



GHANA
CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR AC-23-001

AIR TRAFFIC SAFETY ELECTRONIC PERSONNEL (ATSEP) LICENSING

SECTION 1 - GENERAL

1. PURPOSE

- A. This Advisory Circular (AC) is issued to provide guidance to individuals, organizations and examiners regarding the determination that an individual's knowledge, skill level and attitude is adequate for the issuance of an Air Traffic Safety Electronic Personnel License with associated ratings, rating endorsements and/or authorizations.
- B. This AC describes the licenses and ratings issued by the Authority and prescribe the requirements for testing and validating such licenses, ratings, and authorizations

2. STATUS OF THE ADVISORY CIRCULAR

This AC is an original issuance.

3. BACKGROUND

- A. Pursuant to Section 3 (b) (vii) of Ghana Civil Aviation Amendment Act, 2016, ACT 906 the requirements for the licensing and rating of Air Traffic Safety Electronics Personnel (ATSEP) have been defined in Subpart 23.7 of Part 23 of Ghana Civil Aviation (ANS) Directives.
- B. In order to enhance safety of flights and to ensure personnel involved in the maintenance and installation of Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) systems act



professionally at all times in the performance of their duties, it has been approved by the ICAO Council that ATSEPs shall be licensed like other professionals in the aviation industry but on National basis.

- C. This guidance contains information on the requirements for an ATSEP license and rating of ATSEPs in Ghana.

4. APPLICABILITY

This AC is applicable to individuals ply their trade as Air Traffic Safety Electronic Personnel (ATSEP) engaged by Air Navigation Service Providers (ANSPs) and Aerodrome Operators for installation, operation and maintenance of CNS/ATM facilities and systems used in support of Air traffic services within designated aerodromes and airports in Ghana.

5. RELATED DIRECTIVIES

This AC is related to the Part 23 – Aeronautical Telecommunication (Subpart 23.7: ATSEP LICENSING) of the Ghana Civil Aviation (Air Navigation Services) Directives:

6. RELATED READING MATERIAL

- A. ICAO Annex 10 – Aeronautical Telecommunications, Volume I–V.
- B. ICAO DOC 10057 - The Manual on Air Traffic Safety Electronics Personnel Competency-based Training and Assessment
- C. ICAO DOC 9841 – Manual on the Approval of Training organizations
- D. ICAO DOC 9868 – Procedure for Air Navigation Services Training
- E. ICAO DOC 9379 – Manual of Procedures for Establishment and Management of a State’s Personnel Licensing System
- F. GCAA ATSEP Licensing Procedures Manual
- G. AC-CNS-002, Knowledge Test Guides (KTG)



7. ACRONYMS

AC	-	Advisory Circular
ANS	-	Air Navigation Service
ANSP	-	Air Navigation Service Provider
ATSEP	-	Air Traffic Safety Electronics Personnel
GCAA	-	Ghana Civil Aviation Authority
GCAD	-	Ghana Civil Aviation Directives
DG	-	Director General
CNS	-	Communication, Navigation and Surveillance
PEL	-	Personnel Licensing
OJT	-	On-the-Job Training
OJTI	-	On-the-Job Training Instructor
ATO	-	Approved Training Organization

SECTION B - GUIDANCE AND PROCEDURES

8. GENERAL INFORMATION –

A. ATSEP LICENCE

A person shall not practice as an Air Traffic Safety Electronic Personnel (ATSEP) unless he/she holds an ATSEP license with a valid rating, including any associated rating and/or unit endorsement relating to the Aeronautical Telecommunication services (CNS/ATM systems) to be provided.

B. ATSEP -TRAINEE LICENCE

- i. A person not holding an ATSEP license, who performs a CNS/ATM safety, related engineering activity under supervision, towards the grant of an ATSEP license, shall hold a ATSEP-Trainee license issued by the GCAA.
- ii. A holder of an Air Traffic Safety Electronic Personnel (ATSEP) license who is training to obtain additional ratings and/or unit



endorsements will not be required to hold an ATSEP- Trainee license. His/her ATSEP license will act as an “ATSEP- Trainee license” and permit him/her to perform under supervision, an engineering function relating to a CNS/ATM system for which he/she does not hold the appropriate rating / endorsement, but for which he has successfully completed initial training.

C. CATEGORIES OF RATING(S) TO BE ISSUED WITH ATSEP LICENCES

An ATSEP licence shall contain one or more of the ratings of the categories notified below:

- i. Communication system rating;
- ii. Radio navigation aids equipment rating;
- iii. Surveillance equipment rating;
- iv. ATSEP Instructor rating

D. UNIT/SYSTEM TYPE ENDORSEMENT

The following units/systems shall be endorsed with a license:

- i. Communication: VHF/HF Radios, VCCS, Voice Recorders, AMHS, AFTN, CPDLC, Satellite Comm, Microwave & Transmission, PABX, Automatic Weather Observation System(AWOS);
- ii. Navigation: Conventional (VOR, DME, NDB, ILS), GNSS Augmentation Systems (GBAS), Flight and Ground Radio Navigational Aids calibration;
- iii. Surveillance: ATM systems, PSR, SSR, Mode S, ADS-B, ADS-C, MLAT and WAMLAT, FDPS, SDPS.
- iv. Any other facilities/equipment/systems/technologies as may be introduced in future for CNS/ATM.



E. PRIVILEGES OF AN ATSEP LICENSE (OR RATING) AND THE CONDITIONS TO BE OBSERVED IN EXERCISING SUCH PRIVILEGES.

- i. Subject to compliance with the requirements specified in Subpart 23.7 of Part 23 of Ghana Civil Aviation (ANS) Directives, the privileges of the holder of an ATSEP license (or rating) shall be to:
 1. Install and Operate of CNS/ATM systems or facilities used to provide Air Navigation Service in Aerodrome and within the airspace of Ghana;
 2. Carry maintenance (preventive/corrective) on CNS/ATM facilities; and
 3. Certify the equipment or system as functional after an authorized calibration, repair, modification or installation of such equipment, accessory, instrument, and/or item of equipment, or following inspection, maintenance operations (preventive or corrective maintenance) and/or routine servicing.
- ii. The privileges of the holder of an ATSEP license (or rating) shall be exercised only in respect of such systems mentioned in paragraph 8 (C) and (D) as entered on the licence.

F. ATSEP LICENSING SCHEME

The Licensing Scheme for ATSEP Licensing is shown in Figure 1 below.

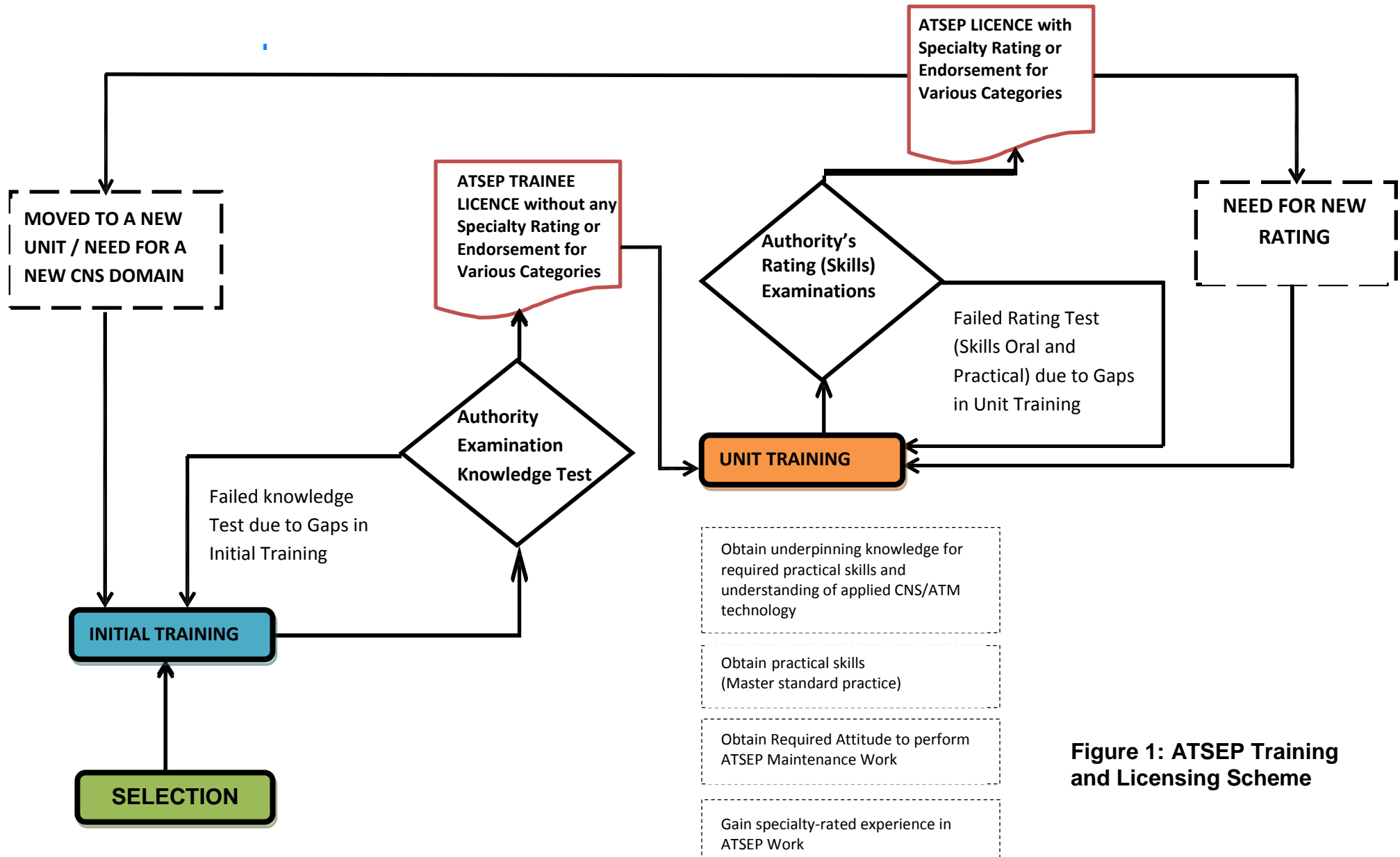


Figure 1: ATSEP Training and Licensing Scheme



9. GENERAL REQUIREMENT FOR ISSUE OF AN ATSEP-TRAINEE / ATSEP LICENSE

A. AGE

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

B. KNOWLEDGE

- i. An applicant for an Air Traffic Safety Electronic Personnel licence shall receive knowledge instruction through an approved training course and demonstrate a level of knowledge relevant to the privileges to be granted and appropriate to the responsibilities of an ATSEP licence holder.
- ii. An applicant must pass the required knowledge test organized by the GCAA Personnel Licensing (PEL) Office.

C. EXPERIENCE

- i. The applicant shall demonstrate, satisfactorily, under the supervision of an appropriately rated ATSEP OJT Instructor, performance of maintenance, calibration, installation, management, monitoring, control and modification (if applicable) for a period of not less than three (3) months at the unit and/or on the systems/equipment for which the License and rating is sought.
- ii. The experience specified in (i) shall have been completed within the six (6) months period immediately preceding the application.
- iii. When the applicant already holds an Air Traffic Safety Electronics Personnel rating in another category or the same rating for another system/equipment, the Authority shall determine whether the experience requirement of (ii) can be reduced, and if so, to what extent.



D. TRAINING

- i. The applicant should have completed a course of training appropriate to the privileges to be granted.
- ii. The Manual on Air Traffic Safety Electronics Personnel Competency- based Training and Assessment (ICAO DOC 10057) contains guidance material on the training for applicants for an ATSEP licence.

E. SKILL

- i. Each applicant for an ATSEP licence or rating must pass a skill test; a measure of Competency on the license or rating that he/she seeks.
- ii. For rating(s) in the different categories, the applicant must undergo a three (3) Months OJT field job tasks experience under supervision of a qualified on-the-job-training instructor (OJTI), in an operational environment for the rating being sought.
- iii. The Skills tests will cover the applicant's basic skill in performing practical projects on the subjects covered by the knowledge test for the license or rating sought.

10. ATSEP TECHNICAL LOGBOOK

The applicant must show in prescribed Logbook evidence that he/she has satisfactorily completed all the job tasks performed during the OJT as approved by the Authority for the rating(s) being sought.

11. ATSEP-TRAINEE LICENCE

A. REQUIREMENT TO HOLD AN ATSEP-TRAINEE LICENCE

A person who does not hold an ATSEP license shall not perform any safety related engineering function on a CNS/ATM system under the supervision of an OJTI, unless he holds an ATSEP-Trainee license.



B. APPLICATION FOR AN ATSEP-TRAINEE LICENSE

An applicant for the grant of an ATSEP License shall:

- i. complete the GCAA-CNS-002 Form, titled “Air Traffic Safety Electronics Personnel (ATSEP) Trainee Application”; and
- ii. submit it to the Authority with:
 1. the appropriate attachments:
 - a. A Copy of photo identification card or Passport;
 - b. Two recent passport size photographs (full face); and
 - c. ATO graduation certificate.
 2. Payment receipt of the prescribed application fee.

C. GRANT OF AN ATSEP-TRAINEE LICENSE

The GCAA will grant an ATSEP-Trainee license to an applicant provided he/she:

- i. is at least 18 years of age;
- ii. has successfully completed an approved course of initial training;
and
- iii. has successfully passed the knowledge test administered by the GCAA Personnel Licensing Office;

D. PRIVILEGES OF AN ATSEP-TRAINEE LICENSE

- i. The holder of an ATSEP-Trainee license is authorized to carry out safety related engineering activities on CNS/ATM systems under the supervision of an OJTI who holds a valid rating appropriate to the CNS/ATM system.



- ii. The CNS/ATM systems and facilities on which engineering activities are performed by the holder of an ATSEP-Trainee license under supervision must be in a rating discipline for which he/she has successfully completed an approved course of initial training.
- iii. ATSEP-Trainees must commence the unit training plan of the unit where they will be training towards the grant of an ATSEP license and associated rating and endorsement(s) within six (6) months of completion of the initial course of training in that rating;
- iv. The ATSEP Trainee license is valid for a period of 24 Calendar Months.

12. AIR TRAFFIC SAFETY ELECTRONICS PERSONNEL (ATSEP) LICENSE

A. REQUIREMENT TO HOLD AN (ATSEP) LICENSE

- i. A person shall not practice as an Air Traffic Safety Electronic Personnel (ATSEP) unless he/she holds an ATSEP license with a valid rating, including any associated rating and/or unit endorsement relating to the Aeronautical Telecommunication services (CNS/ATM systems) to be provided.
- ii. The rating shall be of a type notified in paragraph 8 (C) and the units/system endorsements shall be of a type notified in paragraph 8 (D) of this AC.

B. APPLICATION FOR AN ATSEP LICENSE

An applicant for the grant of an ATSEP License shall:

- i. complete the GCAA-CNS-001 form, titled **“Air Traffic Safety Electronics Personnel or ATSEP Instructor Licence, Rating, Authorization, Conversion, or Validation Certificate Application”**;



- ii. and submit it to the Authority with:
 1. the appropriate attachments:
 - a. A copy of photo identification card or passport;
 - b. Two recent passport size photographs (full face); and
 - c. ATO graduation certificate (if applicable)
 - d. Certificate(s) from System/Equipment Factory Training (if applicable); and
 2. a payment receipt of the prescribed application fee.

C. GRANT OF AN ATSEP LICENSE

The GCAA will grant an applicant an ATSEP license provided he/she:

- i. holds a valid ATSEP-Trainee license;
- ii. has successfully completed a Unit Training Plan (UTP);
- iii. has passed a rating examination (skill oral and practical test); and
- iv. is at least 18 years of age;

13. KNOWLEDGE TEST

This test is conducted to ascertain applicants theoretical knowledge on initial training or System/Equipment rating sought. The knowledge is conducted in accordance with the GCAA procedures on Computerized Based Testing. The minimum passing score is 70 percent. The knowledge test shall contain 100 questions, and applicants are allowed a maximum of 1.5 hours to complete the test.

A. UNSATISFACTORY PERFORMANCE

- i. If the knowledge test is not satisfactory the applicant will be informed of the results of the test.



- ii. A Print out the Test Report indicating overall performance of applicant in the test will be given to the applicant.
- iii. Notice of Disapproval will also be given to the applicant.
- iv. An applicant can schedule the test for a later date.

B. SATISFACTORY PERFORMANCE

- i. When the applicant has satisfactorily passed the knowledge test, he/she will be informed of the test results, given a print out of the Test Report.
- ii. The Applicant will be scheduled for the Skills Test on the rating sought.

14. SKILLS /COMPETENCE TEST

A. RATING COMPETENCE

Rating competence is the ability of an ATSEP to apply his appropriate knowledge, skills and attitude to undertake operational safety related engineering functions as notified in his/her ATSEP license.

B. REQUIREMENT

- i. Before a rating is issued to an ATSEP, he/she must demonstrate competence in that rating.
- ii. ANSPs/CNS Units shall require ATSEPs to complete a minimum amount of time performing operational safety related engineering functions in each of their valid ratings sufficient to enable them to maintain their competence in those ratings.
- iii. ANSPs/CNS Units must have training procedures, which include training to handle unusual circumstances and emergencies.



- iv. Before an ATSEP-Trainee is granted a valid ATSEP license and associated rating he must be assessed as competent by an authorized person by the Authority.
- v. ATSEP already holding an ATSEP license, shall demonstrate their competence if they wish to make their rating(s) valid on additional CNS/ATM system(s) in the same unit or at another units.
- vi. The license of an ATSEP who does not continue to meet the competence requirements for a particular rating shall be varied by suspending that rating in accordance with the procedures set out in GCAA ATSEP Procedures Manual (Paragraph 13).

C. RATING EXAMINATIONS

- i. A rating examination is an examination for the issue of an:
 - 1. ATSEP license and associated rating (if any) and unit endorsement; or
 - 2. Additional rating, rating endorsement (if any) and unit endorsement to an existing license.
- ii. All rating examinations will be chaired by a CNS Safety Inspector or an authorized person of the GCAA.
- iii. The applicant must pass the both the knowledge and skill test relating to the rating sought.
- iv. The GCAA may compose a board for a rating examination which may comprise of authorized persons from the Safety Regulation Department (SRD), GCAA including the Aviation Safety Inspector (CNS) of the GCAA and designated CNS unit / ANSP authorized persons.
- v. At CNS units, an Aviation Safety Inspector (CNS) shall conduct all rating examinations.



D. FAILING A RATING EXAMINATION

- i. A candidate failing a rating examination shall not be permitted to retake the examination until a period of at least 30 days has elapsed and will be required to undertake both the practical and the oral examination at further attempts.
- ii. The appropriate designated person (CNS Head of Department /Head of training) shall determine the minimum additional training required in consultation with the Air Navigation Service Provider and the GCAA.

15. UNIT ENDORSEMENT EXAMINATIONS

A. REQUIREMENT

A unit endorsement examination is an examination for the issue of:

- i. additional unit endorsement(s) on CNS/ATM system(s) or facilities(s) at the same CNS unit at which an ATSEP already hold valid ratings in the rating appropriate to carry out operational safety related engineering functions;
- ii. unit endorsement(s) at a CNS units where the ATSEP does not yet hold a valid rating appropriate to the CNS/ATM system(s) but on which he/she holds, or has held within the previous four years, a valid rating at another unit.

B. FAILING A UNIT ENDORSEMENT EXAMINATION

- i. A candidate failing a unit endorsement shall not be permitted to retake the examination until a period of at least 30 days has elapsed.
- ii. The CNS Manager in charge of the unit shall agree the minimum period of additional training required, in consultation with the Air Navigation Service Provider and the Authority.



- iii. A candidate who fails a unit endorsement may, at the discretion of the examiners, be required to:
1. take both the practical and the oral element at further attempts at the examination; or
 2. only that element of the examination failed at the previous attempt.

16. PRIVILEGES OF AN ATSEP LICENSE

- A. Privileges of an ATSEP License shall be in compliance to paragraph 8 (E) in this document.
- B. An ATSEP must not perform any safety related engineering function which they do not hold a valid rating except where they are under training under supervision.

17. DURATION OF ATSEP LICENSES, RATINGS AND AUTHORIZATIONS

- A. No person, having ceased to exercise the privileges of an Air Traffic Safety Electronics Personnel rating for a period of 180 days, may exercise the privileges of that rating until their ability to exercise the privileges of the rating has been re-established.
- B. No person may continue to exercise the privileges of an Air Traffic Safety Electronics Personnel rating after a period of 12 concurrent months unless they have satisfactorily completed a competency check of their performance.
- C. No person may exercise the privileges of an Air Traffic Safety Electronics Personnel rating unless that person has familiarized himself with all pertinent and current information.
- D. No person may carry out instruction for an Air Traffic Safety Electronics Personnel rating in an operational environment unless such person meets



the requirements in paragraph 14 of Part 1 of this Procedures Manual and has received proper authorisation from the Authority.

18. VALIDATION OF FOREIGN LICENSES AND RATINGS

Any foreign license issued by an ICAO contracting State after completing the required ATSEP training from an Approved Training Organization shall generally be validated.

19. CONVERSION OF LICENSES AND RATINGS

Any foreign license shall be converted upon GCAA having inspected the license, requisite certificates and transcripts and having satisfied itself that they are genuine and are coming from a recognized ATO and issued by an ICAO Contracting State. Where doubts exist, the applicant may be asked to undergo some examinations again to satisfy whichever requirement may have been identified before the conversion is done.

20. ATSEP INSTRUCTOR (ON-THE-JOB TRAINING INSTRUCTOR (OJTI)) LICENSE ENDORSEMENT

An ATSEP Instructor's (On-the-Job Training Instructor (OJTI)) license endorsement may be used in association with any of the license holder's valid ratings.

A. REQUIREMENTS FOR THE ISSUE OF AN OJTI LICENSE ENDORSEMENT

- i. To be issued with an OJTI license endorsement the applicant must:
 1. hold an ATSEP license;
 2. have successfully completed an approved OJTI training course;



3. have held a valid rating in the rating discipline in which he will instruct for a period of at least two years;
 4. hold, and have held for a period of at least six months, a rating valid on the CNS/ATM system(s) on which he will instruct.
- ii. An OJTI shall remain responsible for the safety of the CNS/ATM system(s) and related service being provided and shall supervise:
1. An ATSEP-Trainee; or
 2. An ATSEP License holder requiring additional rating; or
 3. An ATSEP whose rating, rating endorsement or unit endorsement has been provisionally suspended or suspended;

B. PRIVILEGES OF AN OJTI LICENSE ENDORSEMENT

- i. An OJTI license endorsement shall entitle the holder to supervise ATSEP-Trainee and ATSEP License holders (requiring additional rating) while they undertake operational safety related engineering functions on CNS/ATM system(s) for which they do not hold a valid rating.
- ii. An OJTI shall only supervise ATSEP-Trainee while they undertake operational safety related engineering functions on CNS/ATM system(s) for which he holds a valid rating.

21. ADDITIONAL GUIDANCE

Additional guidance of the ATSEP Licensing can be found in the Subpart 23.7 of Part 23 of Ghana Civil Aviation (ANS) Directives, the associated Implementing Standards (IS) and GCAA ATSEP Procedure Manual. These include guidance on:



- A. Suspension and Revocation of ATSEP Licenses
- B. Cancellation of unit endorsements
- C. Psychoactive substances (Alcoholic Drinks and Problematic Drugs and Medicine)

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