action Required	:	For strict compliance by the holders of Air Operator Certificates for Commercial Air Transport Operation.
13. Checklist	:	Not applicable

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LINE OPERATIONAL SIMULATIONS:
LINE-ORIENTED FLIGHT TRAINING,
SPECIAL PURPOSE OPERATIONAL TRAINING

1. PURPOSE

This ASN presents requirements that shall be addressed in the design and implementation of Line Operational Simulations, including Line-Oriented Flight Training (LOFT) and Special Purpose Operational Training (SPOT).

2. RELATED CIVIL AVIATION REQUIREMENTS.

ASN 042 and ASN 047

3. RELATED READING MATERIAL

ASN 068, Crew Resource Management Training.

4. BACKGROUND

a. Training which utilizes flight simulators and flight training devices is an important element for ensuring the qualification of flight crew members, both as individuals and as part of a crew. In the mid-1970's, the concept of LOFT was introduced as a form of simulator training for a complete crew. LOFT was later allowed to be substituted for alternate proficiency checks under recurrent training programs.

b. Since the early 1980's, as the technology of flight simulators and flight training devices advanced, the number of training applications has increased. These training applications are now grouped under the general term of Line Operational Simulations. The increase in the number of individual training applications requires clarification and updating of applicable guidelines. These guidelines are presented in this ASN and cover the following:

(1) Up-to-date details on implementing LOFT for a complete crew under recurrent training programs;

(2) Guidelines on implementing other types of Line Operational Simulations (for purposes other than that in (1) above). This includes: Special Purpose Operational Training (e.g., training in cockpit resource management skills; differences training).

GUIDELINES ON LINE OPERATIONAL SIMULATIONS

CONTENTS

CHAPTER 1.

INTRODUCTION

1. PURPOSE

The purpose of this ASN is to provide updated guidance that shall be utilized in designing and implementing Line Operational Simulations, which includes: LOFT and Special Purpose Operational Training.

2. BACKGROUND

a. The use of flight training devices and flight simulators has become increasingly important in training flight crew members. As the level of sophistication in simulators increased, air operators have come to rely on simulators for part or all of their flight training programs. Since the mid-1970's, some air operators have implemented alternative simulator training, which is now known as LOFT, to train crew members. LOFT is training in a simulator with a complete crew using representative flight segments which contain normal, abnormal, and emergency procedures that may be expected in line operations. This ASN provides guidance that shall be utilized for LOFT in "qualification" and "recurrent" training programs and sets forth guidelines for its design and implementation.

b. LOFT is a useful training method because it gives crew members the opportunity to practice line operations (e.g., maneuvers, operating skills, systems operations, and the operator's procedures) with a full crew in a realistic environment. Crew members learn to handle a variety of scripted real-time scenarios which include routine, abnormal, and emergency situations. They also learn and practice cockpit resource management skills, including crew coordination, judgment, decision making, and communication skills. The overall objective of LOFT is to improve total flight crew performance, thereby preventing incidents and accidents during operational flying.

(1) <u>Special Purpose Operational Training (SPOT).</u> New training concepts and training media have identified a need for other types of training in operational simulations called Special Purpose Operational Training. This type of operational simulation includes the concepts listed below. In addition, other types of Special Purpose Operational Training may evolve over time.

(i) International Civil Aviation Organization (ICAO), DGCA and industry have recognized the importance of Cockpit Resource Management (CRM) in crew member training. CRM training addresses human factors (e.g., leadership, communication skills, time management, situational awareness, and attitudes in flight operations). Training to improve performance in these areas has been identified as a factor in

reducing the number of airline accidents and incidents. CRM training is designed for a complete crew environment. Application of CRM skills appears to be an integral part of safe and successful line operations. This ASN addresses the relationship of CRM to Special Purpose Operational Training, as well as to LOFT.

(ii) Current regulations do not presently address the use of Special Purpose Operational Training for Differences Training. This ASN presents guidelines in conducting Special Purpose Operational Training for Differences Training.

3. SUMMARY

This ASN identifies three types of Line Operational Simulations:

(1) Recurrent LOFT,
(2) Qualification LOFT, and
(3) Special Purpose Operational Training, which is training that shall be used for various unique purposes such as aircraft differences or CRM training.

CHAPTER 2

DEFINITIONS

9. GENERAL

The following terms are used throughout this ASN and are defined as follows:

a. Line Qualified Describes a flight crew member or instructor who is current and qualified to conduct actual flight operations in an assigned aircraft and duty position.

b. Line Familiar Describes a flight crew member or instructor who is familiar with an Air Operator Certificate (AOC) holders line operations. This person is either line qualified or otherwise qualified by participation in an approved line observation program. (An acceptable line observation program would include observation from the cockpit jump seat of a line crew on at least two operational flight segments. This should be accomplished twice annually, and the line observation program should be included as a part of the approved training program)

c. Task Familiar. Describes a flight crew member who is familiar with and can satisfactorily accomplish the duties of a particular cockpit duty position though not qualified for that duty position. For example, a second-in-command (SIC) candidate who performs the duties of the pilot-in-command (PIC) during simulator training.

d. Qualification LOFT. An approved flight simulator course of LOFT to facilitate transition from training using flight simulation to operational flying.

e. Recurrent LOFT. An approved flight simulator course of LOFT which may be used to meet recurrent flight training requirements and to substitute for alternate proficiency checks.

f. Special Purpose Operational Training. An approved course of operationally oriented flight training, conducted in a flight simulator or flight training device, which may be used to learn, practice, and accomplish specific training objectives; e.g., training in variant aircraft or special aircraft equipment.

CHAPTER 3

BASIC ELEMENTS OF LOFT

10. GENERAL

Certain elements about LOFT must be understood to ensure that its primary objective, to provide realistic line-oriented training, is met. These elements apply to both Recurrent and Qualification LOFT and are described in this chapter. (NOTE: Some or all of these elements may also apply to Special Purpose Operational Training. See chapter 5 for more information on how these Concepts apply to this type of Line Operational Simulations.)

11. CREW COMPOSITION AND PARTICIPATION

LOFT should take place in a line operational environment with a complete crew. A complete crew will always be scheduled and every effort will be made to maintain crew integrity. During LOFT, each crew member performs both as an individual and as a member of a team, as is expected during line operations.

12. REAL-WORLD SITUATIONS

LOFT should contain scenarios of real world, line operational situations, which progress in real time. These scenarios should be representative of flight segments where an entire en route operation is completed. In cases of flights involving repetitive events, the en route segments may be compressed. However, enough time should be allotted to allow crew members to become sufficiently familiar with the scenario to ensure that if the scenario is compressed, crew members will be able to resume or restart the scenario without confusion.

13. NO-JEOPARDY TRAINING

LOFT is "no-jeopardy" training, i .e., the instructor does not issue a passing or failing grade to a participating crew member. As a LOFT scenario progresses, it is allowed to continue without interruption so crew members may learn by experiencing the results of their decisions. Decisions which produce unwanted results do not indicate a training failure, but serve as a learning experience. If the LOFT instructor identifies crew member performance deficiencies, additional training or instruction will be provided. This training or instruction may be in any form, including additional LOFT. Before the crew member may return to line operations, the performance deficiencies will be corrected and the instructor will document the training as satisfactorily

completed. The "no-jeopardy" concept allows crew members to use their full resources and creativity without instructor interference. At the end of a LOFT session and after debriefing, the instructor certifies that the training has been completed.

14. UNINTERRUPTED TRAINING

LOFT scenarios run full-length, with no interruption by the instructor permitted. The effects of crew member decisions are allowed to accrue and influence the rest of the flight. The concept is that crew members will learn more effectively if they are allowed to learn from their experiences, rather than being interrupted and corrected by an instructor. In rare cases, and only during "Qualification LOFT", an instructor may choose to intervene if he determines negative learning is taking place.

15. FEEDBACK

LOFT includes feedback to crew members on their performance in the scenario. This takes place during the debriefing phase. (See the following paragraph for further detail on feedback and debriefing.)

16. PHASES OF LOFT

LOFT scenarios should contain the following phases: briefing, preflight planning documents and activities, flight time, and debriefing. These are described in the following paragraphs.

a. Briefing. Before the flight segment begins, the instructor should brief crew members on the LOFT scenario, including the training objectives, and the role of the instructor (i.e., the instructor is considered "not present," except as an Air Traffic Controller (ATC) or as another ground base entity). The role of the flight crew should be discussed in the briefing (i.e., flight crew members should perform their duties just as they would in line operations). Information about "the environmental setting of the scenario" should also be discussed.

b. Preflight Planning Documents and Activities. Preflight planning documents (e.g., weather reports and flight plans) should be prepared with the operator's particular training objectives in mind. For example, the operator may choose to have crew members learn how to handle unfavorable weather conditions or how to correct improper fuel loads. Preflight activities include cockpit setup, computation of takeoff data, etc.

c. Flight Segment. The flight segment includes taxiing, takeoff, flying, and landing. It should also include the time in which communication with ATC and other ground agencies takes place.

d. Debriefing. Debriefing should include feedback to crew members on their performance. Positive comments regarding crew performance should be emphasized in the debriefing as well as crew performance which needs improvement. The debriefing involves instructor critiques of individual crew members and of the crew as a team. Also, it is important that crew members be given the opportunity to critique and analyze their own performance and review key points of the video record, if used. (See paragraphs 21 and 22 for further discussion of critiques, debriefing, and use of video records.)

17. TRAINING HOURS, RECURRENT AND QUALIFICATION LOFT

Both recurrent and qualification LOFT sessions should be based on at least 4 hours of total crew member training activity, which should include at least 2 l/2 hours of LOFT scenarios. Reasonable amounts of time should be allowed for problem solving (e.g., consulting minimum equipment lists and operations manuals, preparing takeoff data, as well as other crew actions which are occasioned by the training scenario). For qualification LOFT, the 4 hours of crew member training should include cockpit preparation, preflight activities, crew briefings, and interactions with flight dispatch and other ground agencies. For Recurrent LOFT, any additional hours of training, beyond the 2 l/2 hours of LOFT scenarios necessary to comply with applicable Civil Aviation Regulations may, subject to the approval of the DGCA, be utilized for other specific training requirements. All crew members participating in a LOFT session are credited with 4 hours of training time.

18. LOFT SCENARIOS

LOFT scenarios should be constructed with the following guidelines in mind:

a. Objectives. The operator should assign specific training objectives to each scenario. These training objectives should be based on the particular needs of the operator. For example, if an operator is experiencing an unusual frequency of a specific operational problem, such as wet or icy runways, then the scenarios should be designed to include exposure to that particular operational problem. Training objectives may also be identified by the DGCA based upon documented trends. Other specific objectives may include winter operations training, unusual airport or runway operations, alternate operation of automated systems, etc.

b. Constructing Scenarios. A variety of scenarios can be constructed choosing different combinations of elements from the suggested categories listed below. Scenarios should normally be representative of the flight segment appropriate to the operations being conducted by the operator.

(1) Origin, routing, and destination (e.g., short vs. long routes)

(2) Revised arrival procedures (e.g., an unexpected runway change)

(3) Alternate operation of flight management systems.

(4) Abnormal and emergency conditions, including simple conditions (e.g., a potential hot start) and complex conditions which continue for the entire flight (e.g., a failed essential A.C. bus).

(5) Adverse weather conditions.

(6) Partial or full loss of integrated flight management systems.

c. Timing. Scenarios should run in real time. This may include inactive time to realistically resemble actual operations.

d. Realism. Scenarios should contain realistic circumstances: e.g., messages from the ATC, or cabin crew interruptions. Operators may use these elements to design full-length, real-time scenarios, as well as shorter scenarios which teach specific skills (e.g., wind shear, special navigation equipment, TCAS, etc.). Scenarios should also be developed to observe checklist management procedures, standard call outs, leadership qualities, assertiveness, crew coordination, and communication. Scenarios should be updated periodically to ensure they continue to meet training objectives. Just as crew members could not anticipate all flight operational situations, operators should try to prevent crew members from anticipating the entire content of the scenarios.

19. APPROVAL OF SCENARIOS

Scenarios will be accepted by the DGCA. When submitting LOFT scenarios for acceptance operators should state what training objectives are expected to be attained through completion of the LOFT. Operators may elect to submit specific LOFT scenarios or a description of a system that uses a menu of different flight situations and environmental conditions, which can be selected randomly, to construct a variety of LOFT scenarios. In any case, scenarios that comply with the elements provided in this ASN and meet the operator's stated training objectives may be accepted. Detailed scripts of the scenarios need not be considered for acceptance. When updated, scenarios should conform to the same guidelines that apply to original approval.

20. LOFT AND CRM

LOFT scenarios should contain CRM skills, whereby crew members utilize and reinforce various CRM concepts. CRM skills should be integrated into each operator's maneuver/procedure learning objectives. In addition, focused CRM training could be provided independently during separate Special Purpose Operational Training.

21. CRITIQUE OF CREW MEMBER PERFORMANCE

Critique of crew members should take place during the debriefing by the instructor. Critiques should include positive feedback regarding crew performance. Critiques should include discussion of individual and flight crew performance by the instructor as well as assessment by the crew members of their own performance. The critique should consider the crew member's judgment and the crew's interaction with all resources in handling problems. This includes interaction with ATC, company communications, software materials (e.g., company operations manuals and Flight Manuals), workload-reducing devices (e.g., autopilot and flight management systems), and other crew members.

22. USE OF AUDIOVISUAL EQUIPMENT

Recorded audiovisual feedback is very useful as a debriefing aid for most types of LOFT because it allows crew members to view themselves from a third person perspective. This feedback helps crew members to better understand their performance, identify and accept their weak areas, and build upon their strong areas, thereby encouraging positive changes in attitudes and behavior. Recorded audiovisual feedback should be destroyed at completion of the debriefing.

23. ADDITIONAL TRAINING/LOFT COMPLETION

Decisions that produce unwanted results do not indicate a training failure, but serve as a learning experience that may indicate need for additional instruction or modified training activities. The additional training could be any form, including additional LOFT. In any case, required additional training shall be provided and documented as satisfactorily completed prior to the crew member's return to line operations. Although additional training for a particular individual may be necessary, each LOFT scenario will be recorded as "complete" at the end of the debriefing stage.

24. BASIC ELEMENTS OF LOFT: SUMMARY

LOFT is defined by the following basic concepts:

a. It takes place in a simulated line operational environment.

b. It uses a complete crew with total participation.

c. It contains real-world incidents, unfolding in real time.

d. It is "no-jeopardy" training.

e. It contains scenarios and segments that run uninterrupted.

f. It contains scenarios tailored to the operator's learning objectives.

g. It incorporates CRM skills.

h. It provides for use of SOPs for normal and abnormal flight phases

i. It provides critique of individual and crew performance.

25. DGCA PHILOSOPHY REGARDING LOFT

a. The DGCA believes that the effectiveness of LOFT is dependent on four important aspects:

(1) the use of the highest fidelity simulator available,

(2) ensuring that only line qualified crew members are scheduled to participate in Recurrent LOFT, and that only crew members who are in training for a particular duty position or line qualified crew members are scheduled to participate in Qualification LOFT,

(3) that LOFT scenarios run their full, uninterrupted course,

(4) that a variety of scenarios, fully compatible with training objectives, are available and periodically updated to ensure that the LOFT experience does not become repetitive or stale.

b. In keeping with this philosophy the DGCA expects that an air operator, who has available a range of flight simulators for a particular model aircraft, will conduct LOFT in the flight simulator with the most fidelity. For example, if the operator

has both a Level A and a Level D B-737-300 simulator at its training facility, the DGCA expects the operator will conduct LOFT in the Level D simulator.

c. The DGCA believes that the training value of LOFT can be seriously diminished when inappropriate crew substitutions are made. Operators should not schedule any person other than "**line qualified" crew members for Recurrent LOFT**. For Qualification LOFT, operators should schedule only line qualified crew members or those crew members who are in training for a particular duty position. In both cases, the DGCA expects operators to make every reasonable effort to meet these scheduling guidelines. When, due to reasons beyond the control of the operator, the need for substitution arises, the substitution tables in this ASN may be used. However, these tables are intended to be used only after the operator has made all reasonable efforts to provide a substitute crew member of equal status to the person originally scheduled. The DGCA recommends that the operator have an identified pool of cockpit crew members available to serve as substitutes in LOFT. This pool might include reserve crew members and/or newly qualified crew members. (Newly qualified crew members could benefit from the additional experience they would receive by serving as substitutes.) In any case, the DGCA would expect operators to use the contingency features of the substitution tables only to permit continuation of scheduled training for extraordinary and infrequent situations.

d. The DGCA considers interruption of LOFT scenarios a determent to the learning qualities inherent in LOFT. Arbitrary interruption of LOFT is not acceptable. LOFT scenarios should be allowed to continue to their logical completion. In Qualification LOFT, if the instructor is certain that negative training is occurring, the scenario may be interrupted. The DGCA believes that well-thought-out and properly developed scenarios will not lead often to situations that require interruption.

e. Proper planning and development of LOFT scenarios are essential to ensure that training objectives are met. This is a critical characteristic of any DGCA approved LOFT program. Training value is diminished when students become familiar with scenarios. Therefore, a variety and a sufficient number of LOFT scenarios are required to guard against crew members experiencing repetitious situations. In addition, the DGCA expects operators to regularly update LOFT scenarios, thereby ensuring that crew members are exposed to new technology, procedures, and current operational problems.

CHAPTER 4.

TYPES OF LOFT

31. GENERAL

As discussed throughout this ASN, there are two types of LOFT; Recurrent LOFT and Qualification LOFT. Guidelines for designing and conducting these types of LOFT are presented below.

32. RECURRENT LOFT

Recurrent LOFT is designed to ensure that each crew member maintains proficiency in the type of aircraft and crew member duty position involved. Recurrent LOFT is intended for flight crew members who are presently qualified in a particular make model and series aircraft. Recurrent LOFT is best conducted with a complete line qualified crew. Interruption of Recurrent LOFT is not permitted.

33. GUIDELINES FOR RECURRENT LOFT

Recurrent LOFT should meet the following guidelines:

a. <u>No Direct Instruction or Scenario Interruption.</u> Recurrent LOFT does not permit direct instruction and normally <u>does not permit</u> interruption of the scenario by the instructor.

b. <u>Crew Composition</u>. Recurrent LOFT requires scheduling of a complete crew which is line qualified.

c. <u>Crew Substitutes</u>. The use of substitutes is discouraged and substitution should be rare. When the composition of the scheduled line qualified crew cannot be maintained, the operator may use substitutions based on the guidelines in Table 4-l. However, the operator will attempt first to substitute with another line qualified crew member. This table should be used only as a last resort to prevent interruption of scheduled training.

Table 4-1.

Recurrent LOFT Substitution Table

	Pilot-in-Command Position	Second-in-Command Position	Flight Engineer (FE) Position
1.	Another person of the same status for that position.		
2.	PIC[1]	SIC[1]	FE[1]
3.	Pilot Instructor [2]	PIC[1]	F E Instructor [2]
4.		Pilot Instructor [2]	

[1] Includes those who are either line qualified or in training for the position.

[2] May act as a substitute when a line qualified crew member is not available. The instructor should not have previous knowledge of the scenario; however, when this is unavoidable, the instructor should not use that knowledge to influence or direct the scenario.

NOTE: The instructor conducting the LOFT session may not act as a substitute crew member.

d. <u>Number and Type of Segments</u>. A Recurrent LOFT scenario may include one or more flight segments, depending upon the training objectives.

e. <u>Training Media</u>. The highest fidelity flight simulator available should be scheduled for Recurrent LOFT. Recurrent LOFT may be conducted in a Level A, B, C, or D flight simulator, however, the use of the highest level simulator (Level D) is encouraged and the use of **Level A simulators** is **discouraged.**

34. QUALIFICATION LOFT

Qualification LOFT is designed to prepare crew members, who are not yet fully qualified for line operations and whose training has been provided in accordance with actual flight operations. Qualification LOFT provides training that facilitates the transition from flight simulator training to operational flying. Scenarios are designed to represent typical flight segments. Qualification LOFT is instructional in nature;

therefore, when it is essential to do so, instructors may momentarily interrupt a scenario for instructional purposes. Qualification LOFT is best conducted when the student crew member, who is not yet fully qualified, is scheduled with a crew complement whose other members are line qualified. For example, a PIC candidate would be scheduled with a line qualified SIC and FE.

35. GUIDELINES FOR QUALIFICATION LOFT

Qualification LOFT should meet the following guidelines:

a. Direct Instruction and Scenario Interruption. Qualification LOFT permits <u>minimal interruption</u> of the scenario for the purpose of instruction. Interruption is allowed only when the instructor is certain that negative learning is taking place.

b. Crew Composition. Qualification LOFT requires the scheduling of a complete crew complement. Ideally, the crew member who is qualifying would be scheduled with other crew members who are fully line qualified. In any case, the crew members will be Task Familiar with their assigned duty position but need not be Line Familiar.

c. Crew Substitutes. The use of substitutes is highly discouraged and substitution should be implemented rarely. When the composition of the scheduled crew cannot be maintained, the operator may substitute crew members using Table 4-2. Operators should attempt first to substitute another person in the same status.

Table 4-2

Qualification LOFT Substitution Table

Pilot-in-Command Position	Second-in-Command Position	Flight Engineer Position
1. Another person of the same status for that position.		
2. PIC[1]	SIC[1]	FE[1]
3. SIC[1]	PIC[1]	F E Instructor[2]
4. Pilot Instructor	Pilot Instructor	Pilot Instructor

[1] Includes those who are either qualified or in training for the position and will be Task Familiar for the position in which they are substituting.

[2] May act as a substitute when a line qualified crew member is not available. The instructor should not have previous knowledge of the scenario; however, when this is unavoidable, the instructor should not use that knowledge to influence or direct the scenario.

d. <u>Number and Type of Segments</u>. Qualification LOFT should consist of at least two flight segments, one containing normal line operations and one containing abnormal and emergency occurrences.

e. <u>Training Media</u>. Qualification LOFT will be conducted in flight simulators qualified at Levels C or D.

CHAPTER 5.

SPECIAL PURPOSE OPERATIONAL TRAINING

41. GENERAL

Special Purpose Operational Training is designed for training crew members in a flight simulator or flight training device. Special Purpose Operational Training is useful whenever coordinated crew performance is required. It may not be substituted for Recurrent LOFT or Qualification LOFT. Examples of Special Purpose Operational Training may include training which:

a. Focuses on CRM skills.

b. Trains Crew on SOPs

c. Provides differences training on variant aircraft.

d. Provides wind shear training.

e. Trains in special aircraft equipment, e.g., navigational equipment and flight management systems.

42. ELEMENTS RESEMBLING LOFT

Special Purpose Operational Training contains some elements which are similar to those found in LOFT, including line environment, scenarios which are real world and real time, no-jeopardy training, and the use of feedback and critique. Elements of Special Purpose Operational Training which may vary from LOFT are described below.

43. GUIDELINES FOR SPECIAL PURPOSE OPERATIONAL TRAINING

The components of Special Purpose Operational Training vary, depending on the purpose or objective of the training. Therefore, the following provides only general guidelines for Special Purpose Operational Training.

a. <u>Direct Instruction and Scenario Interruption</u>. Special Purpose Operational Training permits direct instruction and allows for interruption of the scenario by the instructor.

b. <u>Crew Composition</u>. Special Purpose Operational Training may include use of a complete or partial crew, depending upon the training objectives.

c. <u>Crew Substitutes</u>. The use of crew substitutes in Special Purpose Operational Training depends upon the type of training being provided.

d. <u>Number and Type of Segments</u>. Special Purpose Operational Training may contain any number of full or partial flight segments, depending upon the training objectives.

e. <u>Training Media</u>. Special Purpose Operational Training may use a wide range of flight simulators and flight training devices, depending upon the training objectives.

CHAPTER 6.

THE ROLE OF INSTRUCTORS

51. MINIMUM QUALIFICATIONS

Instructors should be trained in the philosophy, skills, and conduct of Line Operational Simulations and CRM. They should be able to effectively observe and critique both individual and crew performance during the scenario. To do this, they should meet the minimum requirements discussed in the following paragraphs:

a. Line Familiar. Instructors should be Line Familiar, i.e., familiar with the operations for which they are providing training. This will ensure that instructors accurately perceive and evaluate situations as they arise. In cases where instructors currently are not line qualified, an approved line observation program (see paragraph 9a, Line Qualified) should ensure that they are familiar with line operational procedures and problems. In this way, instructors will maintain understanding of the operational demands confronting line crew members.

b. Qualified as Instructors. Instructors should be qualified as defined in Civil Aviation Regulations or as otherwise approved. They are not required to hold current medical certificates to qualify and serve as instructors.

c. Trained in CRM Skills. Instructors will receive training in CRM skills in order to observe and critique these areas in Line Operational Simulations. (See ASN 068, Crew Resource Management Training, for further information on the skills of CRM.)

d. Trained in Methods for Briefing, Debriefing, and Critique. Instructors should be trained to conduct the briefing and debriefing/critique phases of Line Operational Simulations, including how to provide feedback in a non-threatening and sensitive manner.

52. INSTRUCTOR RESPONSIBILITIES AT EACH STAGE OF LINE OPERATIONAL SIMULATIONS

The following is a description of the roles and responsibilities expected of instructors:

a. Briefing and Preparation. Instructors should be able to effectively convey the purpose of the Line Operational Simulation and how it is representative of line operations. Instructors should also explain the instructor's role during the training; i.e., as an observer and not considered present unless playing a role in the scenario.

b. <u>Flight Segment</u>. Instructors should be able to both observe and perform ancillary roles. They should be trained in observing both technical and CRM skills. The instructor should also be trained in proper pacing, proper introduction of abnormal/emergency procedures, and methods of handling unforeseen crew actions.

e. <u>Debriefing and Critique</u>. Instructors should provide both positive and negative feedback during critiques of individual and crew performance. Prior to the instructor's critiques, crew members should be encouraged to critique themselves. Instructors will provide feedback to the crew to encourage the changes needed for improved performance. Instructors should also provide specific recommendations to improve individual crew members' performance.