MILITARY AIR TRAFFIC CONTROLLER
INITIAL TRAINING

COVER DOCUMENT

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MILITARY AIR TRAFFIC CONTROLLER WORKING GROUP

DOCUMENT CHANGE RECORD

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STATUS

The Status of the document can take 3 values:

Working Draft: Working copy to develop the proposed version or revision of the document.

Draft: Version to be proposed to the ESMAB Policy by the MATCO Working Group

Approved: Final version approved* by the ESMAB Policy for publication.

EDITION

The Edition value of document will have the following template: **Edition X.YY**:

The **value of X** will change after a **major** revision of the document.

The **value of Y** will change after a **minor** revision of the document.

* It should be noted that the approval by ESMAB Policy is given with the clear understanding that the document is legally non-binding and its potential implementation remains fully a decision to be taken at national level.

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1. INTRODUCTION

(a) Background

At the occasion of the substantial review by EASA of Commission Regulation (EU) 2015/340 on ATCO training and licensing aiming in particular at introducing a mechanism for the conversion of national military ATCO licenses into student ATCO licenses, EDA SES Unit organised in spring 2022 a survey and 2 Workshops on Military ATCO Training and Licensing.

As shown by EDA survey, 94% of the Member States with a Military ANSP are training their ATCOs using as reference Commission Regulation (EU) 340/2015. Due to this strong common ground but also the many similarities in the challenges encountered when trying to preserve the Military dimension of ATCO training, the vast majority of the participants in the Workshops expressed strong interest in engaging in a cooperation on the topic.

(b) Working method

Via a written procedure initiated by a letter from the EDA Chief Executive dated 21 June 2022, the ESMAB Policy confirmed its support for the launch of the cooperation on the topic and 8 Member States expressed interest in this activity and appointed experts to the Working Group being set up initially for a duration of one year (renewable upon Member States agreement) with the objective to develop a non-binding Military ATCO Initial Basic Training composition document to be used for military ATCO training, upon national decision.

The MATCO Working Group was kicked-off on 28 September 2022. Its active participants are from BE, DE, ES, EL, IT, LT and SK and the meetings are facilitated by EDA. The Working Group usually meets in a hybrid format (via Webex and at EDA premises). On some occasions the meeting has been hosted by one of the participating Member States (pMSs) on the site of its Military ATCO Academy. These meetings have proven to be very valuable as they are an opportunity for the experts to visit the schools and get a briefing on how the Military ATCO training is organised in those pMSs.

(c) Main highlights of the military ATCO INITIAL training composition document

The Working Group has developed the Military ATCO initial training composition document by reviewing and enriching the civil equivalent document of Commission Regulation (EU) 2015/340 with specific common military objectives, based on the respective syllabus of the pMSs. In some cases, some of the civil training objectives deemed less relevant to the training of Military ATCOs have been highlighted and their corresponding taxonomy level (level of requirement for students) was adapted.

All the following content comes from EASA AMC and includes the amendments coming from the Commission Implementing Regulation (EU) 2023/893 of 21 April 2023 amending Regulation (EU) 2015/340 updated regulation which was published in the Official Journal of the EU on 4 May 2023.

The resulting work is a very exhaustive document encompassing both civil and military training objectives. It has been an excellent exercise that led to reviewing legal references identified as mandatory content, including ICAO and its links and transpositions in EU regulations, but also the way different States handle military flights and provide Air Navigation Services.

(d) Expected use of the military ATCO INITIAL training composition document

Each MS can decide on the way they want to use this valid document, for instance for improving their national syllabus or for using it as a reference when contracting Civil training organisations in charge of Military ATCO initial training. The Working Group keeps it as a living document in order to take into account lessons learned from implementation or civil evolutions of ATCO training under EASA initiative, following the update procedure adopted by the ESMAB Policy.

The EDA Military INITIAL Training composition documents would meet the objectives of improving military collaboration in the field of ATCO Training: sharing experience, facilitating interoperability and a standard base when providing ATS in joint multinational operations in both complex exercises and real operational missions, etc.

The composition of the Military ATCO Initial Training as presented in this document are the minimum requirements recommended to be implemented by interested military ATCO training organisations. Any Member State might decide to train its military ATCOs giving one or several of the training objectives a higher level of importance hence a higher taxonomy level. Mandatory content should be understood as training content provided in all Member States. Optional content should be understood as content that might be omitted in Member States where this is not applicable.

Despite the fact that this document is legally non-binding, in order to achieve standardisation in the initial training of Military ATCOs, Member States which decided to implement it should apply its content as proposed.

2. STRUCTURE OF THE BASIC AND RATING TRAINING SYLLABI

(a) The basic and rating training syllabi are structured as follows:

(1) The syllabus is divided into subjects, which are divided into topics that are in turn divided into subtopics. This structure serves the definition and classification of the objectives. There can be one or several objectives linked to each subtopic.

(2) Objectives are assigned to a specific topic/subtopic which deals with the knowledge and skills needed to accomplish the related subject.

(3) Subjects, topics and subtopics are contained in Appendices to this document in order to provide the reader with a comprehensive and unique reference document for the basic and each of the rating training courses.

- Composition of initial training - basic training composition;
- Composition of initial training – aerodrome control (ADC) rating training composition;

Training objectives are included in, and form an integral part of, each of the aforementioned document.

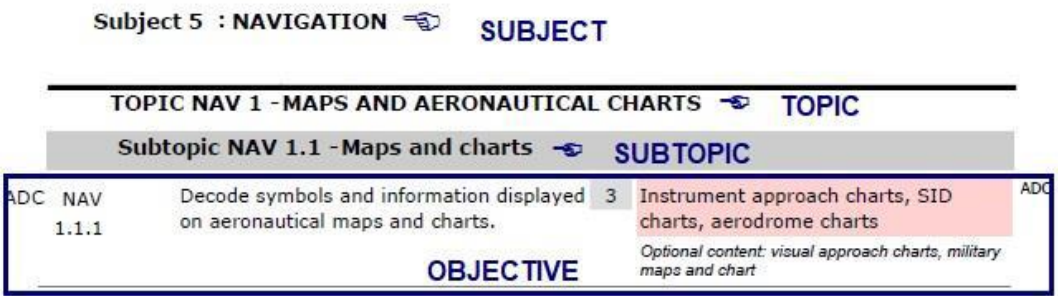

Figure 1: Layout of the syllabus

(b) The following principles may be applied to the development of a training course that is based on any of the syllabi:

(1) The structure of the syllabi and the order of the objectives contained therein is neither intended to convey a pedagogical sequence nor to indicate a relative level of importance.

(2) No objective from the basic training syllabus is repeated as 'a refresher' in the rating training syllabi.

(3) The number of objectives contained within a subtopic does not necessarily signify how long it should take to teach that subtopic. For example, a subtopic containing five relatively straightforward objectives, may take a shorter time to be taught than another subtopic containing two complex objectives.

3. STRUCTURE OF THE OBJECTIVES

(a) An objective consists of three elements:

(1) The corpus, which is a description of the required performance. It always contains an action verb to ensure that the outcome is observable. The action verb is always associated with a defined taxonomy.

(2) The level, which indicates numerically the taxonomy of the action verb.

(3) The content, which may be implicit or explicit. Explicit content is written in the content field, while implicit content is not but, instead, is implied in the corpus of the objective and other elements (syllabus, subject, etc.). Content that is a required part of the objective is written in the red-shaded field. Optional content, written in italics is provided to help training designers develop their training material and may suggest possible reference documents that could be used and/or elaborate on the content with specific examples. With or without explicit content, the objective needs to be covered since the implementation is implied in its corpus (text of the objective) and associated context (Subtopic/Topic/Subject/Rating).

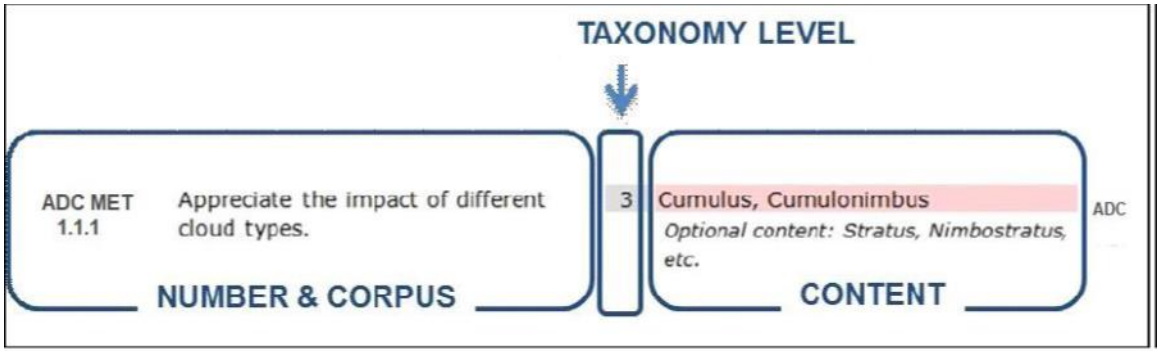

Figure 2: Layout of an objective

4. REPEATED AND COMMON OBJECTIVES

(a) Repeated and common objectives are only applicable to rating training.

(b) To the right of each objective, there is an indication of which other ratings contain this particular objective. If the rating is indicated in red italics, it notifies the reader that the objective(s) is (are) verbatim in each rating; however, the objective numbers are different. This indication is the first step to help training providers identify potential commonalities between the various syllabi. As a second step, training providers must determine, on the level of local implementation, whether the objective is to be regarded as repeated or common.

Subtopic ATM 1.2 - Flight information service (FIS)				
ADC ATM 1.2.1	Describe the information that shall be passed to aircraft by an aerodrome controller.	2	Regulation (EU) 2017/373 *Optional content: ICAO Doc 4444*	ADC
ADC ATM 1.2.2	Provide FIS.	4	Regulation (EU) 2017/373, Regulation (EU) No 923/2012 *Optional content: national documents*	ALL
ADC ATM 1.2.3	Issue appropriate information.	3	Regulation (EU) 2017/373, essential local traffic, traffic information	ADC
ADC ATM 1.2.4	Appreciate the use of ATIS in the provision of flight information service.	3	Regulation (EU) No 923/2012	ALL

Figure 3: Indication of the ratings to which a particular objective applies

3.1 Repeated objectives

All the objectives appearing in a syllabus are implicitly appropriate to this syllabus. As a consequence, objectives may be repeated 'verbatim' in different rating syllabi and nevertheless specify a different performance. The reader always needs to mentally add the sentence 'in this syllabus context' at the end of each objective.

For example, the objective 'use approved phraseology' is repeated (same level, same corpus, same content) in all the syllabi but is different because the context is different in each syllabus (a learner that is able to use approved phraseology for en-route traffic will need additional training before mastering the phraseology in the provision of aerodrome control).

3.2 Common objectives

(a) Common objectives are verbatim the same objectives that appear in more than one rating syllabi in the same context so that they do not need to be taught again in case of combined or successively organised courses.

For example, the objective 'describe the human information-processing model' is common for all the syllabi because the context is non-specific and is, therefore, not determined by the type of rating.

(b) As a general principle, the rating subject 'Human Factors' is identical in each of the rating training syllabi and can be considered as containing common objectives because the context is always the same. This means that the rating training objectives relating to Human Factors need to be taught only once. If a learner acquires an additional rating, that learner would not be required to repeat the Human Factors objectives.

5. ACTION VERBS THAT SUPPORT THE TAXONOMY FOR TRAINING OBJECTIVES

(a) The five taxonomy levels should be understood to have the following levels of complexity:

(1) Action verbs for Level 1

Level 1 — A basic knowledge of the subject. It is the ability to remember essential points, to memorise data and retrieve it.

L1 Verb	Definition	Example
Define	State what it is and what its limits are; state the definition.	Define ATC service.
Draw	Produce a picture, pattern, or diagram.	Draw the block diagram. Draw a holding pattern.
List	Say one after the other.	List the different types of jet engines.
Name	Give the name of objects or procedures.	Name the competent authorities responsible for ATCO licensing.
Quote	Repeat what is written or said.	Quote the ICAO definition of ATC service.
Recognise	To know what it is because you have seen it before.	Recognise the information contained in the different parts of the AIP.
State	Say or write in a formal or definite way.	State the meteorological hazards to aviation.

(2) Action verbs for Level 2

Level 2 — The ability to understand and to discuss the subject matter intelligently to represent and act upon certain objects and events.

L2 Verb	Definition	Example
Characterise	To describe the quality of features in something.	Characterise the main radio navigation techniques based on ground-based systems.
Consider	To think carefully about it.	Consider how the evolution of a situation may have an impact on safety.
Demonstrate	Describe and explain; logically or mathematically prove the truth of a statement.	Demonstrate the importance of good communication in ATC.
Describe	Say what it is like or what happened.	Describe the assessment process.
Differentiate	Show the differences between things.	Differentiate between the different types of airspace.
Explain	Give details about something or describe so that it can be understood.	Explain airspace classification.
Take account of	Take into consideration before deciding.	Take account of the limitations of equipment and systems.

(3) Action verbs for Level 3

Level 3 — A thorough knowledge of the subject and the ability to apply it with accuracy. The ability to make use of the repertoire of knowledge to develop plans and activate them.

L3 Verb	Definition	Example
Act	Carry out, execute.	Act to reduce stress.
Appreciate	To understand a situation and know what is involved in a problem-solving situation, to state a plan without applying it.	Appreciate the need for coordination (the learner says that the coordination will be done and with whom; the learner does not perform the actual coordination).
Assist	Help somebody to do a job by doing part of it.	Assist the pilot.
Calculate	To discover from information you already have by arithmetic; to think about a possible cause of action in order to form an opinion or decide what to do.	Calculate the appropriate levels.
Check	Make sure the information is correct (satisfactory).	Check all relevant documentation before managing traffic.
Choose	Select out of number, decide to do one thing rather than another.	Choose appropriate levels. Choose the appropriate separation methods.
Collect	Assemble, accumulate, bring or come together.	Collect appropriate information relevant to the situation.
Conduct	Organise and carry out.	Conduct level changes.
Confirm	Establish more firmly, corroborate.	Confirm sequence order.
Decode	Turn into ordinary writing, decipher.	Decode the content of weather reports and forecasts.
Encode	Put into code or cipher.	Encode and decode flight plans (including supplementary information).
Estimate	Form an approximate judgement of a number, form an opinion.	Estimate the heading for a new track and the distance to the next way point.
Execute	Perform action.	Execute selected plan in a timely manner.
Extract	Copy out, make extracts from, find, deduce.	Extract pertinent data from relevant sources to produce a flight progress display.
Identify	Associate oneself inseparably with, establish the identity.	Identify potential or actual abnormal and emergency situations. Identify aircraft.
Inform	Tell, give facts or information.	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management

Initiate	Begin, set going, originate.	Initiate appropriate coordination.
Input	Enter in the system.	Input data.
Issue	Send forth, publish.	Issue appropriate ATC clearances. Issue appropriate information concerning the position of conflicting traffic.
Maintain	Cause or enable to continue.	Maintain situational awareness by monitoring traffic.
Measure	Ascertain extent or quality of (thing) by comparison with fixed unit or with object of known size.	Measure distance on a map.
Monitor	Keep under observation.	Monitor the technical integrity of the controller working position.
Notify	Make known, announce, report.	Notify runway in use.
Obtain	Acquire easily without research.	Obtain meteorological information.
Operate	Conduct work on equipment.	Operate the equipment of the controller working position.
Pass	Move, cause to go, transmit.	Pass essential traffic information without delay.
Perform	Carry into effect, go through, execute.	Perform communication effectively.
Process	To put through the steps of a prescribed procedure.	Process pertinent data on data displays.
Record	Register, set down for remembrance or reference.	Record information by writing effectively.
Relay	Receive and pass on, broadcast.	Relay meteorological information.
Respond	Provide an answer, perform answering or corresponding action.	Respond to loss/doubt concerning identification. Respond to distress and urgency messages and signals.
Scan	Continuously observe rapidly, sequentially and selectively to extract relevant data.	Scan data display.
Transfer	Hand over.	Transfer information to the relieving controller.
Update	Refresh, bring up to date.	Update the data display to accurately reflect the traffic situation.
Use	Employ for a purpose, handle as instrument, put into operation.	Use approved phraseology. Use the available means for coordination.
Verify	Establish truth of.	Verify that the settings of the working position are appropriate.

(4) Action verbs for Level 4

Level 4 — Ability to establish a line of action within a unit of known applications following the correct chronology and the adequate method to resolve a problematic situation. This involves the integration of known applications in a familiar situation.

L4 Verb	Definition	Example
Acquire	Gain by oneself and for oneself, obtain after research.	Acquire relevant aeronautical information.
Adjust	Change to a new position, value or setting.	Adjust the surveillance system display.
Allocate	Assign, devote.	Allocate levels according to altimetry data.
Analyse	Examine minutely the constitution of.	Analyse examples of pilot–controller communication for effectiveness. Analyse the information provided by the ATS surveillance system.
Assign	Designate or set an element.	Assign codes.
Coordinate	Negotiate with others in order to work together effectively.	Coordinate runway in use. Coordinate when providing FIS.
Comply	Act in accordance with.	Comply with rules.
Delegate	Commit authority to somebody.	Delegate separation to pilots in the case of aircraft executing successive visual approaches.
Detect	Discover existence of.	Detect conflicts in time for appropriate resolution.
Ensure	Make safe, make certain.	Ensure the agreed course of action is carried out.
Expedite	Assist the progress of, do speedily.	Expedite traffic.
Integrate	Combine into a whole, complete by addition of parts.	Integrate appropriate ATC clearances in control service.
Manage	Handle, conduct, maintain control over something, be in charge of.	Manage traffic on the manoeuvring area. Manage traffic in accordance with a change to operational procedures.
Organise	Give orderly structure to, frame and put into working order.	Organise pertinent data on data displays. Organise priority of actions.
Predict	Forecast.	Predict positions of aircraft in the aerodrome traffic and taxi circuits.
Provide	Supply, furnish.	Provide vectoring. Provide FIS.
Relate	Establish link with.	Relate a pressure setting to an altitude.

(5) Action verbs for Level 5

Level 5 — Ability to analyse new situation in order to elaborate and apply one or other relevant strategy to solve a complex problem. The defining feature is that the situation is qualitatively different from those previously met, requiring judgement and evaluation of options.

L5 Verb	Definition	Example
Assess	Estimate value or difficulty, evaluate, appraise.	Assess workload.
Balance	Weigh (a question, two arguments, etc., against each other).	Balance the workload against personal capacity.
Discuss	Investigate by reasoning or argument.	Discuss the impact of regulation.
Evaluate	Ascertain amount of, find numerical expression for.	Evaluate the necessary information to be provided to pilots in need of navigational assistance.
Interpret	To decide on something's meaning or significance when there is a choice.	Interpret operational information.
Optimise	To make optimal; get the most out of; use best; modify to achieve maximum efficiency.	Optimise the use of support tools.
Resolve	Solve, clear up, settle.	Resolve conflict.
Select	Pick out as best or most suitable.	Select the runway in use.
Theorise	Extract general principles from a particular experience.	Theorise the resolution of conflict between a slow and a fast aircraft.
Validate	Make valid, ratify, prove valid, show or confirm the validity of something.	Validate one radar vectoring option to expedite the traffic.

(b) Application of taxonomy levels to practically based objectives

(1) Objectives at taxonomy level 3 or higher, which are of a practical nature, related to all subjects except ATM, may be achieved by any suitable type of practical training methods, e.g., hands-on, plotting on charts, etc.

(2) Objectives at taxonomy level 3 or higher, for the ATM subject (basic and rating), are practical by nature and require the integration of several knowledge areas and skills at the same time, e.g. vectoring of an aircraft requires knowledge and skills in the areas of radiotelephony, aircraft performance, navigation and radar theory. Therefore, ATM level 3 objectives should be achieved through the use of a part-task trainer or a simulator.

(3) ATM level 4 objectives should be achieved for the most part through the use of a simulator. A part-task trainer, which presents operational situations at an enforced pace, may be used to achieve some ATM level 4 objectives.

(4) ATM level 5 objectives should be achieved through the use of a simulator.

6. LIST OF ABBREVIATIONS

For the purposes of:

(a) Composition of initial training — BASIC TRAINING;

(b) Composition of initial training — AERODROME CONTROL RATING TRAINING;

the following abbreviations apply:

Abbreviation	Stands for / Means
A-RNP	Advanced Required Navigation Performance
A/B (Type)	A and B type approaches (classifications)
ABAS	Aircraft-based Augmentation System
ABES	Abnormal and Emergency Situations (Subject)
ACARS	Aircraft Communications Addressing and Reporting System
ACAS	Airborne Collision Avoidance System
ACC	Area Control Centre
ACFTB	Aircraft — Basic Training (subject)
ACFT	Aircraft (subject)
ACN	Aircraft Classification Number
ACP	Area Control Procedural Rating
ACS	Area Control Surveillance Rating
ADF	Automatic Direction-Finding System
ADC	Aerodrome Control
ADI	Aerodrome Control Instrument
ADS	Automatic Dependent Surveillance
ADS-B	Automatic Dependent Surveillance — Broadcast
ADS-C	Automatic Dependent Surveillance — Contract
ADV	Aerodrome Control Visual Rating
ADVS	Advisory Service
AEA	Association of European Airlines
AFIL	Air-Filed Flight Plan
AFTN	Aeronautical Fixed Telecommunication Network
AGA	Aerodromes
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication

AIRAC	Aeronautical Information Regulation and Control
AIRAC SUP	AIRAC Supplement
AIREP	Air-Report
AIRMET	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations
AIS	Aeronautical Information Service
ALRS	Alerting Service
AMAN	Arrival Manager
AMC	Acceptable Means of Compliance
ANS	Air Navigation Services
AP/FD	Autopilot/Flight Director
APM	Approach Path Monitor
APP	Approach Control/Centre/Procedural Rating
APS	Approach Control Surveillance Rating
APV	Approach Procedure with Vertical guidance
APW	Area Proximity Warning
ASDA	Accelerate Stop Distance Available
ASM	Airspace Management
ASMGCS	Advanced Surface Movement Guidance and Control Systems
ATC	Air Traffic Control
ATCEUC	Air Traffic Controllers European Unions Coordination
ATCO	Air Traffic Controller
ATCS	Air Traffic Control Service
ATFCM	Air Traffic Flow and Capacity Management
ATFM	Air Traffic Flow Management
ATIS	Automatic Terminal Information Service
ATM	Air Traffic Management
ATMB	Air Traffic Management — Basic Training (subject)
ATS	Air Traffic Services
ATZ	Aerodrome Traffic Zone
AVASI	Advanced Visual Approach Slope Indicator
Beidou	Chinese navigation satellite system
BIRDTAM	Bird hazard NOTAM (NOTAM reporting bird hazard)
CANSO	Civil Air Navigation Services Organisation
CAT	Clear-Air Turbulence

CBA	Cross-Border Area
CBT	Computer-Based Training
CCO	Continuous Climb Operations
CDO	Continuous Descent Operations
CDR	Conditional Route
CEM	Collaborative Environmental Management
CISM	Critical Incident Stress Management
CPDLC	Controller–Pilot Data Link Communications
CPL	Current Flight Plan
CWP	Controller Working Position
DA	Decision Altitude
DFTI	Distance from Touchdown Indicator
DH	Decision Height
DMAN	Departure Manager
DME	Distance-Measuring Equipment
Doc	Document
EDA	European Defence Agency
EASA	European Union Aviation Safety Agency
EAT	Expected Approach Time
EATMP	European Air Traffic Management Programme
EC	European Commission
ECAC	European Civil Aviation Conference
EDA	European Defence Agency
EET	Estimated Elapsed Time
EFIS	Electronic Flight Instrument System
EGNOS	European Geostationary Navigation Overlay Service
EGPWS	Enhanced Ground Proximity Warning System
EPU	Emergency Power Unit
EQPS	Equipment and Systems (subject)
EQPSB	Equipment and Systems — Basic Training (subject)
ETF	European Transport Workers' Federation
EU	European Union
EU ETS	European Union Emissions Trading Scheme
EUROCONTROL	European Organisation for the Safety of Air Navigation

FA	Fix to Altitude
FAB	Functional Airspace Block
FAF	Final Approach Fix
FAP	Final Approach Point
FDPS	Flight Data Processing System
FIR	Flight Information Region
FIS	Flight Information Service
FMS	Flight Management System
FPB	Flight Progress Board
FPL	Flight Plan or Filed Flight Plan
FRA	Free-Route Airspace
FRT	Fixed Radius Transition
FTE	Flight Technical Error
FUA	Flexible Use of Airspace
Galileo	European satellite navigation system
GCA	Ground-Controlled Approach
GBAS	Ground-Based Augmentation System
GLONASS	Global Orbiting Navigation Satellite System
GNSS	Global Navigation Satellite System
GP	Glide Path
GPS	Global Positioning System
GPWS	Ground Proximity Warning System
HF	High Frequency
HFACS	Human Factors Analysis & Classification System
HUM	Human Factors (subject)
HUMB	Human Factors – Basic Training (subject)
IACA	International Air Carrier Association
IAF	Initial Approach Fix
IAOPA	International Council of Aircraft Owner and Pilot Associations
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IF	Intermediate Approach Fix
IFALPA	International Federation of Airline Pilots' Associations
IFATCA	International Federation of Air Traffic Controllers' Associations

IFPS	Integrated Initial Flight Plan Processing System
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IMC	Instrument Meteorological Conditions
INS	Inertial Navigation System
INTR	Introduction to the course (subject)
INTRB	Introduction to the course — Basic Training (subject)
IRS	Inertial Reference System
IRVR	Instrument Runway Visual Range
ISA	International Standard Atmosphere
ITU	International Telecommunications Union
JP 4	Jet Propellant 4
JP 8	Jet Propellant 8
LAM	Local Area Multilateration
LAW	Aviation Law (subject)
LAWB	Aviation Law — Basic Training (subject)
LDA	Landing Distance Available
LOA	Letter of Agreement
LOC	Localiser
LOPs	Local Operating Procedures
LPV	Localiser Performance with Vertical guidance
MAPt	Missed Approach Point
MCMF	Multi-Constellation, Multi-Frequency
MDA	Minimum Descent Altitude
MDH	Minimum Descent Height
MET	Meteorology
METAR	Meteorological Aviation Routine Weather Report
METB	Meteorology — Basic Training (subject)
MLAT	Multilateration
Mode A	SSR identification code
Mode C	SSR Mode C (pronounced: Mode Charlie)
Mode S	Mode Select
MONA	Monitoring Aids
MSAW	Minimum Safe Altitude Warning

MTCD	Medium-Term Conflict Detection
MTI	Moving Target Indication
MWO	Meteorological Watch Office
NATO	North Atlantic Treaty Organization
NAV	Navigation (subject)
NAVAID	Navigation(al) Aid
NAVB	Navigation — Basic Training (subject)
NDB	Non-Directional Beacon
No.	Number
NOTAM	Notice to Airmen
NPA	Non-Precision Approach
NSE	Navigation System Error
OCA	Obstacle Clearance Altitude
OCH	Obstacle Clearance Height
OJT	On-the-Job Training
OLDI	On-Line Data Interchange
PA	Precision Approach
PANS	Procedures for Air Navigation Services
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PBN	Performance-Based Navigation
PCN	Pavement Classification Number
PCP	Pilot Common Project
PDE	Path Definition Error
PEAR (model)	People who do the job/Environment in which they work/Actions they perform/Resources necessary to complete the job
PEN	Professional Environment (subject)
PENB	Professional Environment — Basic Training (subject)
PSR	Primary Surveillance Radar
PTP	Part-Time Practice
QDM	Inbound magnetic bearing to the station
QDR	Outbound magnetic bearing from the station
QFE	Atmospheric pressure at aerodrome elevation
QNH	Atmospheric pressure at mean sea level
QRA	Quick Reaction Alert

QTF	The position of the transmitting station according to the bearings taken by the D/F station
RA	Resolution Advisory (TCAS)
RAIM	Receiver Autonomous Integrity Monitoring
RCC	Rescue Coordination Centre
RF	Radius to Fix
RIS	Radar Information Service
RNAV	Area Navigation
RNP	Required Navigation Performance
RNP APCH	Required Navigation Performance Approach
RNP AR APCH	Required Navigation Performance Authorisation Required Approach
RNP (AR) DEP	Required Navigation Performance Authorisation Required Departure
ROC	Rate of Climb
RPAS	Remotely Piloted Aircraft System
RTF	Radiotelephony
RVR	Runway Visual Range
RVSM	Reduced Vertical Separation Minimum
SADIS	Satellite Distribution of World Area Forecast System
SAR	Search and Rescue
SARPs	Standards and Recommended Practices (ICAO)
SBAS	Satellite-Based Augmentation System
SDPS	Surveillance Data Processing System
SELCAL	Selective Calling
SES	Single European Sky
SHELL (model)	Software, Hardware, Environment, Live ware, Live ware Model
SFO	Simulated Flameout
SIB	Safety Information Bulletin
SID	Standard Instrument Departure (Route)
SIGMET	Significant Meteorological Information
SMAN	Surface Management
SMR	Surface Movement Radar
SNOWTAM	NOTAM on SNOW conditions
SOPs	Standard Operating Procedures

SPECI	Aviation Selected Special Weather Report
SSR	Secondary Surveillance Radar
STANAGs	NATO Standardization Agreement
STAR	Standard Instrument Arrival (Route)
STCA	Short-Term Conflict Alert
SVFR	Special Visual Flight Rules
TA	Traffic Alert (TCAS)
TACAN	UHF Tactical Air Navigation Aid
TAF	Terminal Area (Aerodrome) Forecast
TAWS	Terrain Awareness and Warning System
TBO	Trajectory-Based Operations
TCAC	Tropical Cyclone Advisory Centre
TCAS	Traffic Alert and Collision Avoidance System
TODA	Take-Off Distance Available
TORA	Take-Off Run Available
TRA	Temporary Reserved Airspace or Temporary Reserved Area
TRM	Team Resource Management
TSA	Temporary Segregated Area
TSE	Total System Error
TWR	Tower Control Unit (Aerodrome Control Tower)
UAS	Unmanned Aircraft System
UDF	Ultra High Frequency Direction Finder
UHF	Ultra High Frequency
UTC	Coordinated Universal Time
VAAC	Volcanic Ash Advisory Centre
VASI	Visual Approach Slope Indicator
VDF	Very High Frequency Direction Finder
VFR	Visual Flight Rules
VHF	Very High Frequency

VMC	Visual Meteorological Conditions
VNAV	Vertical Navigation
VOLMET	Routine Weather Reports Broadcast on VHF
VOR	VHF Omni-directional Radio Range
WAFC	World Area Forecast Centre
WAFS	World Area Forecast System
WAM	Wide Area Multilateration
WGS-84	World Geodetic System 84
WMO	World Meteorological Organization

APPENDIX A: COMPOSITION OF INITIAL TRAINING — BASIC TRAINING — TRAINING OBJECTIVES

APPENDIX B: COMPOSITION OF INITIAL TRAINING — AERODROME CONTROL RATING (ADC) TRAINING —TRAINING OBJECTIVES