Rating Requirements
for Flight Information Service

Aerodrome Flight Information Service
Instrument Rating
AFI
and
Aerodrome Flight Information Service
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. Editorial corrections from “control” to “information”. 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 prevent collision between aircraft, the operator must not only know the information 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 flight information service.

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 AFI: 160 hours

Additional endorsements:

For RAD: 80 hours

By training time (OJT) is meant, 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 AFI: 80 hours

Additional endorsements:

For RAD: 40 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 AERODROME FLIGHT INFORMATION SERVICE INSTRUMENT RATING – AFI

KEY ROLES	TOPICS	
KEY ROLE A COMMUNICATE WITH AIRCRAFT AND OTHER AGENCIES	A1	CHECK AND OPERATE COMMUNICATIONS EQUIPMENT
	A2	COMMUNICATE FROM A VISUAL TOWER ROOM
KEY ROLE B ESTABLISH AND UPDATE A REPRESENTATIVE FLIGHT DATA DISPLAY	B1	CORRELATE FLIGHT DATA INTO APPROPRIATE PROFORMA FOR DISPLAY
	B2	MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME FLIGHT INFORMATION 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 D SELECT THE DIRECTION OF LANDING AND TAKE OFF	D1	SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G1	MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME
	G2	MANAGE AERODROME SURFACE MOVEMENTS
	G3	CO-ORDINATE WITH OTHER ATS OPERATIONAL POSITIONS
	G8	EFFECT LIAISON WITH OTHER AGENCIES
	G9	HANDLE DIVERSIONS
	G10	WORK AS A TEAM MEMBER ON THE AERODROME FLIGHT INFORMATION OPERATIONAL POSITION
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H1	MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME FLIGHT INFORMATION SERVICE UNIT
	H2	MANAGE DOMESTIC CONTINGENCIES IN AN AERODROME VISUAL TOWER ROOM

TOPICS AND SUB-TOPICS FOR AERODROME FLIGHT INFORMATION SERVICE INSTRUMENT RATING – AFI

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
A2 Communicate from a visual tower room	A2.1 Use standard phraseology applicable to aerodrome flight information 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
B2 Maintain a representative flight data display for aerodrome flight information service	B2.1 Correlate flight data into a display for aerodrome flight information service B2.2 Update the aerodrome flight information 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 D	**SELECT THE DIRECTION OF LANDING AND TAKE OFF**
TOPICS	**SUB-TOPICS**
D1 Select the runway in use and appropriate visual aids	D1.1 Select the runway in use D1.2 Operate aerodrome lighting

KEY ROLE G		**MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC**	
TOPICS		**SUB-TOPICS**	
G1	Manage flights operating in the vicinity of the aerodrome	G1.1	Manage flights operating under the visual flight rules
		G1.2	Manage flights operating under the instrument flight rules
G2	Manage aerodrome surface movements	G2.1	Assist aircraft on the manoeuvring area and aprons and vehicles and personnel on the manoeuvring area
G3	Co-ordinate with other ATS operational positions	G3.1	Co-ordinate with appropriate control/information operational positions
G8	Effect liaison with other agencies	G8.1	Liaise with non ATS agencies
		G8.2	Liaise with the safety services
G9	Handle diversions	G9.1	Handle diversions
G10	Work as a team member on the aerodrome flight information service operational position	G10.1	Accept responsibility for the operational position
		G10.2	Monitor performance whilst responsible for the operational position
		G10.3	Transfer responsibility for the operational position
KEY ROLE H		**MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES**	
TOPICS		**SUB-TOPICS**	
H1	Manage developed emergencies from the aerodrome flight information service unit	H1.1	Manage radio failures
		H1.2	Manage situations arising from unlawful interference
		H1.3	Manage Aircraft Emergencies
		H1.4	Provide Alerting Service
H2	Manage domestic contingencies in an aerodrome visual tower room	H2.1	Safely evacuate the visual tower room

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KEY ROLES AND TOPICS FOR AERODROME FLIGHT INFORMATION SERVICE RATING – RADAR ENDORSEMENT – RAD

KEY ROLE E SET UP AND USE SURVEILLANCE RADAR EQUIPMENT	E2	USE PRIMARY RADAR
	E3	USE SECONDARY RADAR
	E4	SELECT AND SET UP AERODROME FLIGHT INFORMATION RADAR
	E5	USE AERODROME FLIGHT INFORMATION RADAR
KEY ROLE G MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC	G4	MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME FLLIGHT INFORMATION RADAR
KEY ROLE H MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES	H4	MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED AERODROME FLIGHT INFORMATION SERVICE UNIT

TOPICS AND SUB-TOPICS FOR AERODROME FLIGHT INFORMATION SERVICE RATING – RADAR ENDORSEMENT – RAD

KEY ROLE E	**SET UP AND USE SURVEILLANCE RADAR EQUIPMENT**
TOPICS	**SUB-TOPICS**
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
E4 Select and set up aerodrome flight information radar	E4.1 Select and set up aerodrome flight information radar
E5 Use aerodrome flight information radar	E5.1 Use aerodrome flight information radar
KEY ROLE G	**MANAGE THE OPERATIONAL POSITION AND ITS TRAFFIC**
TOPICS	**SUB-TOPICS**
G4 Manage flights operating in the vicinity of the aerodrome with the aid of aerodrome flight information radar	G4.1 Manage flights operating under the visual flight rules G4.2 Manage flights operating under the instrument flight rules
KEY ROLE H	**MANAGE EMERGENCIES AND DOMESTIC CONTINGENCIES**
TOPICS	**SUB-TOPICS**
H4 Manage developed emergencies from the radar equipped aerodrome flight information service unit	H4.5 Recover from a radar failure.

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 A2 COMMUNICATE FROM A VISUAL TOWER ROOM

Sub-Topic A2.1 USE STANDARD PHRASEOLOGY APPLICABLE TO AERODROME FLIGHT INFORMATION SERVICE

Performance Objectives	Conditions	Essential Knowledge
A2.1.1 Standard phraseology is employed wherever possible in communications. A2.1.2 Composition of messages is concise and unambiguous. A2.1.3 Station identity is used correctly. A2.1.4 Relay ATC clearances and instructions in a correct and identifiable way. A2.1.5 Acknowledgements and readbacks are obtained and verified when required. A2.1.6 Abbreviated phraseology is used when appropriate.	**Communication by:** Radiotelephone, telephone. **Message Types:** Clearances, instructions, information.	Standard aerodrome flight information 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 B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME FLIGHT INFORMATION SERVICE

Sub-Topic B2.1 CORRELATE FLIGHT DATA INTO A DISPLAY FOR AERODROME FLIGHT INFORMATION SERVICE

Performance Objectives	Conditions	Essential Knowledge
B2.1.1 All relevant traffic is included on the display. B2.1.2 Flight progress strips are organised in a manner, which reflects the traffic situation in accordance with laid down procedures. B2.1.3 Electronic flight data displays are organised in accordance with laid down procedures.	**Methods of display:** Flight progress strip displays. Electronic flight data displays.	**Local procedures** Layout and use of flight progress strips. Layout and use of electronic flight data displays.

Topic B2 MAINTAIN A REPRESENTATIVE FLIGHT DATA DISPLAY FOR AERODROME FLIGHT INFORMATION SERVICE

Sub-Topic B2.2 UPDATE THE AERODROME FLIGHT INFORMATION SERVICE FLIGHT DATA DISPLAY

Performance Objectives	Conditions	Essential Knowledge
B2.2.1 Information is extracted from all relevant sources. B2.2.2 The display is updated using information received. B2.2.3 Clearances and instructions passed to aircraft and other agencies are recorded. B2.2.4 Co-ordination agreed with other agencies is recorded. B2.2.5 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. Electronic data displays.	Aircraft performance. **Local procedures** Report formats. EDD display parameters.

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. Aerodrome warnings

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:** Surface wind. Thunderstorms and Cumulonimbus clouds . Freezing rain. Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility. Low level wind shear.	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. Aerodrome warnings

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:** Surface wind. Thunderstorms and Cumulonimbus clouds. Freezing rain. Moderate / Severe icing. Severe turbulence. Severe mountain waves. Low visibility. Low level wind shear.	Windshear ***Underpinning knowledge*** Effects of weather on flight operations. Meteorology:- Wind, cloud, thunderstorms, microbursts, icing, line squalls.

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 Pilots' 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. Visual observation.	**DK/GREENLAND/FAROE AIP** Content and use of AIP, NOTAM. Aeronautical information circulars. Restricted, prohibited airspace. Danger areas. Aeronautical charts

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. Unserviceable approach and landing aids. Reduction of safety services cover. Surface contamination.	***Underpinning knowledge*** Communication and navigation systems, use 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. Unserviceable approach and landing aids. Reduction of safety services cover. Surface contamination.	Flight information service. Essential aerodrome information. ***Underpinning knowledge*** Communication and navigation systems, uses and limitations. Conditions affecting operations at aerodromes. Airspace restrictions.

Topic D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS

Sub-Topic D1.1 SELECT THE RUNWAY IN USE

Performance Objectives	Conditions	Essential Knowledge
D1.1.1 The prevailing weather conditions are evaluated. D1.1.2 The availability of essential aids is evaluated. D1.1.3 Surface conditions are evaluated. D1.1.4 Operational requirements of aircraft are evaluated. D1.1.5 The runway selected is the most suitable.	**Operating conditions:** Day. Night. Low Visibility.	Landing direction and runway in use. Runway changes. ***Underpinning knowledge*** Take off and landing performance of aircraft. Approach and landing aids use and limitations.

Topic D1 SELECT THE RUNWAY IN USE AND APPROPRIATE VISUAL AIDS

Sub-Topic D1.2 OPERATE AERODROME LIGHTING

Performance Objectives	Conditions	Essential Knowledge
D1.2.1 The prevailing weather conditions are evaluated. D1.2.2 The serviceability of lighting aids is evaluated. D1.2.3 Lighting is operated in accordance with laid down procedures. D1.2.4 Failure or irregular operation of aerodrome lighting is notified in accordance with laid down procedures.	**Operating conditions:** Day. Night. Low Visibility.	Aerodrome lighting aids:- Lighting systems in use at the aerodrome. Operation of lighting systems and intensity controls. Periods of display. **Local Procedures** Notification of unserviceabilities.

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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. Vectoring. 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 E4 SELECT AND SET UP AERODROME FLIGHT INFORMATION RADAR

Sub-Topic E4.1 SELECT AND SET UP AERODROME FLIGHT INFORMATION RADAR

Performance Objectives	Conditions	Essential Knowledge
E4.1.1 Appropriate aerodrome flight information radar equipment is selected. E4.1.2 Controls are adjusted to provide best available performance. E4.1.3 Accuracy of aerodrome flight information radar, information is checked against laid down criteria. E4.1.4 Deficiencies are notified in accordance with local procedures.	**Operating conditions:** Day. Night. Low visibility.	Aerodrome traffic monitor. ***Underpinning knowledge*** ATM principles of operation. Limitations of ATM Processing and display of ATM data.

Topic E5 USE AERODROME FLIGHT INFORMATION RADAR

Sub-Topic E5.1 USE AERODROME FLIGHT INFORMATION RADAR

Performance Objectives	Conditions	Essential Knowledge
E5.1.1 Displayed information is accurately correlated with known traffic. E5.1.2 Action is taken to establish the identity of significant unknown returns. E5.1.3 Tracks and speeds are accurately assessed using displayed information. E5.1.4 Aircraft are informed, where necessary, of their position and other traffic. E5.1.5 Navigational assistance is provided in accordance with laid down procedures	**Atmospheric conditions:** Cyclonic, anticyclonic and zero wind conditions. **Traffic speeds:** Low and high speed traffic.	Aerodrome traffic monitor ***Underpinning knowledge*** Processing and display of ATM data. Ground / Air Speed. Effect of wind. Effect of weather

Topic G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME

Sub-Topic G1.1 MANAGE FLIGHTS OPERATING UNDER THE VISUAL FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
G1.1.1 Flight data is assessed for actual and potential traffic conflicts G1.1.2 Traffic is visually monitored to detect actual and potential conflicts. G1.1.3 The runway is safeguarded to ensure the safety of aircraft taking off and landing. G1.1.4 Traffic information is passed to enable pilots to position themselves in the traffic pattern. G1.1.5 Immediate action is taken to inform about wake turbulence. G1.1.6 ATS procedures are adjusted to allow for the effects of weather on flight operations G1.1.7 ATS procedures are adjusted to allow for the effect of degradation of communication services on flight operations.	**Airspace category :** G, TIZ. **Traffic information:** Departing Arriving Transiting Local **Types of Flight:** Fixed and Rotary Wing. VFR. Arriving, Departing, Local. **Wake Turbulence Categories:** Light, Medium, Heavy, Small. **Weather conditions:** VMC **Operating conditions:** Day Night	**Rules of the Air** General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings. Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Critical positions in the traffic circuit. Arriving aircraft. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Vortex wake spacing requirements. Local traffic information Altimeter setting and vertical reference ***Underpinning knowledge*** Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids.

Topic G1 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME

Sub-Topic G1.2 MANAGE FLIGHTS OPERATING UNDER THE INSTRUMENT FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
G1.2.1 Flight data is assessed for actual and potential traffic conflicts. G1.2.2 The runway is safeguarded to ensure the safety of aircraft taking off and landing. G1.2.3 Traffic is visually monitored to detect actual and potential conflicts. G1.2.4 Traffic information is passed to enable pilots to plan their flight avoiding traffic conflicts G1.2.5 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern. G1.2.6 Immediate action is taken to inform about wake turbulence. G1.2.7 Appropriate traffic information is passed without delay. G1.2.8 ATS procedures are adjusted to allow for the effects of weather on flight operations. G1.2.9 ATS procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight opr.	**Airspace category :** G TIZ **Types of Flight:** Fixed and Rotary Wing. IFR Arriving, Departing, Local. **Traffic information:** Departing Arriving Transiting Local **Wake Turbulence Categories:** Light, Medium, Heavy, Small. **Weather conditions:** VMC, IMC and Low Visibility. **Operating conditions:** Day Night	**Rules of the Air** General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings. Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Critical positions in the traffic circuit. Arriving aircraft. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Vortex wake spacing requirements. Local traffic information Altimeter setting and vertical reference ***Underpinning knowledge*** Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids.

Topic G2 MANAGE AERODROME SURFACE MOVEMENTS

Sub-Topic G2.1 ASSIST AIRCRAFT ON THE MANOEUVRING AREA AND APRONS AND VEHICLES AND PERSONNEL ON THE MANOEUVRING AREA

Performance Objectives	Conditions	Essential Knowledge
G2.1.1 Aerodrome surface is monitored for potential conflicts. G2.1.2 Informations issued achieve the most expeditious flow consistent with safety. G2.1.3 The condition of the airfield surface is evaluated when permitting movements. G2.1.4 Flow management requirements are met. G2.1.5 Requests for work on the airfield are evaluated and appropriately met.	**Surface movements:** Aircraft. Vehicles. Personnel. **Monitoring of surface movements:** Visually. **Communication by:** Radiotelephony. Light signals. **Operating conditions:** Day Night	**Rules of the Air** General Flight Rules - choice of IFR or VFR Aerodrome traffic rules. Aerodrome signals and markings. Aerodrome flight information:- Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Work on the manoeuvring area Aerodrome inspections. ***Underpinning knowledge*** Flow management procedures Aircraft limitations on ground manoeuvring.

Topic G3 CO-ORDINATE WITH OTHER ATS OPERATIONAL POSITIONS

Sub-Topic G3.1 CO-ORDINATE WITH APPROPRIATE CONTROL/INFORMATION OPERATIONAL POSITIONS

Performance Objectives	Conditions	Essential Knowledge
G3.1.1 Traffic situation is analysed to determine the need for co-ordination. G3.1.2 Appropriate co-ordination is initiated in sufficient time to permit negotiation and any agreement to be effected. G3.1.3 An appropriate course of action is negotiated and agreed. G3.1.4 The agreed course of action is effected. G3.1.5 Flow management requirements are met.	**Control positions:** Approach control. Approach radar control. Area control Area radar control **Information positions:** Other Aerodromes Sector Flight information service Flight information centres	Responsibilities - Co-ordination. Aircraft performance. Standing agreements. Flow management procedures.

Topic G4 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME FLIGHT INFORMATION RADAR

Sub-Topic G4.1 MANAGE FLIGHTS OPERATING UNDER THE VISUAL FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
G4.1.1 Radar information is integrated with information from other sources. G4.1.2 Traffic is monitored to detect actual and potential conflicts. G4.1.3 Traffic information is passed to enable pilots to plan their flight avoiding traffic conflicts G4.1.4 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern. G4.1.5 Immediate action is taken to inform about wake turbulence. G4.1.6 Appropriate traffic information is passed without delay. G4.1.7 ATS procedures are adjusted to allow for the effects of weather on flight operations. G4.1.8 ATS procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.	**Airspace categories:** G TIZ **Operating conditions:** Day. Night **Types of Flight:** Fixed and Rotary Wing. VFR Arriving, Departing, Local.	**Rules of the Air** General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings. Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Awaiting take off. Critical positions in the traffic circuit. Arriving aircraft. Aerodrome traffic monitor. Missed approach restrictions. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Windshear. Vortex wake spacing requirements. Local traffic information Altimeter setting and vertical reference ***Underpinning knowledge*** Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids. Processing and display of ATM data.

Topic G4 MANAGE FLIGHTS OPERATING IN THE VICINITY OF THE AERODROME WITH THE AID OF AERODROME FLIGHT INFORMATION RADAR

Sub-Topic G4.2 MANAGE FLIGHTS OPERATING UNDER THE INSTRUMENT FLIGHT RULES

Performance Objectives	Conditions	Essential Knowledge
G4.2.1 Radar information is integrated with information from other sources. G4.2.2 Flight data is assessed for actual and potential traffic conflicts. G4.2.3 The runway is safeguarded to ensure the safety of aircraft taking off and landing. G4.2.4 Traffic is monitored to detect actual and potential conflicts. G4.2.5 Traffic information is passed to enable pilots operating with visual reference to position themselves in the traffic pattern. G4.2.6 Immediate action is taken to inform about wake turbulence. G4.2.7 Appropriate traffic information is passed without delay. G4.2.8 ATS procedures are adjusted to allow for the effects of weather on flight operations. G4.2.9 ATS procedures are adjusted to allow for the effect of degradation of essential navigational and communication services on flight operations.	**Airspace category :** G TIZ **Operating conditions:** Day. Night **Types of Flight:** Fixed and Rotary Wing. IFR, Arriving, Departing. **Wake Turbulence Categories:** Light, Medium, Heavy, Small **Weather conditions:** VMC, IMC and Low Visibility.	**Rules of the Air** General Flight Rules - rules for avoiding aerial collisions, right hand traffic rule, choice of IFR or VFR Visual Flight Rules Instrument Flight Rules Aerodrome traffic rules. Aerodrome signals and markings. Provision of services. Responsibilities. Airspace classification. Effect of weather on operations. Essential aerodrome information. Control of surface traffic. Taxiing aircraft. Critical positions in the traffic circuit. Arriving aircraft. Missed approach restrictions. Aerodrome traffic monitor. Closure or restricted operation of aerodromes. Work on the manoeuvring area. Aerodrome inspections. Windshear. Vortex wake spacing requirements. Local traffic information. Altimeter setting and vertical reference:- ***Underpinning knowledge*** Aircraft performance. Effects of weather on flight operations. Use and limitations of navigation and communications aids. Processing and display of ATM data.

Topic G8 EFFECT LIAISON WITH OTHER AGENCIES

Sub-Topic G8.1 LIAISE WITH NON ATS AGENCIES

Performance Objectives	Conditions	Essential Knowledge
G8.1.1 The sources of requests are verified. G8.1.2 Requests are evaluated for their effect on aerodrome operations. G8.1.3 Information on the status of the aerodrome and its associated aids is disseminated in accordance with local procedures.	**Non ATS Agencies:** Aerodrome Authority. Customs and Immigration. Police.	Aerodrome emergency services. Local Procedures.

Topic G8 EFFECT LIAISON WITH OTHER AGENCIES

Sub-Topic G8.2 LIAISE WITH THE SAFETY SERVICES

Performance Objectives	Conditions	Essential Knowledge
G8.2.1 The need for safety services call-out is identified in accordance with laid down criteria. G8.2.2 Call-outs are initiated in accordance with local procedures. G8.2.3 The category of call-out initiated is appropriate to the circumstances. G8.2.4 The sources of requests for off airfield attendance are verified. G8.2.5 Requests for off airfield attendance are evaluated for their effect on aerodrome operations. G8.2.6 Off airfield attendance is permitted in accordance with local procedures.	**Safety services:** Aerodrome fire and rescue services. Civil fire, ambulance and police. Aerodrome Security.	Aerodrome fire service. Aerodrome emergency services. Aerodrome rescue and fire fighting. Heliport fire fighting categories.

Topic G9 HANDLE DIVERSIONS

Sub-Topic G9.1 HANDLE DIVERSIONS

Performance Objectives	Conditions	Essential Knowledge
G9.1.1 Information necessary to facilitate the diversion is obtained. G9.1.2 Other relevant agencies are informed of the diversion. G9.1.3 Flight plan data is amended. G9.1.4 Diversion messages are issued when appropriate.	**Types of diversion:** Pilot initiated. Company initiated. ATC initiated.	Diversion procedures. Aerodrome actions AFI actions. ***Underpinning knowledge*** Background on weather minima. Background on fuel management.

Topic G10 WORK AS A TEAM MEMBER ON THE AERODROME FLIGHT INFORMATION SERVICE OPERATIONAL POSITION

Sub-Topic G10.1 ACCEPT RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G10.1.1 Compliance with licensing and medical requirements is confirmed. G10.1.2 Pre task briefing is carried out. G10.1.3 The current and projected traffic situation is obtained from the duty operator. G10.1.4 Current and projected workload is evaluated to determine whether the resources available are appropriate. G10.1.5 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 G10 WORK AS A TEAM MEMBER ON THE AERODROME FLIGHT INFORMATION SERVICE OPERATIONAL POSITION

Sub-Topic G10.2 MONITOR PERFORMANCE WHILST RESPONSIBLE FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G10.2.1 Assistance is called for in sufficient time to ensure personal capabilities are not exceeded. G10.2.2 Assistance provided to other team members is appropriate to the circumstances. G10.2.3 Current and projected workload is evaluated to determine whether the resources available are appropriate. G10.2.4 Action is taken to ensure resources are adequate for the task. G10.2.5 Rest/fatigue break requirements are complied with. G10.2.6 Concentration is maintained at an appropriate level for the task. G10.2.7 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 G10 WORK AS A TEAM MEMBER ON THE AERODROME FLIGHT INFORMATION SERVICE OPERATIONAL POSITION

Sub-Topic G10.3 TRANSFER RESPONSIBILITY FOR THE OPERATIONAL POSITION

Performance Objectives	Conditions	Essential Knowledge
G10.3.1 The current traffic situation is clearly communicated to the relieving operator. G10.3.2 The current and projected operating conditions are clearly communicated to the relieving operator. G10.3.3 Current and projected workload is evaluated to determine whether the resources available are appropriate. G10.3.4 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 H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H1.1 MANAGE RADIO FAILURES

Performance Objectives	Conditions	Essential Knowledge
H1.1.1 Aircraft radio failure is recognised from available information. H1.1.2 Standard radio failure procedures are implemented.	**Types of failure:** Ground radio. Partial and complete aircraft radio. **Environment:** Radar and non-radar environment.	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 H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H1.2 MANAGE SITUATIONS ARISING FROM UNLAWFUL INTERFERENCE

Performance Objectives	Conditions	Essential Knowledge
H1.2.1 The possibility of unlawful interference is recognised from available information. H1.2.2 Standard procedures are adhered to when dealing with aircraft subject to unlawful interference.	Aircraft intending to land. Aircraft on ground.	Hi-jacking and the unlawful use of aircraft. Availability of supplementary flight plan information. Reporting action.

Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H1.3 MANAGE AIRCRAFT EMERGENCIES

Performance Objectives	Conditions	Essential Knowledge
H1.3.1 The possibility of an emergency situation existing is recognised from available information. H1.3.2 The nature of the emergency is determined. H1.3.3 The level of priority over other traffic is evaluated	**Types of emergency:** Engine. Airframe. Fuel based. Medical.	Aircraft emergencies. Aircraft lost. Reporting action ***Underpinning knowledge*** Aircraft performance and performance limitations.

Topic H1 MANAGE DEVELOPED EMERGENCIES FROM THE AERODROME FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H1.4 PROVIDE ALERTING SERVICE

Performance Objectives	Conditions	Essential Knowledge
H1.4.1 Available information is evaluated to determine the phase of emergency existing. H1.4.2 Actions follow laid down procedures appropriate to the phase of the emergency.	**Phases of emergency:** Uncertainty. Alert. Distress.	Alerting service. Overdue aircraft. Reporting action.

Topic H2 MANAGE DOMESTIC CONTINGENCIES IN AN AERODROME VISUAL TOWER ROOM

Sub-Topic H2.1 SAFELY EVACUATE THE VISUAL TOWER ROOM

Performance Objectives	Conditions	Essential Knowledge
H2.1.1 Available information is evaluated to determine the need to evacuate the visual tower room. H2.1.2 Traffic is disposed of in accordance with laid down procedures. H2.1.3 Evacuation is conducted in accordance with laid down procedures.	**Reasons for evacuation:** Fire and Bomb Warnings.	**Local procedures** Evacuation of visual tower room.

Topic H4 MANAGE DEVELOPED EMERGENCIES FROM THE RADAR EQUIPPED AERODROME FLIGHT INFORMATION SERVICE UNIT

Sub-Topic H4.5 RECOVER FROM A RADAR FAILURE

Performance Objectives	Conditions	Essential Knowledge
H4.5.1 Aircraft are informed of the failure H4.5.2 Flight data is assessed for actual and potential traffic conflicts. H4.5.3 Appropriate traffic information is passed without delay. H4.5.4 Appropriate traffic flow restrictions are applied. H4.5.5 Aircraft are identified on resumption of radar service. H4.5.6 Aircraft are informed of the resumption of radar service.	**Airspace category:** G TIZ **Operating environment** Total or partial radar failure Computer assisted failure **Types of flight:** Aircraft en route, joining, crossing and leaving controlled/uncontrolled airspace.	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 in the event of radar failure. Reporting action. Local traffic information. Traffic information. Contingency plans

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