



ICAO

# Doc 10057

## Manual on Air Traffic Safety Electronics Personnel Competency-based Training and Assessment

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

## B.1 — RECOMMENDED TRAINING OBJECTIVES FOR A BASIC TRAINING COURSE

### SUBJECT 1. INDUCTION

#### TOPIC 1: INDUCTION

##### SUB-TOPIC 1.1: Training and assessment overview

1.1.1	Describe the training scheme and progression towards ATSEP competence.	2 <sup>1</sup>	Initial (basic and qualification), S/E rating and continuation training. Course aims, objectives, and topics.
1.1.2	State the assessment requirements, procedures, and methods.	1	—

##### SUB-TOPIC 1.2: National organization

1.2.1	Describe the organizational structure, purpose and functions of the national service provider(s) and regulatory structures.	2	e.g. Headquarters, control centres, training facilities, airports, out stations, civil/military interfaces, regulatory interfaces.
1.2.2	Describe the structure and functions of the major departments within the service provider national organization.	2	e.g. Organizational handbook (plans, concepts and structure, finance model).
1.2.3	State appropriate accountabilities and responsibilities of the service provider(s) and competent authority.	1	—

## SUB-TOPIC 1.3: Workplace

1.3.1	State the role of trade unions and professional organizations.	1	e.g. International, regional, national.
1.3.2	Consider security of site facilities and personnel against unlawful interference.	2	Environmental, physical and information security measures, employee vetting, and reference checks.
1.3.3	Describe actions when suspecting a security breach.	2	e.g. Inform police, security agencies and managers. Security manual and/or contingency plan.

## SUB-TOPIC 1.4: ATSEP role

1.4.1	Describe the key responsibilities of an ATSEP.	2	
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## SUB-TOPIC 1.5: National/regional/worldwide dimension

1.5.1	Explain the relationship between States and its relevance to ATM operations.	2	e.g. Harmonization, flow management, bilateral agreement, sharing of ATM relevant data, major studies, research programmes, and policy documents.
1.5.2	Define the regulatory framework of international and national ATM.	1	e.g. ICAO, regional and national concepts, responsibilities.
1.5.3	State the purpose of a range of international and regional bodies.	1	e.g. ICAO, EASA, FAA, RTCA, EUROCAE.

## SUB-TOPIC 1.6: International Standards and Recommended Practices

1.6.1	Explain how the regulatory environment of ICAO notifies and implements legislation.	2	Annexes, SARPs.
1.6.2	State which major/key ATM engineering “standards” and “practices” are applicable.	1	e.g. ICAO Annex 10, ICAO Doc 8071, guidance material on reliability, maintainability and availability.

SUB-TOPIC 1.7: Data security

1.7.1	Explain the importance of ATM security.	2	—
1.7.2	Describe the security of operational data.	2	Secure restricted access by authorized personnel.
1.7.3	Explain security policies and practices for information and data.	2	Backup, storing, hacking, confidentiality, copyright.
1.7.4	Describe the possible external interventions which may interrupt or corrupt ATM services.	2	Introduction of software viruses, illegal broadcasts, jamming, spoofing.

SUB-TOPIC 1.8: Quality management

1.8.1	Explain quality management and the need for it.	2	e.g. ISO, EFQM.
1.8.2	Explain the need for configuration management.	2	Importance for safe operations, e.g. S/E build state, software adaption/version.

SUB-TOPIC 1.9: Safety management system

1.9.1	Explain why there is a need for high-level safety requirements for aeronautical activities.	2	Safety policy and rules, system safety cases, system safety requirements.
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SUB-TOPIC 1.10: Health and safety

1.10.1	Explain personal safety responsibilities in the work environment.	2	Safety statement, first aid, rules about climbing.
1.10.2	Explain potential hazards to health and safety generated by equipment, or contained within the work environment.	2	e.g. Health consequences of electric shock and static discharges, precautions with chemical products (batteries), mechanical hazards (rotating machinery/antennas), toxic materials (beryllium), biological hazards, faulty earthing.
1.10.3	Describe fire safety and first-aid regulations and practices.	2	Requirements and rules, e.g. Standards.
1.10.4	State any applicable legal requirements and safety rules.	1	National, regional, international regulations, e.g. For working on power supply and/or air conditioning.
1.10.5	Describe the main features and uses of the different types of fire detectors and extinguishers.	2	e.g. VESDA, Type A, B, C, D extinguishers.



**EASA**  
European Aviation Safety Agency



**ATM/ANS**  
(IR + AMC/GM)

**eRules**

## Appendix 1a – ATSEP Basic training – Shared

ATSEP UID (Unique Objective Identifier)	CORPUS	Tax	CONTENT
<b>ATSEP.BAS</b>	<b>ATSEP BASIC</b>		
<b>ATSEP.BAS.IND</b>	<b>INDUCTION</b>		
<b>ATSEP.BAS.IND_1</b>	<b>INDUCTION</b>		
<b>ATSEP.BAS.IND_1.1</b>	<b>Training and Assessment Overview</b>		
ATSEP.BAS.IND_1.1.1	Describe the training scheme and progression towards ATSEP competence	2	Initial (Basic and Qualification), S/E Rating and Continuation training; course aims, objectives, and topics
ATSEP.BAS.IND_1.1.2	State the assessment requirements, procedures, and methods	1	-
<b>ATSEP.BAS.IND_1.2</b>	<b>National Organisation</b>		
ATSEP.BAS.IND_1.2.1	Describe the organisational structure, purpose and functions of the service provider(s) and regulatory structures	2	e.g. headquarters, control centres, training facilities, airports, outstations, civil/military interfaces, regulatory interfaces
ATSEP.BAS.IND_1.2.2	Describe the structure and functions of the major departments within the service provider	2	e.g. organisational handbook (plans, concepts and structure, finance model)
ATSEP.BAS.IND_1.2.3	State appropriate accountabilities and responsibilities of the service provider(s) and competent authority	1	-
<b>ATSEP.BAS.IND_1.3</b>	<b>Workplace</b>		
ATSEP.BAS.IND_1.3.1	State the role of trade unions and professional organisations	1	e.g. international, European, national, local level
ATSEP.BAS.IND_1.3.2	Consider security of site facilities and personnel against unlawful interference	2	Environmental, physical and information security measures, employee vetting, and reference checks
ATSEP.BAS.IND_1.3.3	Describe actions when suspecting a security breach	2	e.g. inform police, security agencies and managers; follow the security manual and/or contingency plan
<b>ATSEP.BAS.IND_1.4</b>	<b>ATSEP Role</b>		
ATSEP.BAS.IND_1.4.1	Describe the key responsibilities of an ATSEP	2	-

## Appendix 1a – ATSEP Basic training – Shared

ATSEP UID (Unique Objective Identifier)	CORPUS	Tax	CONTENT
<b>ATSEP.BAS.IND_1.5</b>	<b>European/Worldwide Dimension</b>		
ATSEP.BAS.IND_1.5.1	Explain the relationship between States and its relevance to ATM operations	2	e.g. harmonisation, flow management, bilateral agreement, sharing of ATM relevant data, major studies, research programs and policy documents
ATSEP.BAS.IND_1.5.2	Define the regulatory framework of international and national ATM	1	e.g. ICAO, European and national concepts, responsibilities
ATSEP.BAS.IND_1.5.3	State the purpose of a range of international bodies	1	ICAO, EU, EASA e.g. ECAC, EUROCONTROL, RTCA, EUROCAE
<b>ATSEP.BAS.IND_1.6</b>	<b>International Standards and Recommended Practices</b>		
ATSEP.BAS.IND_1.6.1	Explain how the regulatory environment of ICAO notifies and implements legislation	2	ICAO Annexes
ATSEP.BAS.IND_1.6.2	State which major/key ATM engineering 'standards' and 'practices' are applicable	1	e.g. ICAO Annex 10, ICAO Doc 8071, ICAO Doc 9426-3, available EUROCONTROL standards, guidance material on reliability, maintainability and availability
<b>ATSEP.BAS.IND_1.7</b>	<b>Data Security</b>		
ATSEP.BAS.IND_1.7.1	Explain the importance of ATM security	2	-
ATSEP.BAS.IND_1.7.2	Describe the security of operational data	2	Secure, restricted access by authorised personnel
ATSEP.BAS.IND_1.7.3	Explain security policies and practices for information and data	2	Backup, storing, hacking, confidentiality, copyright
ATSEP.BAS.IND_1.7.4	Describe the possible external interventions which may interrupt or corrupt ATM services	2	Introduction of software viruses, illegal broadcasts, jamming, spoofing
<b>ATSEP.BAS.IND_1.8</b>	<b>Quality Management</b>		
ATSEP.BAS.IND_1.8.1	Explain the need for quality management	2	e.g. ISO, EFQM (European Foundation for Quality Management)
ATSEP.BAS.IND_1.8.2	Explain the need for configuration management	2	Importance for safe operations
<b>ATSEP.BAS.IND_1.9</b>	<b>Safety Management System</b>		
ATSEP.BAS.IND_1.9.1	Explain why there is a need for high-level safety requirements for ATM/ANS activities	2	Safety policy and rules, system safety cases, system safety requirements

## Appendix 1a – ATSEP Basic training – Shared

ATSEP UID (Unique Objective Identifier)	CORPUS	Tax	CONTENT
<b>ATSEP.BAS.IND_1.10</b>	<b>Health and Safety</b>		
ATSEP.BAS.IND_1.10.1	Explain personal safety responsibilities in the work environment	2	Safety statement, first aid, rules about climbing
ATSEP.BAS.IND_1.10.2	Explain potential hazards to health and safety generated by equipment or contained within the work environment	2	e.g. health consequences of electric shock and static discharges, precautions with chemical products (batteries), mechanical hazards (rotating machinery/antennas), toxic materials (beryllium), biological hazards, faulty earthing
ATSEP.BAS.IND_1.10.3	Describe fire safety and first-aid regulations and practices	2	Requirements and rules e.g. standards
ATSEP.BAS.IND_1.10.4	State any applicable legal requirements and safety rules	1	National, international regulations e.g. for working on power supply and/or air conditioning
ATSEP.BAS.IND_1.10.5	Describe the main features and uses of the different types of fire detectors and extinguishers	2	e.g. VESDA, Type A, B, C, D extinguishers