►This RA has been substantially re-written; for clarity, no change marks are presented – please read the RA in its entirety◄

RA 2375 – Qualification, Approval and Use of Aircrew Training Devices

Rationale

Aircrew Training Devices (ATD) are used across the Defence Air Environment as preparation, or substitution, for live flying. ATDs that misrepresent the real behaviour or performance or have significant material differences to the associated Air System could jeopardize the safe operation of the live Air System by Aircrew, and thereby increase Risk to Life (RtL). This RA requires Senior Responsible Owners (SRO), Aviation Duty Holders (ADH) and Accountable Managers (Military Flying) (AM(MF)) to ensure that ATDs within their Area of Responsibility (AoR) are appropriately qualified, fit for their approved use and either, ensure that their use does not jeopardize the safe operation of the live Air System, or understand how it could. Qualification and Approval of ATDs allows deficiencies to be understood and mitigated, by influencing the broader training design (such as amendments to the training objectives achieved in the ATD and the broader live versus synthetic balance).

Contents

Definitions

Definitions Relevant to this RA

1. Simulator descriptors intentionally reflect civil terminology, amended to suit military application where appropriate, to allow industry partners to apply recognized civil standards where military standards are not codified or readily available.

2. **Aircrew Training Device.** A device used for Aircrew practical training which can support claims in the Air System Safety Case (ASSC)[1] which relate to Aircrew flying behaviours, qualifications, currency, or Competency. Such devices are categorized as either a Flight Simulation Training Device (FSTD) or Other Training Device (OTD).

3. **Flight Simulation Training Device (FSTD)**. Is a device which can provide Aircrew flying training credit, facilitate flying currency requirements, support claims about Aircrew behaviours in the ASSC or has the potential to provide negative training[2]. FSTD may be categorized as a Full Flight Simulator (FFS), a Flight Training Device (FTD) or a Flight and Navigation Procedures Trainer (FNPT).

   a. **Full Flight Simulator (FFS)**. Means a physical, true-to-life replica of a specific Air Systems flight deck or Remote Pilot Station (RPS), including the assemblage of all equipment and computer programmes necessary to represent the Air System in surface and flight operations, a visual System[3] providing an out of the flight deck / cockpit view and a force cueing motion System. FFS are qualified and approved as accurately replicating the crew environment and Air System performance of a single Aircraft type, with the most stringent Validation requirements. Remotely Piloted Aircraft System (RPAS) FFS only require a force queuing motion System where necessary to emulate performance of the flying controls within the RPS, or where the RPS is itself subject to motion (airborne, seaborne, or within a moving ground vehicle).

   b. **Flight Training Device (FTD)**. Means a physical replica of a specific Air Systems instruments, equipment, panels, and controls in an open flight deck / RPS / other crew station area or an enclosed flight deck / RPS / other crew

[1] Refer to RA 1205 – Air System Safety Cases.
[2] Where training devices are used for mission rehearsal, or other training not relating primarily to the safe conduct of flight, SROs / ADH / AM(MF) need to consider whether there is any Risk of transfer of negative training that could compromise claims in the ASSC.
[3] Visual Systems may include Augmented or Virtual Reality (AR / VR) Systems, subject to the same qualification and approval criteria as the overall ATD. This is also applicable when the AR / VR System is integrated to a live Air System.

Definitions

station, including the assemblage of equipment and computer software programmes necessary to represent the Air System in surface and flight operations to the extent of the Systems installed in the device. It does not require a force cueing motion or visual System. FTD are qualified and approved as accurately replicating performance and behaviour of a single Aircraft type but may not fully represent all Aircraft Systems. A visual System[3] (depicting the external environment) is not necessary, but if fitted must meet Validation criteria agreed by the Duty Holder or AM(MF) as acceptable for FFS.

c. **Flight and Navigation Procedures Trainer (FNPT)**. Means a training device which represents the flight deck / RPS or other crew station, including the assemblage of equipment and computer programmes necessary to represent an Air System's in-flight operations to the extent that the Systems represented appear to function as they would in the live Air System. Where civil standards have been used to aid Qualification any reference to a flight deck or cockpit is also applicable to another crew workstation. An FNPT may, or may not, be linked to an FFS or FTD for whole crew training. FNPT are qualified and approved to represent the generic environment and performance of a class of Aircraft, although the design itself may depict a specific type. Simulator performance criteria may be representative of a class of Aircraft (rather than validated as accurate to type as would be required for FFS or FTD).

4. **Other Training Device (OTD)**. Means an ATD other than an FSTD which facilitates flying training without representing flight characteristics or where a complete flight deck, RPS or Mission Crew Trainer environment is not necessary. OTD are not FSTD but, if they support claims in the ASSC (in accordance with (iaw) paragraph 2), or have the potential to provide negative training[2], then compliance with RA 2375 is required.

5. **Qualification Test Guide (QTG)**. Means a template document describing the series of functional tests that prove performance, handling qualities and synthetic environment of an ATD, including mission Systems, are within prescribed limits and that all applicable requirements have been met. The QTG includes both the flight data from the Air System and the acceptable criteria from an agreed Certification standard. The QTG is part of a wider set of compliance demonstration documentation (see Qualification Statement and release for training) designed to demonstrate all aspects of the device meet requirements.

6. **Master QTG (MQTG)**. The MQTG is a documented process which demonstrates that the performance, handling qualities and synthetic environment of an individual ATD (as installed in a given location), including mission Systems, are within the prescribed limits described in the QTG. It may refer to computer based tests designed into the ATD that support the MQTG output. It is derived from the QTG and records the performance of the ATD when qualified and approved. It may also provide a reduced minimum set of objective and subjective tests to assure continued performance of the ATD (see Acceptable Means of Compliance (AMC) for suitable management system).

7. **Qualification Statement (QS)**. Means an overarching statement developed, managed, and owned by the SRO, Operating Duty Holder (ODH) or AM(MF) on completion of the Qualification Process detailed at paragraph 10. The QS records the training for which the ATD may be used and any limitations. The QS explains the Certification standard agreed between the SRO and ODH and references the QTG against which the ATD has been assessed.

8. **ATD Operator**. Means the organization responsible for the provision of the ATD. Responsibilities may include availability, Maintenance, and testing. An ATD Operator may be different to the original manufacturer and any third party that provides instructional services.

Regulation 2375(1)

Qualification of Aircrew Training Devices

2375(1) The SRO[4] **shall** ensure that the ATD[5] within their AoR are Qualified for their intended use.

Acceptable Means of Compliance 2375(1)

Qualification of Aircrew Training Devices

9. The SRO **should** own, develop, and manage a QS for each ATD within their AoR:

a. Each QS **should** have a single owner at any one time.

b. For new Air Systems that require an ATD, the SRO **should** own the QS until transfer of the device to the ODH or AM(MF)[6].

c. Transfer from the SRO to ODH or AM(MF) **should** be before any routine In-Service employment of the ATD. Where the ATD is being used to train ahead of Air System delivery the SRO may retain ownership of the QS until the Air System is accepted into Service.

10. The QS **should** be produced on completion of the Qualification Process detailed below, which is also depicted pictorially at Annex A.

a. During the procurement process the SRO **should:**

(1) Define the category of device required.

(2) Define the intended use of the device, including any specific military or training tasks that may be performed in addition to, or are different to, that of an equivalent type of civil Air System.

(3) Define the desired training output and what level of fidelity is required for each training objective (with reference to a Certification specification – see Guidance Material in paragraph 23), including any environmental considerations.

(4) Ensure that the Air System or Commodity Delivery Team Leader (DTL) contracts the Design Organization to provide flight data[7], and the device manufacturer to use it together with available flight test data, to achieve the required fidelity levels.

(5) Assure that the Air System or Commodity DTL contracts the device manufacturer to apply the appropriate Design Standards for ATD[8].

(6) Ensure that a QTG is produced by the ATD Operator, in consultation with Test and Evaluation (T&E) Suitably Qualified and Experienced Person(s) (SQEP), that demonstrates compliance against the performance and tolerance criteria that has been agreed by the SRO. This **should** include any objective and subjective tests that are required to evaluate specific military tasks and capabilities.

b. The QTG **should** be designed and used to assess the procured device against the procurement requirement. It **should:**

(1) Be provided to the independent evaluating T&E SQEP to form part of their evaluation and support their statement of material differences and RtL assessment.

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[4] Where an SRO is not appointed, the ODH / AM(MF), or In-Service Capability Manager on behalf of the ODH / AM(MF), **shall** fulfil this responsibility, eg In-Service Modification where an SRO is not appointed or Contractor Flying Approved Organization Scheme (CFAOS) organizations.

[5] Where multiple devices of the same specification exist, they will need to be individually assessed and qualified.

[6] While the SRO will only own one QS, following transfer there may be more than one QS for a specific ATD, ie where that ATD is used by more than one ADH / AM(MF). In such cases the SRO will transfer the same QS to all ADH / AM(MF)s.

[7] RA 5810 – Military Type Certificate (MRP 21 Subpart B) requires that where Operational Suitability Data, which includes Air System validation source data to support the objective qualification of simulator(s), is available it **should** be included as part of the Military Type Certification or Changes in Type Design.

[8] International Civil Aviation Organization (ICAO), Federal Aviation Administration (FAA), European Aviation Safety Agency (EASA) or an equivalent agreed by the MAA.

Acceptable Means of Compliance 2375(1)

(2) Prescribe desired performance criteria and tolerances for assessment (based on the Certification specification referenced iaw paragraph 10.a.(3)).

c. Following the evaluation of the device using the QTG, three Artefacts[9] **should** be produced:

(1) A T&E report that includes the relevant material differences between the device and the live Air System, with an assessment of associated RtL that may occur in the live Air System.

(2) An MQTG that **should** be used as a baseline for future evaluations of the individual device.

(3) A recommendation for release to training by an Aircrew Instructor (AI) who is current on type and deemed SQEP by the ADH / AM(MF), underpinning what the device is and is not suitable to be used for, including any possible transfer of training Risk to the live Air System. This **should** be based on a review of the T&E report and identify and explain any training objectives identified in the procurement requirement (see AMC paragraph 10.a.(3)) for which the ATD is not suitable - and explain how this is mitigated (such as through adjustment to training design).

d. After review of the T&E report, MQTG and recommendation for release to training - the SRO **should** produce a definitive QS[10] which includes, as a minimum:

(1) The category of the device.

(2) The training objectives (TO) the device can and cannot support, including the currency limitations, qualifications, ratings, and supervisory checks that may be conducted in the device. This **should** be based on the recommendation for release to training (see AMC paragraph 10.c.(3)). Suitability of the device for the TOs **should** be assessed as effective, limited, or negative.

(3) The implications of any environmental misrepresentation and the environmental conditions in which the device may be used.

(4) Any relevant material differences between the device and the Air System. These may be reproduced in documentation that is available to Aircrew and training staff.

(5) Any areas where there is a reasonable prospect of negative training occurring, specifying any associated limitations or exceptions and where RtL may be increased in the live Air System as a result.

11. For a device that has been procured through Foreign Military Sales the SRO **should** ensure that an independent T&E SQEP is able to observe, where possible, and validate the T&E assessment conducted by the foreign military provider to enable an initial QS to be produced. If not possible or evidence gaps exist, the SRO **should** develop a plan, in consultation with independent T&E Aircrew[11], to gather the evidence required to support a full QS.

12. The initial assessment **should** be conducted by appropriately qualified T&E Aircrew[11] where accurate handling qualities, Quality of the mission System representation, synthetic environment or Air System performance and operation are material to the intended usage.

13. A device **should** be re-qualified following an expansion of the intended use, or a Modification to the device, which might have affected the accurate handling qualities, Quality of the mission System representation, synthetic environment, or Air System performance. This re-qualification **should** be conducted by T&E Aircrew[11].

[9] These artefacts **should** be maintained and updated, as required, throughout the life of the device.
[10] A suggested template for a Qualification Statement can be found on the MAA website.
[11] Refer to RA 2370 – Test and Evaluation.

Acceptable Means of Compliance 2375(1)

14. Where the representation of the operational performance of non-Flight Safety critical mission Systems is material to the intended usage, qualification of the device **should** be conducted by personnel deemed SQEP by the SRO[12].

15. An appropriate SQEP stakeholder group, which includes T&E Aircrew[11], **should** be established where unique and emerging technologies are involved and there is no end user expertise.

16. Qualified ATDs that are not designed by the manufacturer to be mobile **should** be requalified if they are moved, by validating the MQTG against pre-move data. If this Validation fails, the full qualification process in AMC paragraph 10 **should** be followed, using existing data where valid. The process **should** consider the device performance and the training environment when producing the recommendation for release to training.

17. Where an AI is expected to manage the Instructor Operating Station (IOS), whilst simultaneously monitoring the trainee, an assessment of the IOS functionality **should** be made against any impact on the supervision and training Risk.

18. Where a commercially Contracted civil Air System ATD is used to support a live Air System within their AoR the SRO **should** produce a QS based on the device's civil Qualification certificate. Unless the conditions of paragraph 19 are met, this **should** be supported by a T&E assessment of the device's suitability for military use. Whilst it may be the same type of Air System there may be significant material differences or intended use between the civil ATD and the Air System which **should** be quantified, assessed, and recorded (see AMC paragraph 10.c.(1)). In these circumstances the civil Qualification certificate **should** be used together with the T&E assessment to produce the recommendation for release to training and QS required by this RA (see AMC paragraph 10.c.(3)).

19. Where a civil ATD certified to level D, which simulates a type not on the Military Aircraft Register (MAR), is used to support currency on multiple types including Air Systems on the MAR, the SRO **should**:

a. Ensure the ATD's use remains within the scope of the FSTD Data Sheet.

b. Evidence why there is no potential for transfer of negative training to MAR Aircraft.

c. Produce a QS based on the ATD's civil Qualification Certificate. The level D Certification can be taken as the recommendation for release to training.

20. Where devices can be network linked, they **should** be assessed both independently and when linked. Where differences in performance or use exist, they **should** be included in the QS.

21. The ADH / AM(MF) **should** ensure that the ATD Operator:

a. Progressively tests the ATD against the Master QTG over a rolling 12 month period to identify any degradation in performance between annual Approvals.

b. Can demonstrate they have a suitable management system to enable compliance with this RA.

22. The ADH / AM(MF) **should** ensure that Modifications to live Air System within their AoR are communicated to the Type Airworthiness Authority[13] and / or Commodity DTL, and that Configuration differences between the live Air System and the ATD are identified and managed, quantifying any Risk posed by the differences.

[12] Considered on a case-by-case basis, eg tactical mission Systems may be more appropriately evaluated by an Operational Evaluation Unit or specialized role mission equipment may require end user SQEP advice during evaluation.
[13] Or Type Airworthiness Manager, if appropriate iaw RA 1163 – Air Safety Governance Arrangements for Special Case Flying Air System.

Guidance Material 2375(1)

Qualification of Aircrew Training Devices

23. EASA Certification Specifications (CS) for Aeroplane Flight Simulation Training Devices (CS-FSTD(A)) or Helicopter Flight Simulation Training Devices (CS-FSTD(H))[14], detail the civil legal and regulatory requirements for civil FSTD qualification; other equivalent civil CS are also available. These documents are derived from ICAO Doc 9625 Volume 1 and Volume 2 respectively, which provide a structured means of determining qualification criteria according to training requirement. These specifications may assist the SRO to determine the category of ATD and the qualifications, ratings and training output that can be conducted in the ATD. These documents provide guidance on the construction of a QTG and fidelity levels. However, the guidance is based on civil Air Systems, designed to conduct civil flying tasks and these may not fully satisfy military usage. Therefore, specific military tasks and capabilities may need to be included in the device QTG, such as Night Vision Device visual Systems, and acceptance criteria and tolerances adjusted to suit military usage.

24. Commercially contracted ATD that are level D certified CAA / FAA / EASA ATDs will have been subject to rigorous Assurance. However, when they are used for Aircrew training and currency for Air Systems on the MAR, there may be variation in the capabilities and fidelity of ATD, so SROs need to assure themselves that the differences from the Air System and its intended operation are understood and reflected in the Approval for training.

25. Where a Training Service Provider has been Contracted to provide end to end training requirements set by the SRO it is recognized that this may include the procurement and employment of one or more ATD. In this situation the SRO will still be the owner of the QS iaw paragraph 7 and 9, but the development and management of the QS may be the Responsibility of the Contracted Training Service Provider, subject to agreement by the SRO.

26. The following could be used to describe the qualifications, rating and types of training that may be conducted in an ATD and assist with the creation of a matrix of training objectives to be evaluated:

a. Formal Training Statement (comprising training objectives as they relate to Role Performance Standards) for the following Aircrew Qualifications:

(1) Initial Aircrew Qualification[15].

(2) Certificate of Qualification on Type (CQT)[16].

(3) Certificates of Competence[16].

(4) Instrument Rating (IR)[17].

(5) AI Training Requirements[18].

27. Where CS-FSTD(A/H), ICAO 9625 Vol 1/2 or other civil specifications do not provide sufficient guidance for assessing the fidelity of military devices the following considerations may be considered:

a. Handling characteristics throughout the flight envelope, including ground handling.

b. Flight model performance characteristics throughout the flight envelope.

c. Mission realism, including specific military role manoeuvres and tasks.

d. Accuracy of cockpit layout and Structure.

e. Accuracy of whole crew environment.

[14] CS-FSTD(A) is derived from ICAO Doc 9625 Volume 1, Manual of Criteria for the Qualification of FSTD — Aeroplanes and CS-FSTD(H) is derived from ICAO Doc 9625 Volume 2, Manual of Criteria for the Qualification of FSTD — Helicopters which could also be used to assist the qualification of an FSTD. Where the term 'cockpit representation' is used, this is equally applicable to mission Systems and mission workstations.
[15] Refer to RA 2101 – Aircrew Qualifications.
[16] Refer to RA 2102 – Aircrew Competence in Role.
[17] Refer to RA 2120 – Pilots' Instrument Rating Scheme.
[18] Refer to RA 2125 – Aircrew Instructor Training.

Guidance Material 2375(1)

f. Realistic Systems architecture (eg software menus etc).

g. Representative malfunctions, including isolated and compound degraded modes.

h. Representative visuals, sound, and motion cues.

i. Environmental characteristics to include Air Traffic Control, navigation, atmosphere, weather, Aerodromes, terrain, threats, and external players.

j. IOS operator and System interaction capabilities.

k. Linked capability or formation with entity / other ATD.

l. Mission planning, briefing and debriefing facilities.

m. Accuracy of sensor System simulations to be used for provision of Flight Safety critical activities such as Aircraft guidance.

n. Fidelity of Systems used to support weapon targeting.

28. There are several acceptable methodologies that could be used to determine the required fidelity level for specific training objectives[19]. These include, but not exclusively, ICAO 9625 Vol 1/2 and the Liverpool Rating Scale for Subjective Testing of Simulator Fidelity. Based on a modified version of the ICAO 9625 Vol 1/2 fidelity levels could be applied against each training objective, see Annex B for greater detail:

a. None or Not Required (N).

b. Generic (G).

c. Representative (R).

d. Specific (S).

29. CS-FSTD(A/H), ICAO 9625 Vol 1/2 or other civil specifications could be used to determine the statements of compliance and testing requirements for the ATD when constructing the QTG.

30. Relevant material differences could be extensive so may be referenced in the QS but recorded in an F700[20] style document, which will be familiar to Aircrew and training staff, for the device. Acceptable Deferred Faults could also be recorded and tracked with this document.

Regulation 2375(2)

Approval of Aircrew Training Devices

2375(2) The ADH and AM(MF) **shall** approve the use of the ATD within their AoR.

Acceptable Means of Compliance 2375(2)

Approval of Aircrew Training Devices

31. The ADH or AM(MF) **should** approve an ATD for use based on the QS specific to that device.

32. ATD **should** be approved on initial entry into service.

33. ATD Approvals **should** be renewed and recorded at least annually.

34. For ATD within their AoR, the ADH / AM(MF) **should** renew Approvals following an assessment of the progressive testing conducted by the ATD Operator, compared to the MQTG for that individual device. This assessment **should** be conducted by SQEP and a practical, subjective assessment of the ATD by SQEP Aircrew **should** also be conducted. The criteria for SQEP **should** be determined by the ADH or AM(MF).

a. The ATD Approval **should** be renewed following any Modification to the QS or ATD, subject to an assessment by SQEP Aircrew, determined by the

[19] Further guidance may be found in the RAF Air and Space Warfare Centre Trials Directive.
[20] Refer to the Manual of Airworthiness Maintenance - Documentation (MAM-D).

Acceptable Means of Compliance 2375(2)

ADH or AM(MF). Significant Modifications **should** be assessed by T&E Aircrew[11], and the ATD re-Qualified and the QS re-issued.

b. If at any time the performance of the device is suspected to have degraded, undermining the validity of the QS, the ATD Operator **should** conduct an assessment against the MQTG in addition to referral to T&E Aircrew[11], subject to paragraphs 13-16, to evaluate the device using the MQTG and the T&E report as a baseline.

c. The ADH or AM(MF) **should** assess the material differences between the ATD and the 'as flown' Air System as part of the ASSC[3] and ensure that any differences are published and reflected in the training documentation.

d. The ADH or AM(MF) **should** ensure that the ATD Operator can demonstrate they have a suitable management system in place to demonstrate compliance with this RA as part of the annual Approval process.

35. Where an ATD is a civil Contracted device The ADH / AM(MF) **should** ensure that any Modification to the ATD or QS, not reported by the civil Contractor, are identified during the annual Approval process in paragraph 32. Significant Modifications **should** be assessed by T&E Aircrew[11].

Guidance Material 2375(2)

Approval of Aircrew Training Devices

36. The ADH or AM(MF) could use appropriate SQEP Aircrew, eg the Air System STANEVAL or AI, rather than T&E Aircrew[11] to conduct some subjective assessment in order to validate the Approval for use annually, assuming there have been no Modifications to the live Air System, or the ATD, or its use, that have the potential to impact on the safe operation of the live Air System.

37. Re-qualification of the ATD, iaw RA 2375(1), will be required following any significant Modification to the live Air System, or the ATD, or its use, which has the potential to impact on the safe operation of the live Air System. The updated QS may be used to support the Approval for use of the ATD.

38. Where training objectives may be prohibited in the live Air System, eg practise single or multiple engine failures, and specific live Air System performance is unknown or the data is unavailable, a lower fidelity level may be acceptable if the training benefit achieved synthetically will enhance Safety in the live Air System. This will be specifically addressed in the ASSC.

39. Where High Risk Area or high-cost training is conducted in environmental conditions that would not be routinely practised, or would be highly undesirable to practise, in the live Air System, a lower fidelity level may be acceptable if, through T&E Verification, the training benefit achieved synthetically enhances Safety in the live Air System. This will be specifically addressed in the ASSC.

Regulation 2375(3)

Use of Aircrew Training Devices

2375(3) The ADH and AM(MF) **shall** determine the extent that ATD can be used as preparation for, or as a substitute for, live flying.

Acceptable Means of Compliance 2375(3)

Use of Aircrew Training Devices

40. The ADH or AM(MF) **should** use the QS to determine the suitability of an ATD to conduct Qualifications, ratings, and type of training, including currency and Competency requirements.

41. The ADH or AM(MF) **should** specify in orders and instructions the amount of synthetic flying time and the training objectives to be conducted in an ATD, the periodicity that applies and how the training is to be recorded.

42. Where a Training Service Provider has been Contracted to provide an end-to-end training solution, this may include the requirements stipulated in paragraphs 39 and 40 but **should** be agreed by the ADH or AM(MF).

Acceptable Means of Compliance 2375(3)

43. Where an ATD is used to support training credit or currency, hours flown in it **should** be recorded in the relevant section of the Aircrew logbook or training record.

44. The ADH or AM(MF) **should** specify in orders and instructions when Incidents during the use of an ATD are to be reported iaw RA 1410[21].

45. Where ATD substitute live flying training, currency, and Competency requirements, including CQT and Instrument Flying, consideration to other RA concerning live flying **should** be applied, where deemed appropriate by the ADH or AM(MF).

Guidance Material 2375(3)

Use of Aircrew Training Devices

46. It may not be appropriate to report all Incidents in the ATD as they would be in the live Air System. The stage of training or experience level is to be considered when deciding if reporting an Incident is appropriate. Where ATD Systems have been intentionally degraded for training to induce an emergency or the environmental conditions have been manipulated to create a scenario at the extremes, or even outside, of limits it may be anticipated that the likelihood of a mishap is increased, therefore reporting may not be appropriate. However, reporting is to be considered if an adverse outcome has resulted from incorrect procedures or poor handling. Equally, if there is value to other users from lessons identified, eg relevant material differences between the ATD and the live Air System or incorrect procedures, reporting will be considered.

47. Due consideration of other RAs will include areas such as:

a. RA 2307 – Rules of the Air

b. RA 2309 – Flight Procedures: General

c. RA 2310 – Flight Procedures: Role Specific Fixed Wing

d. RA 2315 – Flight Procedures: Role Specific Rotary Wing

e. RA 2320 – Flight Procedures: Role Specific S2 and Certified Remotely Piloted Air Systems

f. RA 2125 – Aircrew Instructor and Aircrew Examiner Training

g. RA 2350 – Air System Emergencies

48. However, consideration of some RAs may be less appropriate, eg:

a. RA 2306 – Authorization of Flights

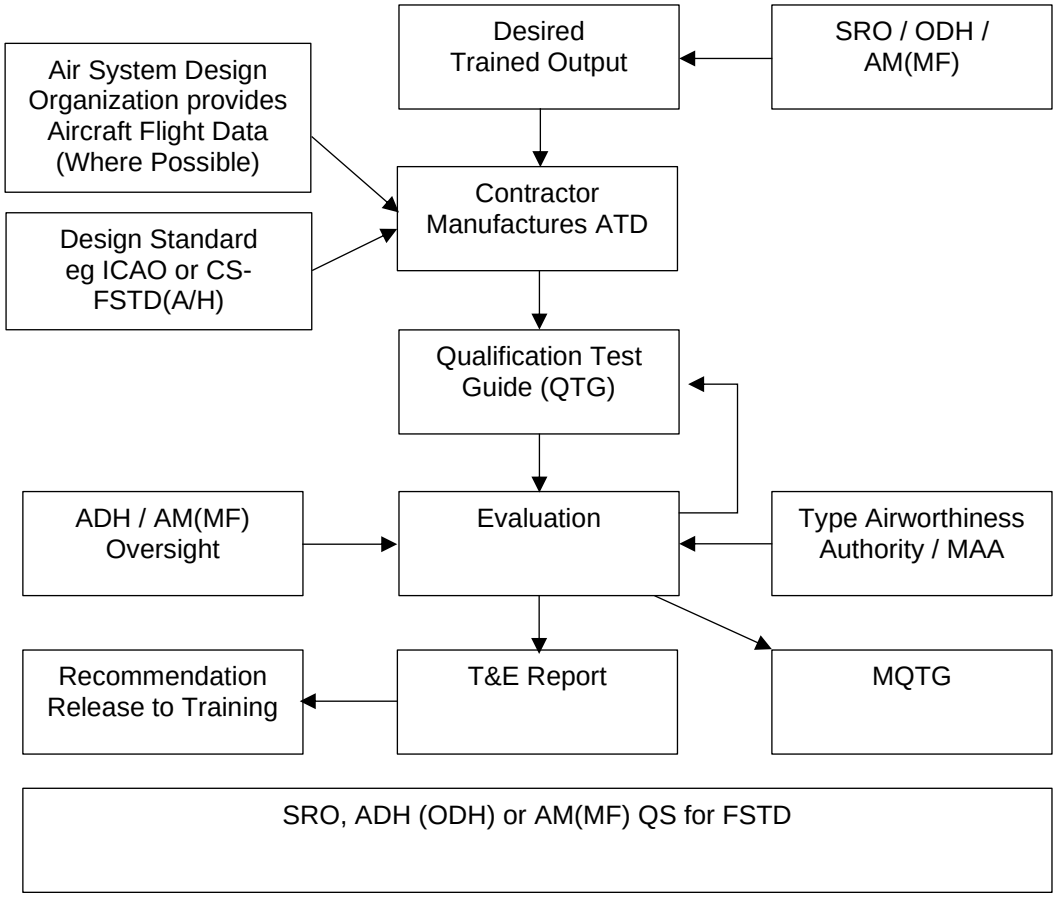
b. RA 2135 – Aircrew and Supernumerary Crew Medical Requirements

c. RA 2345 – Aircrew Fatigue Management

[21] Refer to RA 1410 – Occurrence Reporting and Management.

Annex A

Qualification Process



Annex B

Fidelity Level

Level	Air System Simulation	Cueing Simulation	Environmental Simulation
None	Not Required.	Not Required.	Not Required.
Generic	Not specific to Air System model, type, or variant. Can include skills not possible to replicate in Aircraft, eg Air to Ground Gunnery judgemental training engaging targets.	Generic to an Air System of its class. Simple modelling of key basic cueing features. For *visual cueing* only: generic visual environment with perspective sufficient to support basic Instrument Flying and transition to visual from straight-in Instrument Approaches.	Simple modelling of key basic environment features.
Representative	Representative of an Air System of its class, eg four-engine turbofan or tandem rotor helicopter. Indications can be incorrect, but subsequent technique is correct, an objective that can be contrived to produce a representative outcome. Can include malfunctions and conditions specific to type that do not require representative handling but cannot be initiated on the live Air System (cannot be turned off / CBs cannot be pulled etc).	For *sound and motion cueing* only: replicates the specific Air System to the maximum extent possible. However, physical limitations may only provide representative, not specific, cues. For *visual cueing* only: representative of the real-world visual environment and perspective.	Representative of the real-world environment.
Specific	Replicates the specific Air System. The desired objective can be accurately replicated on any sortie, such as those skills that do not require a failure mode or a specific environmental condition.	Applicable to *visual cueing* replicates the real-world visual environment and (infinity) perspective. However, is to be supported by the appropriate level of motion and sound cueing.	Replicates the real-world environment, as far as required to meet the training objectives, for any specific location.

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