

# INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

## PERSONNEL LICENSING

### ANNEX 1

TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

### License and ratings for personnel other than flight crew members

(CHAPTER 4., subpara. 4)

IFATSEA proposed amendment  
Final draft – 5 April 2000

#### 4.1 General rules concerning licences and ratings for personnel other than flight crew members

4.1.1 An applicant shall, before being issued with any licence or rating for personnel other than flight crew members, meet such requirements in respect of age, knowledge, experience and, where appropriate, medical fitness and skill, as are specified for that licence or rating.

4.1.2 An applicant, for any licence or rating for personnel other than flight crew members, shall demonstrate, in a manner determined by the Licensing Authority, such requirements in respect of knowledge and skill as are specified for that licence or rating.

#### 4.y Air Traffic Safety Electronics Personnel [ATSEP] (technician/technologist/engineer)

*Note: The terms in brackets are given as acceptable additions to the title of the licence. Each Contracting State is expected to use in its own regulations the one it prefers.*

##### 4.y.1 Requirements for the issue of the licence

###### 4.y.1.1 Age

The applicant shall be not less than 18 years of age.

###### 4.y.1.2 Knowledge

The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted and to the responsibilities of a holder of an air traffic safety electronics licence in at least the following subjects:

##### Law and regulations

- a) Rules and regulations related to air traffic safety electronics as applied to air traffic control systems and/or equipment;

## **General science and general knowledge of ATS engineering**

b) Basic mathematics (pure and applied); units of measurement; fundamental principles and theory of physics and chemistry applicable to air traffic safety electronics;

## **Air traffic safety engineering**

c) Technical fundamentals of electronics especially as applied to air traffic control systems and/or equipment:

- Purpose, functioning, interrelations and significance of air traffic safety electronics and/or relevant software;
- Tasks to ensure the integrity during operational use of air traffic safety electronic systems and/or equipment including methods and procedures of monitoring and fault analysis pursuant to ICAO or national regulations as well as system management, system or service restoration and modification of air traffic safety electronic systems or equipment.
- Structure, task and functioning power supply systems (UPS).

## **Human performance and limitations**

d) Human performance and limitations relevant to the duties of a holder of an air traffic safety electronics licence.

### **4.y.1.3 Experience**

The applicant shall have the following experience in inspecting, validating or other maintenance of air traffic safety systems or equipment or components thereof including relevant software:

a) For the issue of a licence with privileges applying to an air traffic safety electronic system or equipment in its entirety, at least:

- 1) Two years if the applicant has satisfactorily completed an approved training course;
- 2) Such a period as the State considers necessary to provide an equivalent level of practical experience to applicants who have satisfactorily completed an approved training course.

#### **4.y.1.3.1 Medical fitness**

The applicant shall hold a medical certificate if deemed necessary by the State issuing the licence.

#### **4.y.1.4 Training**

Recommendation.- The applicant should have completed a course of training appropriate to the privileges to be granted.

#### **4.y.1.5 Skill**

The applicant shall have demonstrated the ability to perform all functions applicable to the privileges to be granted.

#### **4.y.2 Privileges of the licence holder and conditions to be observed in exercising such privileges**

**4.y.2.1** The privileges of a holder of an air traffic safety electronics licence comprise certification of air traffic safety systems or equipment including relevant software for operational use by air traffic controllers, air traffic safety electronics personnel or aircraft navigation personnel following installation, inspection, calibration, repair or modification of air traffic safety systems or equipment.

**4.y.2.2** The privileges of the holder of an air traffic safety electronics maintenance licence as specified in

**4.y.2.1** shall be exercised only:

a) In respect of such:

1) Air traffic safety electronic systems or equipment as is entered in the licence in its entirety either specifically or under broad categories.

b) Provided that the licence holder is familiar with all relevant information relating to the maintenance work for which the holder is signing a maintenance certificate or to such ATS electronics or software for which the licence holder is certifying the operational use.

c) On condition that, within the preceding 24 months, the licence holder has either had such experience in the inspection, validation or maintenance of air traffic safety electronic systems or components including software thereof as is appropriate to the privileges or has, to the satisfaction of the Licensing Authority, met the requirements for the issue of a licence with the appropriate privileges.

**4.y.2.3** The Contracting States shall prescribe the scope of the licence privileges in terms of the complexity of the tasks to which the certification relates;

**4.y.2.3.1** Recommendation-

Details of the certification privileges should be listed on or attached to the licence, either directly or by reference to separate document issued by the Contracting State.

**4.z** Air Traffic Safety Electronics Personnel Ratings

**4.z.1** Categories of air traffic safety electronics personnel ratings

**4.z.1.1** Air traffic safety electronics personnel ratings shall comprise the following categories:

- a) Navigation systems/equipment ratings;
- b) Surveillance systems/equipment ratings;
- c) Communication systems/equipment ratings;
- d) ATM systems/equipment ratings;
- e) Power supply equipment ratings;
- f) Systems monitoring and control ratings;
- g) Other systems supporting ANS systems.

**4.z.2** Requirements for air traffic safety electronics Personnel ratings

**4.z.2.1 Knowledge**

The applicant shall have demonstrated a level of knowledge appropriate to the privileges to be granted, in at least the following subjects in so far as they affect his/her area of responsibility:

- Function of air traffic safety electronic systems or equipment in terms of handling by air traffic control and in terms of system organisation and technical function;
- Effects of intervention in the functional sequences or of parameter changes on the functioning of air traffic safety electronic systems or equipment;
- Effects and consequences of technical interventions or parameter changes on air traffic control operations within the scope of system or product management;
- Applicable rules, procedures and sources of information.

**4.z.2.2 Experience**

**4.z.2.2.1** The applicant shall have:

- a) Satisfactorily completed an approved and appropriate training course;
- b) Executed satisfactorily, under the supervision of an appropriately rated air traffic safety electronics personnel, the privileges as granted by the rating to be issued;
- c) Under appropriate supervision, learned how to apply the acquired knowledge in practice, eg operation and/or maintenance of the air traffic safety electronic systems or equipment in question, in order to demonstrate the skills required for responsible maintenance of the air traffic safety electronic systems or equipment in question:

Navigation systems/equipment ratings, e. g.:

- ILS
- VOR
- NDB
- DME
- DF (direction finder)

Surveillance systems/equipment ratings, e. g.:

- ASR
- SSR
- ASDE

Communication systems/equipment ratings;

ATM systems/equipment ratings, e. g.:

- Radar data processing and distribution systems;
- Schedule data processing and distribution systems.

Power supply equipment ratings;

Systems monitoring and control equipment ratings;

Other systems supporting ANS systems;

**4.z.2.2.2** The experience specified in 4.z.2.2.1 b) shall fall within the 6-month period immediately preceding application.

#### **4.z.2.3 Skill**

The applicant shall have demonstrated, at a level appropriate to the privileges to be granted, the skill and competence required for a safe, orderly and expeditious maintenance and/or operation of air traffic safety systems or equipment.

**4.z.3.3** A Contracting State having issued a licence for air traffic safety electronics personnel shall not permit the licence holder to act as an instructor in an operational environment unless he/she has been properly authorised to do so by same Contracting State.

#### **4.z.3.4 Validity of ratings**

A rating for air traffic safety electronics personnel expires when the holder has ceased to exercise the privileges of the rating for a period determined by the Licensing Authority. That period shall not exceed one year. A rating shall remain invalid until the holders' ability to exercise the privileges of the rating has been re-established.