Rating Requirements
for Flight Information Service

Flight Information Service Surveillance Rating
FFS
Radar Endorsement
RAD

Document history

Edition number	In force	Change of content
1.0	01.12.2004	Released issue
2.0	06.01.2006	Adjusted training hours requirements possibility for reduction. Editorial corrections from “control” to “information”. Sub-topic 35.2 made optional. Document history added.

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1. INTRODUCTION

1.1 Background

The requirements in this document represent the minimum level for approving a Unit Training Plan. Every ATS Unit must on this background produce its own Unit Training Plan (UTP) which should satisfy these requirements and have it approved by the Danish CAA.

The **Requirements** are the outcome of a functional analysis of the flight information service operators job, which produced a series of statements called **Performance Objectives** which describe the actions, behaviours or outcomes that the operator should be able to demonstrate.

Each discipline contains a number of **Key Roles.** For instance a key role common to all ratings is to 'Correlate information useful for the safe and efficient conduct of flights' This key role is divided into two **Topics**, one dealing with Meteorological information and the other with Aeronautical information. Each Topic is then divided into **Sub-topics,** in this case to 'collect, to collate and to disseminate the information'.

Topics common to more than one discipline can be identified and credits given to staff whom have already undergone training in those topics in a different discipline. As not all topics are applicable to every discipline, the numbering used will not necessarily be sequential.

Each sub-topic contains a number of **Performance Objectives**.

A statement of Conditions qualifies each Performance Objective. Conditions describe the context in which the Performance Objectives apply, which means in its simplest form 'can the operator act with equal ability by day or night, and in good or poor weather conditions?'

Finally the Requirements contain detail of the **Essential Knowledge** that is, the knowledge and understanding an operator needs to carry out the task. In order to separate aircraft, the operator must not only know the separation standard to be applied; he must also understand how to apply it. Similarly the operator needs to understand some aspects of the formation of thunderstorms in order to be able to predict their effect on operations and to make allowance for those effects when exercising information.

1.2 Determining Competence by Assessment

In order to determine Competence an Assessor (Examiner) seeks evidence of performance (Can the student/trainee operator actually do the job) both by direct observation and by reference to the training records. Assessment differs from an examination system, by taking a longer more detailed view of performance, rather than taking an intense but short sample of the trainees' work. Performance is assessed in all areas under all conditions seeking to prove that the trainee can perform reliably and consistently to the required level of competence.

Performance must be assessed against the Performance Objectives on sufficient occasions to ensure competence has been demonstrated across all the Conditions for which performance evidence is required. Where performance is tested in only some of the

contexts in the conditions, the application of knowledge must be tested by questioning for the remainder.
All items listed as Content must be tested to prove an understanding of the knowledge, the underlying principles and the application of the knowledge to performance in the workplace. A Student/Trainee, who demonstrates practically that he can do the job and can explain his reasons for acting in a particular manner, thereby demonstrating understanding, has fulfilled all the requirements without the need for additional written testing. It is essential that the Assessor (Examiner) determine understanding, rather than pure knowledge, when determining competence.

1.3 Summary of terms

Key Role
Describes in broad terms, the principal components of the operator's job.

Topic
Divides the Key Role into definable common areas.

Sub-Topic
Defines specific areas of the topic.

Performance Objective
Describes the actions of the operator that demonstrate the correct performance of the Sub-Topic.

Conditions
Describes the contexts in which the Performance Objective applies.

Essential Knowledge
The fundamental knowledge and understanding necessary to perform to the Requirements and to transfer the skills from one situation to another.

1.4 Training

The Unit Training consist of theoretical aspects as well as practical aspects. The training must be planned in a way that the Student/trainee benefits most profitable from this.

The Unit Training plan must indicate the content of the Transitional OJT and the Pre-OJT.
As a minimum the following subjects must be included:
Regional and local geography
ATS message handling
Search and Rescue
Local equipment
Local ATS Procedures
Simulator training if necessary according to BL 6-97.

1.5 Minimum training time (OJT)

For FFS/RAD 240 hours*
For FFS/ADS 240 hours*

* may be reduced for students/trainees having participated in similar relevant unit training, but never less than 160 hours.

Training time (OJT) is meant to be, time "on position" operationally meaningful.
Hours with very little or no traffic should not be counted as training time (OJT).

1.6 Extension of license, same rating/endorsement – another unit

Minimum training time required for extending the privileges of the license for the same rating/endorsement to another unit is

For FFS/RAD: 120 hours
For FFS/ADS: 120 hours

1.7 Examination/Assessment

For every 1st time application for a rating/endorsement an examination must be passed.

The examination will include:

- Review the summative report from the Unit Training Plan (UTP)
- the practical check (min. 2hrs on each endorsement)
- the scenario interview (oral examination)
- the final assessment

To Pass the Examination, the Student/Trainee must:

- satisfactorily have fulfilled the objectives of the UTP
- satisfactorily have passed the practical check
- satisfactorily have passed the scenario interview

All three has to be passed during the same examination.

Assessment for validating or revalidating a Unit Endorsement should be made according to the Performance Objectives in this document for the appropriate Rating/Endorsement at the Unit.

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KEY ROLES AND TOPICS FOR FLIGHT INFORMATION SERVICE SURVEILLANCE RATING – FFS/RAD with RADAR ENDORSEMENT

KEY ROLES	TOPICS
KEY ROLE A COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT A9 COMMUNICATE FROM A FLIGHT INFORMATION RADAR SERVICE UNIT
KEY ROLE B ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY B7 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR FLIGHT INFORMATION RADAR SERVICE
KEY ROLE C CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS	C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION
KEY ROLE E SET UP AND USE SURVEILLANCE RADAR EQUIPMENT	E1 SELECT AND SET UP SURVEILLANCE RADAR EQUIPMENT E2 USE PRIMARY RADAR E3 USE SECONDARY RADAR
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G35 PROVIDE A FLIGHT INFORMATION SERVICE WITH THE USE OF SURVEILLANCE RADAR G36 CO-ORDINATE WITH OTHER AGENCIES G37 MANAGE DIVERSIONS AND HOLDING SITUATIONS G38 WORK AS A TEAM MEMBER ON THE FLIGHT INFORMATION RADAR SERVICE OPERATIONAL POSITION
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLIGHT INFORMATION UNIT H8 MANAGE DOMESTIC CONTINGENCIES IN AN FLIGHT INFORMATION SERVICE ROOM

TOPICS AND SUB-TOPICS FOR FLIGHT INFORMATION SERVICE SURVEILLANCE RATING – FFS/RAD with RADAR ENDORSEMENT

KEY ROLE A	**COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES**
TOPICS	**SUB-TOPICS**
A1 Check and operate communications equipment	A1.1 Establish and monitor the communications equipment serviceability A1.2 Use the communications equipment
A9 Communicate from a flight information radar service unit	A9.1 Use standard phraseology applicable to flight information radar service
KEY ROLE B	**ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY**
TOPICS	**SUB-TOPICS**
B1 Correlate flight data into appropriate proforma for display	B1.1 Obtain flight data information B1.2 Insert flight data into the appropriate proforma
B7 Maintain a representative flight data display for flight information radar service	B7.1 Correlate flight data into a display for flight information radar service B7.2 Update the flight information radar service, flight data display
KEY ROLE C	**CORRELATE INFORMATION USEFUL FOR THE SAFE AND EFFICIENT CONDUCT OF FLIGHTS**
TOPICS	**SUB-TOPICS**
C1 Obtain, interpret and disseminate meteorological information	C1.1 Obtain meteorological information C1.2 Interpret meteorological information C1.3 Disseminate meteorological information
C2 Obtain, interpret and disseminate aeronautical information	C2.1 Obtain aeronautical information C2.2 Interpret aeronautical information C2.3 Disseminate aeronautical information
KEY ROLE E	**SET UP AND USE SURVEILLANCE RADAR EQUIPMENT**
TOPICS	**SUB-TOPICS**
E1 Select and set up surveillance radar equipment	E1.1 Select and set up primary surveillance radar E1.2 Select and set up secondary surveillance radar
E2 Use primary radar	E2.1 Identify aircraft using primary radar E2.2 Use primary radar information
E3 Use secondary radar	E3.1 Identify aircraft using secondary radar E3.2 Validate and Verify secondary radar information E3.3 Use secondary radar information

KEY ROLE G	**MANAGE THE RADAR OPERATIONAL POSITION AND ITS TRAFFIC**
TOPICS	**SUB-TOPICS**
G35 Provide a flight information service with the use of surveillance radar.	G35.1 Provide radar information on flights in ATS routes G35.2 Provide radar information on advisory routes and in advisory areas (if applicable). G35.3 Provide flight information service with the use of surveillance radar
G36 Co-ordinate with other agencies	G36.1 Co-ordinate with adjacent operational positions G36.2 Co-ordinate with adjacent aerodromes
G37 Manage diversions and holding situations	G37.1 Handle diversions G37.2 Manage holding situations
G38 Work as a team member on the flight information radar service operational position	G38.1 Accept responsibility for the operational position G38.2 Monitor performance whilst responsible for the operational position G38.3 Transfer responsibility for the operational position
KEY ROLE H	**MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES**
TOPICS	**SUB-TOPICS**
H7 Manage developed emergencies from the radar equipped flight information service unit	H7.1 Manage radio failures H7.2 Manage situations arising from unlawful interference H7.3 Manage Aircraft Emergencies H7.4 Provide Alerting Service H7.5 Recover from a radar failure
H8 Manage domestic contingencies in a flight information service room.	H8.1 Safely evacuate the flight information service room

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Topic A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT

Sub-Topic A1.1 ESTABLISH AND MONITOR THE COMMUNICATIONS EQUIPMENT SERVICEABILITY

Performance Objectives	Conditions	Essential Knowledge
A1.1.1 Visual and/or aural indications are checked whilst making and receiving transmissions for indications of normal operation. A1.1.2 Documentation confirming equipment status is checked. A1.1.3 Malfunctions and defects are recorded and reported to the appropriate authority according to standing procedures.	**Procedures**: Unit specific.	**Local procedures** Equipment visual and aural indications. Watch log entries. Local standing procedures for reporting equipment faults. ***Underpinning knowledge*** Deriving information from NOTAMS.

Topic A1 CHECK AND OPERATE COMMUNICATIONS EQUIPMENT

Sub-Topic A1.2 USE THE COMMUNICATIONS EQUIPMENT

Performance Objectives	Conditions	Essential Knowledge
A1.2.1 The readability of transmissions is assessed. A1.2.2 Standard speech technique is adhered to. A1.2.3 The appropriate frequency is selected and used. A1.2.4 Transmit and intercom switches are used in accordance with standard procedures. A1.2.5 The appropriate telephone is used. A1.2.6 Ancillary telephone equipment is used in accordance with standard procedures.	**Communication methods:** Radiotelephony, Telephone.	Communications technique. Speech technique. Test transmissions.

Topic A9 COMMUNICATE FROM A FLIGHT INFORMATION RADAR SERVICE UNIT

Sub-Topic A9.1 USE STANDARD PHRASEOLOGY APPLICABLE TO FLIGHT INFORMATION RADAR SERVICE

Performance Objectives	Conditions	Essential Knowledge
A9.1.1 Standard phraseology is employed wherever possible in communications. A9.1.2 Composition of messages is concise and unambiguous. A9.1.3 Station identity is used correctly. A9.1.4 Relay ATC clearances and instructions in a correct and identifiable way A9.1.4 Acknowledgements and readbacks are obtained and verified when required. A9.1.5 Abbreviated phraseology is used when appropriate.	**Communication by:** Radiotelephone, Telephone**.** **Message Types:** Clearances, instructions, information.	Standard flight information radar service phraseology. Standard speech abbreviations. Radiotelephony callsigns. Communication with aircraft. Transfer of communications. Transmission of company messages.

Topic B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY

Sub-Topic B1.1 OBTAIN FLIGHT DATA INFORMATION

Performance Objectives	Conditions	Essential Knowledge
B1.1.1 Flight data information is extracted from all appropriate sources. B1.1.2 Relevant flight data is included at the earliest opportunity. B1.1.3 Flight data is checked to ensure completeness. B1.1.4 Any significant deficiency in flight data is rectified.	**Methods of Display:** Flight progress strips. Electronic data displays.	**Doc. 4444 Appendix 2** Content of full and abbreviated flight plans ATS service messages. **Doc. 7910** ICAO location indicators **Doc.8585** ICAO abbreviations Filing of flight plans Non standard routes Repetitive flight plan Exemptions and non standard flights **Local procedures** Flight plan processing

Topic B1 CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY

Sub-Topic B1.2 INSERT FLIGHT DATA INTO THE APPROPRIATE PROFORMA

Performance Objectives	Conditions	Essential Knowledge
B1.2.1 Strip marking is legible and conforms to standard procedures. B1.2.2 Correct message entry formats are used. B1.2.3 Relevant flight data is included at the earliest opportunity.	**Methods of Display:** Flight progress strips. Electronic data displays.	**Doc. 7910** ICAO location indicators. **Doc. 8585** ICAO abbreviations. **Local procedures** Conventional strip marking

Topic B7 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR FLIGHT INFORMATION RADAR SERVICE

Sub-Topic B7.1 CORRELATE FLIGHT DATA INTO A DISPLAY FOR FLIGHT INFORMATION RADAR SERVICE

Performance Objectives	Conditions	Essential Knowledge
B7.1.1 Strip marking is legible and conforms to standard procedures. B7.1.2 Correct message entry formats are used. B7.1.3 All relevant traffic is included on the display. B7.1.4 Flight progress strips are organised in a manner, which reflects the traffic situation in accordance with laid down procedures. B7.1.5 Electronic flight data displays are organised in accordance with laid down procedures.	**Types of display:** 'Multiple strip' flight progress displays. Electronic flight data displays.	**Local Procedures** Layout and use of flight progress strips. Layout of and use of electronic flight data displays.

Topic B7 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR FLIGHT INFORMATION RADAR SERVICE

Sub-Topic B7.2 UPDATE THE FLIGHT INFORMATION RADAR SERVICE, FLIGHT DATA DISPLAY

Performance Objectives	Conditions	Essential Knowledge
B7.2.1 Information is extracted from all relevant sources. B7.2.2 The display is updated using information received. B7.2.3 Clearances and instructions passed to aircraft and other agencies are recorded. B7.2.4 Co-ordination agreed with other agencies is recorded. B7.2.5 The integrity of EDD performance and data is monitored.	**Sources of information:** Pilot reports. Information from other units. Information from other agencies. Computer derived information. **Methods of display:** Flight progress strips and electronic data displays.	Aircraft performance. Time, speed, and distance calculations. Effects of wind. Report formats. EDD display parameters.

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Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.1 OBTAIN METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C1.1.1 Current and forecast weather information is obtained before taking over watch. C1.1.2 Current and forecast weather information is monitored during the watch. C1.1.3 Weather information and reports from pilots are recorded.	**Types of briefing:** Self and Met office briefing. **Types of report:** Routine and special reports. Met Warnings. Reports from pilots.	Altimeter setting and vertical reference. Windshear. Meteorological services:- Briefing of ATS units. Explanation of terms. Supply of information. Aerodrome meteorological reports (Routine) Aerodrome meteorological reports (Special) Coded aerodrome weather reports. SIGMET. Forecasts ***Underpinning knowledge*** Meteorology:- Wind, cloud, thunderstorms, microbursts, icing, line squalls. Pilot in flight reports (PIREPS) Low level charts. Significant weather charts.

Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.2 INTERPRET METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C1.2.1 Significant weather changes are recognised C1.2.2 The relevance of meteorological information to individual flights or agencies is established.	**Significant weather:** Thunderstorms and Cumulonimbus clouds. Freezing rain, Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility.	Altimeter setting and vertical reference. Windshear. Meteorological services:- Briefing of ATS units. Explanation of terms. Supply of information. Aerodrome meteorological reports (Routine) Aerodrome meteorological reports (Special) Coded aerodrome weather reports. SIGMET. Forecasts ***Underpinning knowledge*** Meteorology:- Wind, cloud, thunderstorms, microbursts, icing, line squalls. Pilot in flight reports (PIREPS) Low level charts. Significant weather charts.

Topic C1 OBTAIN, INTERPRET AND DISSEMINATE METEOROLOGICAL INFORMATION

Sub-Topic C1.3 DISSEMINATE METEOROLOGICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C1.3.1 Aircraft are advised of significant changes in weather information. C1.3.2 Other agencies are advised of significant changes in weather information.	**Significant weather:** Thunderstorms and Cumulonimbus clouds. Freezing rain. Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility.	Effects of weather on flight operations. Meteorology:- Wind. Cloud, thunderstorms, icing, jetstreams, clear air turbulence, microburst, marked mountain waves, line squalls, solar radiation.

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.1 OBTAIN AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.1.1 Aeronautical information is obtained before taking over watch. C2.1.2 Aeronautical information is monitored during the watch. C2.1.3 Pilot's requests for information are promptly and appropriately responded to. C2.1.4 Required information is obtained promptly from appropriate agencies.	**Sources of information:** AIP, NOTAMS, Local notices. Airspace restrictions.	**DK/GREENLAND/FAROE AIP** Content and use of AIP, NOTAM. Restricted, prohibited airspace. Danger areas. Aeronautical charts. Aeronautical information circulars.

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.2 INTERPRET AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.2.1 Significant changes are recognised. C2.2.2 The relevance of aeronautical information to individual flights or agencies is established.	**Operating conditions:** Normal conditions. Unserviceable navigation aids. Restrictions at aerodromes. Airspace restrictions.	Communication and navigation systems, uses and limitations. Conditions affecting operations at aerodromes. Airspace restrictions.

Topic C2 OBTAIN, INTERPRET AND DISSEMINATE AERONAUTICAL INFORMATION

Sub-Topic C2.3 DISSEMINATE AERONAUTICAL INFORMATION

Performance Objectives	Conditions	Essential Knowledge
C2.3.1 Aircraft are advised of significant changes in aeronautical information. C2.3.2 Other agencies are advised of significant changes in aeronautical information.	**Operating conditions:** Normal conditions. Unserviceable navigation aids. Restrictions at aerodromes. Airspace restrictions.	Flight information service. ***Underpinning knowledge*** Communication and navigation systems, uses and limitations. Conditions affecting operations at aerodromes. Airspace restrictions.

Topic E1 SELECT AND SET UP SURVEILLANCE RADAR EQUIPMENT

Sub-Topic E1.1 SELECT AND SET UP PRIMARY SURVEILLANCE RADAR

Performance Objectives	Conditions	Essential Knowledge
E1.1.1 Most suitable available surveillance radar is selected. E1.1.2 Controls are adjusted to provide best available performance. E1.1.3 Accuracy of radar is checked against laid down criteria. E1.1.4 Deficiencies are notified in accordance with local procedures.	**Operating conditions:** Normal atmospheric and anomalous propagation conditions. Weather and ground clutter. **Types of Radar:** Analogue and processed radar.	Primary radar principles of operation. Limitations of primary radar. Radar accuracy and definition. Operational radar coverage. The use and effects of controls available to the operator. The use and effects of suppressers. Processing and display of primary radar data.

Topic E1 SELECT AND SET UP SURVEILLANCE RADAR EQUIPMENT

Sub-Topic E1.2 SELECT AND SET UP SECONDARY SURVEILLANCE RADAR

Performance Objectives	Conditions	Essential Knowledge
E1.2.1 Most suitable available surveillance radar is selected. E1.2.2 Controls are adjusted to provide best available performance. E1.2.3 Accuracy of radar is checked against laid down criteria. E1.2.4 Deficiencies are notified in accordance with local procedures.	**Secondary Radar Modes:** Modes A, C and S. **Types of Radar display:** Analogue and processed radar.	Secondary radar principles of operation. Limitations of secondary radar. Processing and display of secondary radar data.

Topic E2 USE PRIMARY RADAR

Sub-Topic E2.1 IDENTIFY AIRCRAFT USING PRIMARY RADAR

Performance Objectives	Conditions	Essential Knowledge
E2.1.1 Probable target is located using available information. E2.1.2 Identification is carried out using standard methods. E2.1.3 Aircraft are informed, where necessary, of identification	**Types of Radar display:** Analogue and processed displays. **Special conditions:** Mis-identification.	Radar Operation:- Identification using primary radar. Summary identification and position information.

Topic E2 USE PRIMARY RADAR

Sub-Topic E2.2 USE PRIMARY RADAR INFORMATION

Performance Objectives	Conditions	Essential Knowledge
E2.2.1 Tracks and speeds are accurately assessed using displayed information. E2.2.2 Assistance is provided if necessary and requested. E2.2.3 Aircraft are informed, where necessary, of their position, other traffic and significant displayed weather.	**Atmospheric conditions:** Cyclonic, anticyclonic and zero wind conditions. **Traffic speeds:** Low and high speed traffic.	Indicated airspeed, true airspeed and ground speed. Heading and track. Effects of wind. Radar operation:- Position information. Navigation assistance. Terrain clearance. Unknown aircraft. Traffic information.

Topic E3 USE SECONDARY RADAR

Sub-Topic E3.1 IDENTIFY AIRCRAFT USING SECONDARY RADAR

Performance Objectives	Conditions	Essential Knowledge
E3.1.1 Probable target is located using available information. E3.1.2 Identification is carried out using standard methods. E3.1.3 Aircraft are informed, where necessary, of identification.	**Types of Radar display:** Analogue and processed displays. **Special conditions:** Mis-identification.	Identification using secondary radar. Summary identification and position information.

Topic E3 USE SECONDARY RADAR

Sub-Topic E3.2 VALIDATE AND VERIFY SECONDARY RADAR INFORMATION

Performance Objectives	Conditions	Essential Knowledge
E3.2.1 Mode A information is validated using laid down procedures. E3.2.2 Action is taken to rectify incorrect Mode A information in accordance with laid down procedures. E3.2.3 Mode C information is verified using laid down procedures. E3.2.4 Action is taken to rectify incorrect mode C indications in accordance with laid down procedures. E3.2.5 Mode S information is confirmed in accordance with laid down procedures. E3.2.6 Action is taken to minimise the effects of incorrect indications.	**Received indications:** Correct and incorrect, correctable and non-correctable indications. Special purpose codes Code Callsign conversion failure.	Altimetry, Heights, Altitudes and Flight Levels. **DK/GREENLAND/FAROE AIP** Allocation of SSR codes. Originating region code allocation method. Methods of validating mode A. Actions in the event of incorrect mode A indications. Methods of verifying mode C. Actions in the event of incorrect mode C indications. Procedures for confirming the accuracy of Mode S information.

Topic E3 USE SECONDARY RADAR

Sub-Topic E3.3 USE SECONDARY RADAR INFORMATION

Performance Objectives	Conditions	Essential Knowledge
E3.3.1 Tracks and speeds are accurately assessed using displayed information. E3.3.2 Assistance is provided if necessary and requested. E3.3.3 Aircraft are informed, where necessary, of their position, and other traffic.	**Atmospheric conditions:** Cyclonic, anticyclonic and zero wind conditions. **Traffic speeds:** Low and high speed traffic.	Indicated airspeed, true airspeed and ground speed. Heading and track. Effects of wind. Radar operation:- Position information. Navigation assistance. Terrain clearance. Unknown aircraft. Traffic information.

Topic G35 PROVIDE A FLIGHT INFORMATION SERVICE WITH THE USE OF SURVEILLANCE RADAR

Sub-Topic G35.1 PROVIDE A FLIGHT INFORMATION RADAR SERVICE ON ATS ROUTES

Performance Objectives	Conditions	Essential Knowledge
G35.1.1 Flight data is assessed for actual and potential traffic conflicts. G35.1.2 Aircraft are identified on radar. G35.1.3 A strategy is developed to prevent collision between aircraft G35.1.4 The radar is monitored to ensure the prevention of collision. G35.1.5 The applied flight information is the most appropriate taking into account safety and expedition. G35.1.6 Information on unknown traffic considered to constitute a hazard is passed promptly to participating aircraft. G35.1.7 Appropriate traffic information is passed without delay. G35.1.8 Radar procedures are adjusted to allow for the effects of weather on flight operations. G35.1.9 Radar procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.	**Airspace category:** E, F, G Airways and information areas excluding terminal information areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Control techniques:** Radar Monitoring, Vectoring, Speed Control. **Types of flight:** Aircraft en route, joining, crossing and leaving controlled airspace.	Altimetry, Heights, Altitudes and Flight Levels. Radar principles of operation and limitations. Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids. **Rules of the Air** General Flight Rules Instrument Flight Rules Visual Flight Rules Air traffic services:- Introduction. Air traffic service Flight information service Radar operation:- Radar services. Penetration by independent units. Identification using primary radar. Identification using secondary radar. Transfer of identity. Lost identity. Wake turbulence. Traffic information. Unknown traffic information. Weather avoidance by pilots. Weather avoidance by radar operators. Actions in the event of potential collision hazards, reporting action. Ground based collision avoidance systems.

Topic G35 PROVIDE A FLIGHT INFORMATION SERVICE WITH THE USE OF SURVEILLANCE RADAR

Sub-Topic G35.2 PROVIDE RADAR ADVISORY ON ADVISORY ROUTES AND IN ADVISORY AREAS (if applicable)

Performance Objectives	Conditions	Essential Knowledge
G35.2.1 Flight data is assessed for actual and potential traffic conflicts. G35.2.2 Aircraft are identified on radar. G35.2.3 A strategy is developed to prevent collision between aircraft G35.2.4 The radar is monitored to ensure the prevention of collision G35.2.5 The applied advice is the most appropriate taking into account safety and expedition. G35.2.7 Information on unknown traffic considered to constitute a hazard is passed promptly to participating aircraft. G35.2.7 Avoiding action, where necessary, is prompt and effective. G35.2.8 Appropriate traffic information is passed without delay. G35.2.9 Radar procedures are adjusted to allow for the effects of weather on flight operations. G35.2.10Radar procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight opr.	**Airspace category:** F, G. Advisory routes and advisory areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Control techniques:** Radar Monitoring, Speed suggestions. **Types of flight:** Aircraft en route, joining, crossing and leaving advisory airspace.	Altimetry, Heights, Altitudes and Flight Levels. Radar principles of operation and limitations. Aircraft performance. Vectoring techniques. Speed control techniques. Effects of weather on flight operations. Use and limitations of navigation and communications aids. **Rules of the Air** General Flight Rules Instrument Flight Rules Visual Flight Rules Methods of Identification. Non radar standards applicable to a radar environment. Radar separation standards. Wake turbulence. Traffic information. Unknown traffic information. Weather avoidance by pilots. Weather avoidance by radar operators. Actions in the event of potential collision hazards, reporting action. Ground based collision avoidance systems.

Topic G35 PROVIDE FLIGHT INFORMATION SERVICE WITH THE USE OF SURVEILLANCE RADAR

Sub-Topic G35.3 PROVIDE FLIGHT INFORMATION SERVICE WITH THE USE OF SURVEILLANCE RADAR

Performance Objectives	Conditions	Essential Knowledge
G35.3.1 Flight data is assessed for actual and potential traffic conflicts. G35.3.2 Aircraft are identified on radar. G35.3.3 The radar is monitored to provide information on displayed weather. G35.3.4 The radar is monitored to provide information on observed traffic. G35.3.5 Information on observed weather is passed to pilots and appropriate agencies. G35.3.6 Appropriate traffic information is passed without delay. G35.3.7 Radar procedures are adjusted to allow for the effects of weather on flight operations. G35.3.8 Radar procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.	**Airspace category:** E, F, G **Types of Radar:** Primary, Secondary, Analogue, Processed Radar. **Control techniques:** Radar Monitoring, Navigation assistance, Speed suggestions. **Types of flight:** Aircraft operating outside, joining and leaving controlled airspace and advisory airspace.	Altimetry, Heights, Altitudes and Flight Levels. Radar principles of operation and limitations. Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids. **Rules of the Air** General Flight Rules Instrument Flight Rules Visual Flight Rules Air traffic services:- Introduction. Air traffic service Flight information service Radar operation:- Radar services. Penetration by independent units. Identification using primary radar. Identification using secondary radar. Transfer of identity. Lost identity. Wake turbulence. Traffic information. Unknown traffic information. Weather avoidance by pilots. Weather avoidance by radar operators. Actions in the event of potential collision hazards, reporting action. Ground based collision avoidance systems.

Topic G36 CO-ORDINATE WITH OTHER AGENCIES

Sub-Topic G36.1 CO-ORDINATE WITH ADJACENT OPERATIONAL POSITIONS

Performance Objectives	Conditions	Essential Knowledge
G36.1.1 Traffic situation is analysed to determine the need for co-ordination. G36.1.2 Appropriate co-ordination is initiated in sufficient time to permit negotiation and any agreement to be effected. G36.1.3 The effect of co-ordination requested by adjacent air traffic units is assessed. G36.1.4 An appropriate course of action is negotiated and agreed. G36.1.5 The agreed course of action is effected. G36.1.6 Flow management requirements are met.	**Airspace category:** E, F, G. Airways and information areas excluding terminal control areas. Advisory routes and advisory areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Control/Information positions:** Adjacent operational positions. Adjacent centres.	Aircraft performance. Methods of co-ordination. Approval request. Transfer of identity. Radar handover. Approval requests. Transfer point. Standing agreements. Letters of agreement. Flow management procedures.

Topic G36 CO-ORDINATE WITH OTHER AGENCIES

Sub-Topic G36.2 CO-ORDINATE WITH ADJACENT AERODROMES

Performance Objectives	Conditions	Essential Knowledge
G36.2.1 Co-ordination for arriving aircraft is initiated in sufficient time to permit its implementation. G36.2.3 Departure clearances are relayed to expedite departures whilst minimising disruption to the en route flow of traffic. G36.2.4 Flow management requirements are met.	**Airspace category:** E, F, G. Airways and information areas excluding terminal control areas. Advisory routes and areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Control techniques:** Radar Monitoring, Navigation assistance, Speed suggestions. **Conditions:** Single and multiple arrivals and departures.	Aircraft performance. Methods of co-ordination. Transfer of identity. Radar handover. Data on IFR/VFR traffic. Departing aircraft Flow management procedures.

Topic G37 MANAGE DIVERSIONS AND HOLDING SITUATIONS

Sub-Topic G37.1 HANDLE DIVERSIONS

Performance Objectives	Conditions	Essential Knowledge
G37.1.1 Information necessary to facilitate the diversion is obtained. G37.1.2 Other relevant agencies are informed of the diversion. G37.1.3 Flight plan data is amended. G37.1.4 Diversion messages are issued when appropriate.	**Airspace category:** E, F, G. Airways and information areas excluding terminal control areas. Advisory routes and areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Types of diversion:** Pilot initiated. ATS initiated. Company initiated.	Reasons for diversions. Aerodrome actions. FFS actions. Background on weather minima. Background on fuel management.

Topic G37 MANAGE DIVERSIONS AND HOLDING SITUATIONS

Sub-Topic G37.2 MANAGE HOLDING SITUATIONS

Performance Objectives	Conditions	Essential Knowledge
G37.2.1 Flight data is assessed to determine the need for holding. G37.2.2 Aircraft are informed of the need to hold in sufficient time. G37.2.3 Aircraft are advised of the expected delay. G37.2.4 Other relevant agencies are informed of the holding. G37.2.5 Flight plan data is amended. G37.2.6 Identity is re-established when aircraft leave the holding pattern.	**Airspace category:** E, F, G. Airways and information areas excluding terminal control areas. Advisory routes and areas. **Types of radar:** Primary, Secondary, Analogue, Processed Radar. **Holding:** For traffic, weather, airfield closure.	Reasons for holding. **ICAO Doc. 8168** Holding Criteria. Onward clearance times. Holding for weather improvement

Topic G38 WORK AS A TEAM MEMBER ON THE FLIGHT INFORMATION RADAR SERVICE OPERATIONAL POSITION

Sub-Topic G38.1 ACCEPT RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G38.1.1 Compliance with licensing and medical requirements is confirmed. G38.1.2 Pre task briefing is carried out. G38.1.3 The current and projected traffic situation is obtained from the duty opr. G38.1.4 Current and projected workload is evaluated to determine whether the resources available are appropriate. G38.1.5 Action is taken to ensure resources are adequate for the task.	Initial arrival for duty period. Return following fatigue break.	**Aeronautical Information Circulars** Effects of drugs, medicines, fatigue, stress, medical conditions. **Air Navigation Order** Licensing requirements. Certification of competence. Actions before taking over an operational position.

Topic G38 WORK AS A TEAM MEMBER ON THE FLIGHT INFORMATION RADAR SERVICE OPERATIONAL POSITION

Sub-Topic G38.2 MONITOR PERFORMANCE WHILST RESPONSIBLE FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G38.2.1 Assistance is called for in sufficient time to ensure personal capabilities are not exceeded. G38.2.2 Assistance provided to other team members is appropriate to the circumstances. G38.2.3 Current and projected workload is evaluated to determine whether the resources available are appropriate. G38.2.4 Action is taken to ensure resources are adequate for the task. G38.2.5 Rest/fatigue break requirements are complied with. G38.2.6 Concentration is maintained at an appropriate level for the task. G38.2.7 Indications of reduced or inadequate performance are acted upon in an appropriate manner.	**Traffic flow:** Light, Medium, Heavy.	Scheme for regulation of the working hours. ***Underpinning knowledge*** Indications of stress. Indications of fatigue. Workload sharing.

Topic G38 WORK AS A TEAM MEMBER ON THE FLIGHT INFORMATION RADAR SERVICE OPERATIONAL POSITION

Sub-Topic G38.3 TRANSFER RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G38.3.1 The current traffic situation is clearly communicated to the relieving operator. G38.3.2 The current and projected operating conditions are clearly communicated to the relieving operator. G38.3.3 Current and projected workload is evaluated to determine whether the resources available are appropriate. G38.3.4 Action is taken to ensure resources are adequate for the task.	Running handover.	Scheme for regulation of the working hours. Actions when handing over an operational position.

Topic H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H7.1 MANAGE RADIO FAILURES

Performance Objectives	Conditions	Essential Knowledge
H7.1.1 Aircraft radio failure is recognised from available information. H7.1.2 Standard radio failure procedures are implemented.	**Types of failure:** Ground radio. Partial and complete aircraft radio. **Environment:** Radar.	Pilot actions in the event of loss of communications. ATS procedures in the event of loss of communications. Reporting actions. Availability of supplementary flight plan information

Topic H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLILGHT INFORMATION SERVICE UNIT

Sub-Topic H7.2 MANAGE SITUATIONS ARISING FROM UNLAWFUL INTERFERENCE

Performance Objectives	Conditions	Essential Knowledge
H7.2.1 The possibility of unlawful interference is recognised from available information. H7.2.2 Standard procedures are adhered to when dealing with aircraft subject to unlawful interference.	Aircraft overflying, intending to land within area of jurisdiction. **Environment:** Radar.	Indications of unlawful interference. Laid down handling procedures, National and International. Special communications procedures. Reporting action. Availability of supplementary flight plan information.

Topic H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H7.3 MANAGE AIRCRAFT EMERGENCIES

Performance Objectives	Conditions	Essential Knowledge
H7.3.1 The possibility of an emergency situation existing is recognised from available information. H7.3.2 The nature of the emergency is determined. H7.3.3 The level of priority over other traffic is evaluated	**Types of emergency:** Engine. Airframe. Fuel based. Medical. **Environment:** Radar.	Aircraft performance and performance limitations. Recognising an emergency situation: Handling aircraft emergencies; overdue aircraft, criteria and actions; phases of emergency. Reporting action. Availability of supplementary flight plan information.

Topic H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H7.4 PROVIDE ALERTING SERVICE

Performance Objectives	Conditions	Essential Knowledge
H7.4.1 Available information is evaluated to determine the phase of emergency existing. H7.4.2 Actions follow laid down procedures appropriate to the phase of the emergency.	**Phases of emergency:** Uncertainty. Alert. Distress. **Environment:** Radar.	Recognising an emergency situation: Handling aircraft emergencies; overdue aircraft, criteria and actions; phases of emergency. Reporting action. Availability of supplementary flight plan information.

Topic H7 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H7.5 RECOVER FROM A RADAR FAILURE

Performance Objectives	Conditions	Essential Knowledge
H7.5.1 Aircraft are informed of the failure. H7.5.2 Flight data is assessed for actual and potential traffic conflicts. H7.5.4 Immediate action is taken to achieve the goal of the contingency plan H7.5.5 Appropriate traffic information is passed without delay. H7.5.7 Appropriate traffic flow restrictions are applied. H7.5.8 Aircraft are identified on resumption of radar service. H7.5.9 Aircraft are informed of the resumption of radar service.	**Airspace category:** E, F, G. Airways and information areas excluding terminal control areas. Advisory routes and advisory areas. **Operating environment** Total radar **Types of flight:** Aircraft en route, joining, crossing and leaving controlled or advisory airspace. IFR/VFR	Altimetry, Heights, Altitudes and Flight Levels. Effects of weather on flight operations. Use and limitations of navigation and communications aids. Wake turbulence. Aircraft performance. Actions when radar service is restored. Reporting action. Contingency plan

Topic H8 MANAGE DOMESTIC CONTINGENCIES IN A FLIGHT INFORMATION SERVICE ROOM

Sub-Topic H8.1 SAFELY EVACUATE THE FLIGHT INFORMATION ROOM

Performance Objectives	Conditions	Essential Knowledge
H8.1.1 Available information is evaluated to determine the need to evacuate the flight information service room. H8.1.2 Traffic is disposed of in accordance with laid down procedures. H8.1.3 Evacuation is conducted in accordance with laid down procedures.	**Reasons for evacuation:** Fire and Bomb Warnings.	**Local procedures** Evacuation of flight information service room.

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