Australian Government

Civil Aviation Safety Authority

# Notice of Proposed Change (NPC 139/02)

# Proposed Amendments to Manual of Standards (MOS) Part 139 – Aerodromes

**Who this NPC applies to**

*It is expected that the proposals for change will have an effect on the following groups in the aviation industry:*

Persons interested in undergoing training to become a Certified Air/Ground Radio Operator (CA/GRO); Aerodrome Operators.

Issued as part of the process of public consultation by
CASA's Regulatory Development Management Branch

**Document NPC 139/02 – December 2006**

# Foreword

## Background

Part 139 of the Civil Aviation Safety Regulations currently prescribes the rules and procedures for aerodromes that are used for air transport operations. It came into effect in May 2003. The regulations are supported by a Manual of Standards (MOS), which sets out the necessary technical standards for aerodromes, and a series of Advisory Circulars (ACs) which help facilitate compliance.

The current version of the MOS is 1.2, valid from September 2004. In chapter 14, there are standards for setting up and operating a manned radio service, at aerodromes, called a Certified Air/Ground Radio Service (CA/GRS). The standards prescribed in the MOS include the qualifications and competencies of a person who can be authorised to operate a CA/GRS. When authorised by CASA, that person is known as a Certified Air/Ground Radio Operator (CA/GRO).

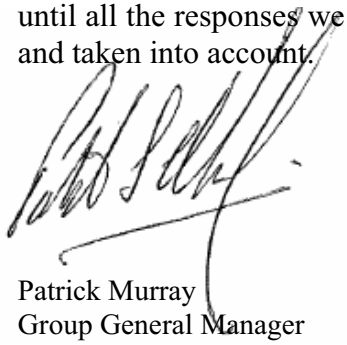
This Notice of Proposed Change (NPC) proposes to amend the standards in chapter 14 (section 14.2.2) of the MOS to allow a wider range of people to become qualified as a CA/GRO. The proposed change takes into consideration feedback received from aerodrome operators about the effectiveness of the rules over the past three years.

## Consultation

NPCs are CASA's method of formally consulting with the public and the aviation community on changes to Manuals of Standards. This NPC invites your comments on proposals which affect the standards for becoming a CA/GRO as published in the Part 139 MOS. The proposals, and their impact, are explained in detail in this NPC.

To ensure the aviation community has safety standards that are clear and relevant, we need the benefit of your knowledge, skill and experience. To make a submission, please read the NPC, consider the issues, and complete a response form (preferably online or as printed in this NPC). **Responses are required to be submitted by 19 February 2007.**

I would like to assure you that no changes will be made to the relevant MOS standards until all the responses we receive to this NPC, by the closing date, have been considered and taken into account.



Patrick Murray
Group General Manager
Air Transport Operations Group

12 December 2006

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***** ***YOU CAN RESPOND ONLINE OR BY FAX, POST OR E-MAIL*** *****

**A web-based online response form is offered as an alternative to the printed form in this NPC. Online submission is the preferred method of sending your comments to CASA. If you are connected to the Internet, type rrp.casa.gov.au/respond into your web browser and follow the links for this NPC.**

# Abbreviations

| | |
|---|---|
| **AAIS** | Automatic Aerodrome Information Service |
| **AC** | Advisory Circular |
| **ACMA** | Australian Communication and Media Authority |
| **AEP** | Aerodrome Emergency Plan |
| **AFRU** | Aerodrome Frequency Response Unit (also known as "beepback" unit) |
| **AIP** | Aeronautical Information Publication |
| **ATC** | Air Traffic Control |
| **CAR** | Civil Aviation Regulations 1988 |
| **CASA** | Civil Aviation Safety Authority |
| **CASR** | Civil Aviation Safety Regulations 1998 |
| **CA/GRO** | Certified Air/Ground Radio Operator |
| **CA/GRS** | Certified Air/Ground Radio Service |
| **CAVOK** | Visibility, cloud and present weather better than prescribed values or conditions |
| **CPL** | Commercial Pilot Licence |
| **CTA** | Control Area |
| **CTAF** | Common Traffic Advisory Frequency |
| **CTAF(R)** | Common Traffic Advisory Frequency (Radio Required) |
| **DME** | Distance Measuring Equipment |
| **ERSA** | Enroute Supplement Australia |
| **FSO** | Flight Service Officer |
| **GPS** | Global Positioning System |
| **ICAO** | International Civil Aviation Organization |
| **IFR** | Instrument Flight Rules |
| **MOS Part 139** | Manual of Standards for CASR Part 139 |
| **NFC** | Notice of Final Change (closes MOS amendment consultation) |
| **NPC** | Notice of Proposed Change (for consultation on proposed MOS change) |
| **ORS** | Online Response System (CASA web-based comment/response system) |
| **PPL** | Private Pilot Licence |
| **QNH** | Altimeter subscale setting to obtain elevation or altitude |
| **RH** | Radio Height |
| **R/T** | Radio Telephony |
| **SARP** | Standards and Recommended Practices (ICAO) |
| **SCC** | Standards Consultative Committee |
| **VFR** | Visual Flight Rules |
| **VHF** | Very High Frequency (30 to 300 MHz) |

# The Proposed Changes

## 1. The MOS Consultation Process

1.1 CASA is committed to working cooperatively with the aviation community to maintain and enhance aviation safety. The CASA Standards Consultative Committee (SCC) is a joint industry/CASA forum that brings together CASA staff and representatives from a diverse range of aviation industry organisations, to jointly develop regulatory change material. The SCC examines proposed regulatory changes to determine if they are worth pursuing and assists CASA in establishing and servicing change projects. CASA and industry experts work together in SCC sub-committees and project teams, to develop regulatory material (both new regulations and amendments). The SCC process has been followed in the development of the proposals in this NPC.

1.2 Subpart 11.J of the *Civil Aviation Safety Regulations 1998* (CASR) specifies the procedures for consultation on a Manual of Standards (MOS) or amendments to a MOS.

1.3 CASA conducts consultation on the initial development of a MOS, generally in conjunction with the development of the particular CASR Part and through a Notice of Proposed Rule Making (NPRM). The objective is to improve the quality of the document and to ensure that persons likely to be affected by the proposals have an adequate opportunity to comment on the content of the proposed changes.

1.4 A Notice of Proposed Change (NPC) is CASA's preferred method of articulating all subsequently proposed changes to a MOS for aviation community/ stakeholder comment in accordance with CASR 11.280. The NPC is published on the CASA RRP website and provided on CD-ROM on request. The availability of the NPC is notified through the CASA website and where relevant to affected stakeholders.

1.5 Consultation on proposed changes to a MOS will generally be directed to a particular body or organisation that sufficiently represents, or combinations of particular bodies or organisations that together sufficiently represent, the interests of most persons likely to be affected by the proposed changes to the MOS.

1.6 All comments to proposed MOS changes should be submitted in writing to CASA, preferably by using the Online Response System (ORS), by email or by facsimile. Details of how to submit comments can be found on the Response Sheet and the rear cover of this NPC.

### What CASA does with your comments (Ref: CASR 11.290)

1.7 At the end of the response period, all submissions will be analysed, evaluated and considered by the relevant project/working group.

1.8 CASA is required to register each comment and submission received, but will not individually acknowledge a response unless specifically requested.

1.9 A consolidation of all comments received, CASA's response and disposition actions, and the final amendments will be prepared and provided to all respondents to the NPC. This information will be published in a document called a Notice of Final Change (NFC) and will close the consultation on the changes proposed by the NPC. The NFC will generally be published on the CASA RRP website and provided on CD-ROM on request.

## 2. Purpose of Changes

2.1 The purpose of this Notice of Proposed Change (NPC) is to promulgate revised standards for the certification by CASA of Certified Air/Ground Radio Operators. The existing standards limit eligibility for certification to persons who hold, or have previously held within the last 10 years, an Air Traffic Controller licence or an Australian Flight Service Officer licence.

2.2 On several occasions over the last six years since the original standards for certification of CA/GROs were put in place by CASA, representations have been received from persons who wish to become CA/GROs but do not have the necessary qualifications. CASA has accepted that the standards should provide an equal opportunity for persons to become CA/GROs by undergoing appropriate, specialised training.

2.3 For example, one of the aerodrome operators that provide a CA/GRS recently informed CASA that it is becoming increasingly difficult to source replacement CA/GROs at the aerodrome as a result of the existing certification standards.

2.4 The standards proposed herein would extend the eligibility for certification as a CA/GRO to persons who possess the necessary aeronautical knowledge as a prerequisite to specialised training, and the satisfactory completion of a specialised theoretical and practical training course.

## 3. Persons Affected

3.1 CASA has identified the persons most affected by the proposed changes as being prospective CA/GROs, some industry training organisations that may wish to provide for CA/GRO training, and some aerodrome operators where the CA/GRS is provided now or in the future.

3.2 At present there are two CA/GRS in operation: at Ayers Rock Airport and Broome International Airport. Each service employs two CA/GROs and, on occasions, a relief CA/GRO. From time-to-time, replacement CA/GROs are advertised for employment at those aerodromes.

3.3 Depending on air traffic growth, it is possible in the future that a service may be provided at other busy regional aerodromes.

# 4. Proposed Changes

4.1 The details of the proposed changes together with an explanation are provided in Annex A of this NPC.

4.2 In addition, Annex B of this NPC is a draft of a proposed new Advisory Circular (AC 139-24(0)) that provides guidelines relevant to the provision of CA/GRS. Most of the content of the proposed AC has been derived from the existing document *CAAP Airways 3*. The AC reflects the changes proposed in Annex A, complements the proposed MOS Part 139 material, and would replace CAAP Airways 3.

4.3 The proposed changes to the MOS and the material in the AC are new standards and advisory material for the certification of persons who wish to become a CA/GRO. The existing standards are included in Section 14.2 of Chapter 14 of the Part 139 MOS. The proposed revised standards would replace those standards existing in Section 14.2.

# 5. Synopsis of Change Proposals

5.1 The process that CASA has adopted for the categorisation of MOS changes is that each proposed change is divided into one of three categories:

- E (Editorial/correction/clarification);
- O (Omission); and
- S (Changes made to existing standard).

As well, the reasons for each change are set out alongside each proposed change.

5.2 Proposed changes are shown as new text added (in orange or grey-scale) and or original text deleted (struck through) in respect of each affected paragraph.

# 6. Impact of Changes

6.1 The Office of Regulation Review at the Productivity Commission has advised that a Regulation Impact Statement (RIS) is not required for amendments to Manuals of Standards. However, CASA is obliged to advise stakeholders of the likely impact of any regulatory changes in consultation documents such as this NPC.

6.2 The changes will only affect persons who are CA/GROs, and to a lesser extent, those aerodrome operators who provide a CA/GRS.

6.3 As previously stated, a CA/GRS is presently provided at Ayers Rock Airport and Broome International Airport. Further services may need to be provided at other aerodromes in the future but that will essentially depend on the extent of the growth in air traffic at the busiest regional aerodromes. As part of the establishment of standards for airspace to be promulgated under CASR Part 71, CASA's intention is to have acceptable criteria included for the classification of airspace and the associated establishment/disestablishment of air traffic services and aerodrome radio communication services. Such criteria will include the establishment/ disestablishment

of a CA/GRS at any aerodrome. The timing for the completion of CASR Part 71 is mid-2007.

6.4 As the revised standards Part 139 effectively represent a widening of the persons eligible to become a CA/GRO, they would provide for an increase in the number of persons who are eligible for certification as a CA/GRO and thus their increased availability. This will be cost beneficial for aerodrome operators in sourcing replacement CA/GROs as the existing operators retire or change employment.

6.5 There will be a cost impact to prospective CA/GROs or their employers of the costs involved in undertaking a CA/GRO training course. The cost of a course could amount to approximately $2,000 to $4,000 per person (based on an estimated two week course provided by a private aviation training organisation).

# NPC 139/02 Response Form

## PROPOSED AMENDMENT TO MOS PART 139 – AERODROMES

**Please complete your response by *19 February 2007* and return it by one of the following means:**

**Online (preferred method*)** rrp.casa.gov.au/respond

**Fax** 1800 653 897 (free call in Australia)

**Post (no stamp required in Australia)**
CASA Regulatory Development Management Branch
Reply Paid 2005, Canberra ACT 2601, Australia

**E-mail (use the response format in this NPRM)**
npc139_02@casa.gov.au

*** A web-based online response form is offered as an alternative to the printed form in this NPRM. Online submission is the preferred method of sending your comments to CASA. If you are connected to the Internet, type rrp.casa.gov.au/respond into your web browser and follow the links for this NPRM.**

### Your Details

Please provide relevant information below and indicate your acceptance or otherwise of the proposal presented in this Notice of Proposed Rule Making by ticking [✓] the appropriate boxes.

Your name: _____ ARN* (if known): _____

Organisation: _____ ARN* (if known): _____

Address: _____

_____

*Aviation Reference Number, usually your CASA-issued licence or certificate number

Your telephone number (optional): _____(to enable the Project Manager to contact you as necessary)

Do you consent to have your name published as a respondent to this NPRM? YES [ ] NO [ ]

Signed: …….. Date: ……..…

**How are you responding to this questionnaire/proposal, i.e. whose views are represented in your response?**

☐ Private individual ☐ Aviation industry body/association ☐ Staff association/ union ☐ Government agency/authority/ department/council ☐ Aviation business owner/ service provider ☐ Other

**Please advise your main involvement in aviation:**

☐ Passenger/ public consumer of aviation services ☐ Air crew for passenger-carrying activities ☐ Air crew for non-passenger-carrying activities ☐ Ground support for passenger-carrying activities ☐ Ground support for non-passenger carrying activities ☐ Other (specify below*)

*** Details:** _____

**Are you satisfied with CASA's consultation on this issue?**

☐ Very satisfied ☐ Satisfied ☐ No opinion ☐ Dissatisfied ☐ Very dissatisfied

# Your Response to the proposed amendments to the MOS Part 139, Chapter 14 and Advisory Circular

**(Please refer to Annex A and Annex B of this NPC)**

**CASA invites you to advise your acceptance, or otherwise, for the proposed changes to the standards contained in this NPC by indicating your preference and commenting below.**

**Refer to Annex A for full details of the proposed amendment.**

MOS Part 139, Chapter 14, Section 14.2 – Certified Air/Ground Radio Services.

[ ] acceptable without any changes
[ ] acceptable but would be improved if changes were made
[ ] not acceptable but would be acceptable if changes were made
[ ] not acceptable under any circumstances
[ ] no opinion

Additional explanation (and, if appropriate, an estimate of any consequential impacts including costs): _____

_____

_____

_____

_____

_____

_____

**Refer to Annex B for draft AC 139-24(0) – Guidelines for the Provision of a Certified Air/Ground Radio Service.**

[ ] acceptable without any changes
[ ] acceptable but would be improved if changes were made
[ ] not acceptable but would be acceptable if changes were made
[ ] not acceptable under any circumstances
[ ] no opinion

Additional explanation (and, if appropriate, an estimate of any consequential impacts including costs): _____

_____

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_____

_____

## Thank you

Your response ensures balanced consideration by CASA of the interests of the aviation community and consumers.

# Annex A

## Proposed Amendments to Chapter 14 of the Manual of Standards (MOS) Part 139 – Aerodromes

**Proposed changes are divided into three categories:**

- E = editorial/correction/clarification
- O = omission
- S = change made to existing standard

**Changes are set out in three columns.** The first column sets out the proposed changes which are shown in orange (on electronic/web based media). The second column denotes the category of change, and the last column provides the reasons for the change.

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# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|
| ***Chapter 14 Section 14.1: General*** | | |
| Amend **Paragraph 14.1.2 Definitions and Abbreviations** as follows: | **S** | To align with CAR166 |
| **CTAF: Common Traffic Advisory Frequency.** The CTAF is a radio frequency for pilot-to-pilot communication within a nominal horizontal distance of 10 NM from the aerodrome and a height above the aerodrome that could result in conflict with operations at the aerodrome.<br><br>***Note:*** *In those CTAFs where a CA/GRS is in operation, the horizontal distance may extend to 20NM or 30NM from the aerodrome.* | | |
| **Frequency Confirmation System** means a ground radio system for an aerodrome that, if it receives a transmission from an aircraft on ~~the MBZ frequency or~~ the CTAF for the aerodrome, ~~sends~~ transmits a signal or message ~~to the aircraft~~ on the CTAF confirming that the transmission has been received. | **E** | The term 'MBZ' is no longer in use. Definition reworded. |
| ~~**MBZ:** Mandatory Broadcast Zone~~ | | |
| **Relevant traffic:** ~~Aircraft that the CA/GRO knows to be operating within the MBZ and that may constitute a hazard to a broadcasting aircraft.~~ Traffic information broadcast to a pilot by the CA/GRO on other known aircraft operating in the CTAF or aircraft, vehicles or personnel on or near the manoeuvring area, or, which may constitute a conflict hazard to the aircraft concerned. | **S** | Definition has been amended to include surface traffic. |
| ***Chapter 14 Section 14.2: Certified Air/Ground Radio Services*** | | |
| *Substitute* existing **Paragraph 14.2.2 (Qualifications)** as follows:<br><br>**14.2.2 CA/GRO Certification – General**<br><br>14.2.2.1 This section sets out the competency and knowledge requirements for Certified Air/Ground Radio Operators who operate a Certified Air/Ground Radio Service (CA/GRS) for, or on behalf of, an aerodrome operator under the provisions of Subpart F of Civil Aviation Safety Regulation Part 139.<br><br>14.2.2.2 The primary purpose of a Certified Air/Ground Radio Service (CA/GRS) is to enhance the safety of air | **S** | The standards for the certification of CA/GROs have been significantly revised to provide an avenue for the training and certification of persons other than ex-ATCs or ex-FSOs. |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|
| transport aircraft operations in busy CTAF areas by the provision of relevant traffic information and meteorological reports and current aerodrome information. These aspects of the service require CA/GROs to have specialised competencies.<br><br>14.2.2.3 The CA/GRO Competency Standard is the basis for the training and examination of those persons who do not hold the necessary prerequisite qualifications and experience to be granted a CA/GRO certificate without undergoing the specific training defined herein.<br><br>**14.2.3 CA/GRO Prerequisite Aeronautical Knowledge Requirements**<br><br>14.2.3.1 **ATC or FSO licence holders.** The competency and aeronautical knowledge requirements for the award of a CA/GRO certificate are completely satisfied if a person has previously undertaken training leading to the award of an Air Traffic Controller's licence or the military equivalent, or an Australian Flight Service Officer licence. Accordingly, CASA will issue a CA/GRO certificate, without the requirement for any further training and written examination or practical test, to any person who provides evidence that he or she holds, or has held within the last 10 years, an Air Traffic Controller's licence or the military equivalent or an Australian Flight Service Officer's licence. The 10 year restriction is to provide assurance of appropriate recency of capability.<br><br>14.2.3.2 **Persons who hold a Pilot Licence.** Persons who hold a Private Pilot Licence (PPL) or a Commercial Pilot Licence (CPL) or an Air Transport Pilot Licence (ATPL) or the military equivalents possess the prerequisite aeronautical knowledge requirements for CA/GRO training. Such persons must undergo a CA/GRO course of training that addresses the competency and knowledge requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.<br><br>14.2.3.3 **Holders of overseas issued aeronautical radio operator licences.** Persons who hold an overseas aeronautical radio operator licence must in the first instance contact CASA for the assessment of their prerequisite knowledge and experience by providing a copy of their overseas licence/certificate and details of their previous relevant experience and employment. If CASA accepts that the person possesses the required prerequisite qualifications, such persons must undergo a CA/GRO course of training that addresses the competency requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.<br><br>14.2.3.4 **Other applicants.** All other persons must possess the prerequisite aeronautical knowledge requirement of a pass in the CASA Private Pilot Licence Theory Examination (or passes in the CASA CPL Theory examinations). Such persons must undergo a CA/GRO course of training that addresses the competency | | The revised standards widen the eligibility to persons who have passed the CASA Private Pilot Licence theory examination and undergone a specialised CA/GRO training course as specified herein. |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|

requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.

### 14.2.4 CA/GRO Competency Standard

14.2.4.1 The CA/GRO Competency Standard in this section specifies the minimum levels of skills and capabilities that a person must possess to safely and satisfactorily carry out the functions of a CA/GRO. Competency standards also define how each competency is to be assessed.

| MAIN CA/GRO COMPETENCY and ELEMENTS | PERFORMANCE ASSESSMENT |
|---|---|
| 1. OPERATE RADIO COMMUNICA-TION SYSTEM(S)<br>Operate VHF R/T equipment.<br>Operate Aerodrome Frequency Response Unit (as necessary). | Knowledge of VHF transmission characteristics is demonstrated.<br>Serviceability of R/T equipment is checked on commencement.<br>Ability to operate the VHF R/T communications set, and knowledge of all the operating controls is demonstrated.<br>Radio control switches/controls are used.<br>Change to standby R/T set if loss of radio transmission/reception on primary set. |
| 2. MAINTAIN WATCH OF THE AIRSPACE AND THE MOVEMENT AREA<br>Maintain an awareness of all traffic in the CTAF and on the surface of the aerodrome, including surface vehicles and no-radio aircraft. | Understand the operational procedures used by aircraft in arriving, departing, operating in and overflying the CTAF, including procedures on the movement area.<br>Maintain visual lookout of the circuit area and the movement area.<br>Maintain listening watch on CTAF frequency.<br>Maintain listening watch on area frequency (as necessary).<br>Maintain alertness for no-radio aircraft. |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | | Code | Reasons |
|---|---|---|---|
| 3. ASSESS RELEVANT AIR TRAFFIC<br>Identify all traffic in the CTAF, the aircraft types and their operational characteristics.<br>Identify potential traffic conflictions in timely manner.<br>Maintain log of all aircraft movements. | Mental awareness of the position and intentions of all aircraft is maintained at all times after the initial contact.<br>Log of aircraft movements is accurate and includes times of operation, aircraft type, collision, arrival or departure, runway to be used.<br>Knowledge of standard operating procedures used by pilots in the CTAF and on the surface of the aerodrome is displayed. | | |
| 4. COMMUNICATE WITH AIRCRAFT<br>Establish communication with aircraft.<br>Communicate details of relevant traffic to aircraft by standard broadcasts. | Standard aviation communication phraseology as per AIP GEN 3.4 paragraph 4 and 5 is used.<br>Correct microphone and communication techniques are used.<br>The standard arrival, departure and transit broadcast to each aircraft including advice of relevant traffic, is transmitted.<br>Over transmissions and clipped transmissions are avoided.<br>Listening watch is maintained.<br>Awareness of international distress frequencies is demonstrated.<br>Radio silence is maintained when required.<br>Ability is demonstrated to recognise carrier wave only transmissions and react to the abnormal situation.<br>Respond to pilot requests for information. | | |
| 5. MAKE METEOROLOGICAL OBSERVATIONS AND REPORTS<br>Make periodic observations and reports of cloud type, cloud amount, estimated Cloud Base, Visibility, runway surface moisture.<br>Undertake readings of Wind Direction, Wind Speed, QNH, air temperature.<br>Interpret Automatic Weather Station information. | Demonstrate knowledge of basic meteorology.<br>Accuracy of observations performed to be within 1 okta (cloud amount); within 10% cloud (height), within 20% (visibility).<br>Demonstrate knowledge of local weather, in particular the likely occurrence of thunderstorms; low cloud, poor visibility, turbulence.<br>Recognise signs to indicate the presence of turbulence, thermals, dust devils, wind gradient, wind shear.<br>Readings of meteorological parameters are accurately taken from the instrumentation. | | |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | | Code | Reasons |
|---|---|---|---|
| Detect, identify and communicate hazardous aerodrome weather. | QNH readings to be to be within 0.1hPa and rounded down to nearest whole hPa. | | |
| 6. OPERATE THE AUTOMATIC AERODROME INFORMATION SERVICE<br>Operate the AAIS<br>Periodically enter voice recordings of meteorological reports for broadcast on the AAIS. | Readings of meteorological parameters are correctly entered on the AAIS.<br>New AAIS recordings are made when the criteria is exceeded.<br>AAIS messages are constructed in accordance with AIP GEN 3.3 2.6.<br>AAIS message is changed when change criteria is exceeded (i.e. wind changes direction by 10 degrees or wind speed changes by 5 knots, Cloud Base changes 200 feet, Cloud Amount changes by 1 okta, Temperature changes by 1 degree, Visibility changes by 1km, occurrence of wind shear). | | |
| 7. COMMUNICATE WITH SURFACE VEHICLES ON THE MOVEMENT AREA | Communication with surface vehicles is clear and concise.<br>Frequency congestion avoided.<br>Standard phraseology is used.<br>Surface vehicles are clearly informed of movement instructions.<br>Instructions ensure safety and take account of aircraft activity. | | |
| 8. MANAGE ABNORMAL AND EMERGENCY SITUATIONS<br>Assess emergency situations which may arise<br>Assess abnormal situations which may arise and pass timely advice to aircraft<br>Initiate AEP in timely manner | Knowledge of aerodrome AEP is demonstrated.<br>Ability to assess emergency situations is demonstrated.<br>Ability to contact emergency services is demonstrated. | | |

**14.2.5 Training Course and CA/GRO Instructors**

14.2.5.1 All prospective trainees must hold the prerequisite aeronautical knowledge qualifications as specified at 14.2.3 above.

14.2.5.2 Training for the CA/GRO certificate must be in accordance with a syllabus of training that addresses the

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|
| competency standards specified at 14.2.4 and training must be delivered by a person who is a **CASA approved CA/GRO Instructor**. The names of CASA approved CA/GRO Instructors and approved training providers are available on application to the Airways and Aerodromes Branch of CASA.<br><br>14.2.5.3 Training by a CASA approved CA/GRO Instructor may be carried out at an aerodrome at which a CA/GRS service is provided, using the CA/GRS facilities (after-hours of normal operation of the CA/GRS).<br><br>14.2.5.4 **CA/GRO Training Course.** As a guide only, and depending upon the previous level of aviation experience, about 80 hours of instruction could be expected to address the training course of all competencies. This estimate is based on face-to-face classroom and practical tuition, a general rather than in-depth treatment of the syllabus items, and that the trainees hold a pass in the CASA PPL theory examination and have previous practical experience in aviation radio communications as a pilot.<br><br>14.2.5.5 **Qualification for Approval as a CA/GRO Instructor.** For a person to be eligible for approval by CASA as a CA/GRO Instructor, a person is required to hold a CA/GRO Certificate and to have at least 12 months experience as a CA/GRO at an operational CA/GRS, or similar work experience as an ATC, FSO, or an Overseas Aeronautical Radio Operator that has carried out duties similar to the CA/GRO duties.<br><br>**14.2.6 Examination and Practical Testing of Trainee CA/GROs**<br><br>14.2.6.1 Trainee CA/GROs must pass both the written CA/GRO examination and the practical test, prior to being granted a CA/GRO certificate.<br><br>14.2.6.2 The written examination and the practical test are to be conducted by a CASA approved CA/GRO Instructor. Where possible, the CA/GRO Instructor conducting these examinations should not be the same person that delivered the CA/GRO training course to the trainee under examination.<br><br>14.2.6.3 The written examination and the practical test will be conducted in the English language only. Trainees may make use of the following reference documentation in the examination:<br>AIP Book;<br>AIP ERSA;<br>Visual Flight Guide published by CASA;<br>Aeronautical Charts published by the AIS; | | |

| PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES | | |
|---|---|---|
| **Proposed Amendment** | **Code** | **Reasons** |
| Civil Aviation Regulations and Civil Aviation Safety Regulations; and<br>Civil Aviation Orders.<br>Other reference material such as notes and other aviation documentation is not permitted. | | |
| 14.2.6.4 The pass level for both the written examination and the practical test is 70%. The pass level must be corrected to 100% by the CA/GRO Instructor by subsequent aural instruction and questioning of the candidate's knowledge or practical skills deficiencies. | | |
| 14.2.6.5 CA/GRO Instructors are to record the results of the written examination and the practical test. A CA/GRO Examination Report Form similar to the example form as shown at Annex D to AC 139-24 is to be completed by the CA/GRO Instructor for every written examination/practical test. A copy of the Examination Report Form is to be provided to the candidate as the candidate's evidence of passing or failing the course and for inclusion with the candidate's application for a CA/GRO Certificate. | | |
| **14.2.7 Applying to CASA for CA/GRO certificate** | | |
| 14.2.7.1 The application form for a CA/GRO certificate is CASA Form 715. Applicants are to complete a Form 715 for each application, and attach the completed CA/GRO Examination Report form. | | |
| 14.2.7.2 **CASA action.** After receiving an application, before issuing a CA/GRO certificate to an applicant, CASA must:<br>(a) confirm the applicant's identity and the prerequisite qualifications;<br>b) confirm that the applicant has passed the CA/GRO training course; (ATC and FSO licence holders excepted);<br>If the applicant satisfies these requirements, CASA will issue the applicant with a Certified Air/Ground Radio Operator Certificate (CASA Form 716). | | |
| **14.2.8 Currency of CA/GRO Certificate** | | |
| 14.2.8.1 A CA/GRO certificate is valid and remains current for 10 years from the date of issue of the certificate. | | |
| 14.2.8.2 The 10 year currency restriction is to provide for some assurance of recency of capability. | | |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|
| **14.2.9 Location Specific On-the-Job Familiarisation – Mandatory Requirement**<br>14.2.9.1 All CA/GROs must undergo location specific on-the-job familiarisation to the satisfaction of the Aerodrome Operator providing the CA/GRS. At CASA's discretion, CASA may undertake a check of the CA/GRO on completion of site specific on-the-job familiarisation prior to a CA/GRO being permitted to operate a CA/GRS unsupervised.<br>14.2.9.2 Aerodrome Operators are responsible to advise CASA that a CA/GRO has undergone location specific on-the-job familiarisation and is capable of operating at the particular location without supervision. CASA will then inform the Aerodrome Operator whether or not CASA will undertake an independent check of the CA/GRO before being permitted to operate the service.<br>**14.2.10 Example of CA/GRO Examination Report form**<br>14.2.10.1 An example of a CA/GRO Examination Report form is at Annex D to AC 139-24.<br>**14.2.11 CA/GRO Syllabus of Training**<br>14.2.11.1 CA/GRO training courses provided by any aviation training organisation must have a Syllabus of Training that addresses the CA/GRO Competency Standard.<br>Note: The recommended syllabus of training for the CA/GRO training course is included at Annex C to Advisory Circular AC 139-24. | | |

# PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES

| Proposed Amendment | Code | Reasons |
|---|---|---|
| ***Substitute*** existing **Paragraph 14.2.3 CA/GRS Operating Standards and Procedures** with the following:<br><br>**14.2.3~~1~~2 CA/GRS Operating Standards and Procedures**<br>14.2.3~~1~~2.1 A CA/GRS must provide the following service to aircraft within ~~airspace designated as an MBZ~~ the CTAF ~~area~~ in which the aerodrome is located:<br>(a) advice of relevant air traffic in the ~~MBZ airspace~~ CTAF or on the aerodrome;<br>b) aerodrome weather and operational information, including:<br>(i) wind speed in knots and direction in degrees magnetic;<br>(ii) the runway preferred by wind or noise abatement requirements;<br>(iii) runway surface conditions;<br>(iv) QNH;<br>(v) temperature;<br>(vi) cloud base and visibility;<br>(vii) present weather;<br>(viii) other operational information;<br>(ix) for departing aircraft, a time check;<br>(x) call-out of the aerodrome emergency services;<br>(xi) provide aerodrome information to pilots who telephone the service.<br><br>14.2.3~~1~~2.2 A CA/GRO may also provide other information requested by pilots.<br><br>14.2.3~~1~~2.3 The decision to use, or not to use, information provided by a CA/GRO rests with the pilot in command.<br><br>14.2.3~~1~~2.4 A permanent CA/GRS must be provided with the following facilities and documentation:<br>(a) a suitable work area that provides the operator with a full view of the manoeuvring area and circuit area.<br>(b) two-way VHF radio communications;<br>(c) an AAIS;<br>(d) a telephone;<br>(e) a means of receiving NOTAM; | **E** | The term 'MBZ' is no longer in use. |

| PROPOSED AMENDMENTS – MANUAL OF STANDARDS (MOS) PART 139 – AERODROMES | | |
|---|---|---|
| **Proposed Amendment** | **Code** | **Reasons** |
| (f) instrumentation that meets Bureau of Meteorology and ICAO Annex 3 standards for aviation use, to provide the following meteorological information:<br>(i) wind direction and speed (2 minute averaging); instrument measurement accuracy to be: Direction +- 5 degrees; Speed +- 1kt up to 20kt;+- 5% above 20kt;<br>(ii) QNH (Measured to within 0.1hPa and rounded down to the next whole integer; e.g. 1010.9hPa is reported as 1010hPa.<br>(iii) air temperature (measured to within 0.5 degrees Celsius and rounded up to the next whole degree Celsius; e.g. 12.5 degrees Celsius is reported as 13 degrees Celsius.<br>(g) current aeronautical documentation, NOTAM, and charts appropriate to IFR and VFR operations within the ~~MBZ~~CTAF.<br>(h) the Aerodrome Emergency Plan (AEP) for the aerodrome. | | |
| 14.2.3~~1~~2.5 A CA/GRO must use the standard aviation communication techniques and phraseology set out in the AIP. | | |
| 14.2.3~~1~~2.6 A CA/GRS call-sign will be the location name of the aerodrome followed by the word 'Radio'. | | |
| 14.2.3~~1~~2.7 The aerodrome operator must provide NOTAM advice to the AIS of the establishment of, or any changes to, a CA/GRS. | | |
| **14.2.4~~1~~3 Broadcasting of Aerodrome Information on AAIS** | | |
| 14.2.4~~1~~3.1 Aerodrome information must be broadcast on the AAIS in the following order:<br>• preferred runway<br>• wind direction and speed<br>• runway surface conditions<br>• QNH<br>• temperature<br>• cloud base and visibility<br>• present weather or CAVOK<br>• aerodrome operational information | | |

# Annex B

## Draft Advisory Circular AC 139-24(0) – Guidelines for the Provision of a Certified Air/Ground Radio Service

**Advisory Circulars**

**Advisory Circulars** (ACs) are intended to:

- provide recommendations and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations; or
- explain certain regulatory requirements by providing interpretive and explanatory material.

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Australian Government
Civil Aviation Safety Authority

# DRAFT
# Advisory Circular

## AC 139-24(0) DECEMBER 2006

# GUIDELINES FOR THE PROVISION OF A CERTIFIED AIR/GROUND RADIO SERVICE

**CONTENTS**



## 1. REFERENCES

- Civil Aviation Safety Regulation Part 139, Division 139.F.3 Air/ground radio service.
- CASA Manual of Standards Part 139, Chapter 14.

## 2. PURPOSE

- Under Regulation 139.400 CASA may direct the operator of an aerodrome to provide a Certified Air/Ground Radio Service (CA/GRS) at the aerodrome.
- This AC provides guidance on the provision of a CA/GRS.

## 3. STATUS OF THIS AC

This AC supersedes and replaces CAAP Airways 3. It differs from the CAAP in that it includes significant revisions and additions in relation to the certification of Certified Air/Ground Radio Operators (CA/GROs).

***Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.***

***Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material.***

***ACs should always be read in conjunction with the referenced regulations.***

## 4. DEFINITIONS AND ABBREVIATIONS FOR THIS AC

| | |
|---|---|
| AAIS | Automatic Aerodrome Information Service. The provision of current, routine information for aircraft arriving at or departing from an aerodrome by means of repetitive broadcasts on a discrete frequency during the hours the CA/GRS is in operation. |
| AC | Advisory Circular |
| ACMA | Australian Communications and Media Authority |
| AFRU | Aerodrome Frequency Response Unit |
| AEP | Aerodrome Emergency Plan |
| AIP | Aeronautical Information Publication |
| AIS | Aeronautical Information Service |
| ATC | Air Traffic Controller |
| ATIS | Automatic Terminal Information Service |
| ATPL | Air Transport Pilot Licence |
| ATSB | Australian Transport Safety Bureau |
| AWS | Automatic Weather Station |
| BoM | Bureau of Meteorology |
| CAO | Civil Aviation Order |
| CA/GRS | Certified Air/Ground Radio Service. An aerodrome radio information service regulated under Division F.3 of CASR Part 139 and operating as described in this AC. Provides operational information to aircraft in CTAF(R) areas. |
| CA/GRO | The radio operator of a Certified Air/Ground Radio Service |
| CASA | Civil Aviation Safety Authority |
| CAR | Civil Aviation Regulations (1988) |
| CASR | Civil Aviation Regulations (1998) |
| CAVOK | Ceiling and Visibility OK |
| CPL | Commercial Pilot Licence |
| CTA | Control Area |
| CTAF | Common Traffic Advisory Frequency |
| CTAF(R) | CTAF where a serviceable VHF radio must be carried in aircraft and where mandatory radio broadcasts by pilots apply (reference CAR 166A |
| DALR | Dry Adiabatic Lapse Rate |
| DME | Distance Measuring Equipment |
| ERSA | En Route Supplement Australia |
| FSO | Flight Service Officer |
| GA | General Aviation |
| hPA | Hectopascal |
| ICAO | International Civil Aviation Organization |

| | |
|---|---|
| IFR | Instrument Flight Rules |
| MOS | Manual of Standards |
| LDA | Landing Distance Available |
| NDB | Non-directional Radio Beacon |
| NOTAM | Notice to Airmen |
| NPA | Non-Precision Approach (procedures at aerodromes) |
| okta | measure of cloud cover |
| PAPI | Precision Approach Path Indicator |
| PPL | Private Pilot Licence |
| PTT | Press-to-talk |
| QNH | Altimeter sub-scale setting to obtain elevation or altitude |
| RH | Relative Humidity |
| R/T | Radio Telephony |
| relevant traffic | Traffic information broadcast to a pilot by a CA/GRO about other known aircraft operating in the CTAF, or aircraft, vehicles, or personnel on or near the manoeuvring area, which may constitute a conflict hazard to the aircraft concerned. |
| RT | radiotelephony |
| RPT | Regular Public Transport |
| RNAV(GNSS) | Area Navigation (Global Navigation Satellite System) |
| RNAV(RNP) | Area Navigation (Required Navigation Performance) |
| SALR | Saturated Adiabatic Lapse Rate |
| SARP | Standard and Recommended Practice (of ICAO) |
| TODA | Take-off Distance Available |
| TORA | Take-off Run Available |
| T-VASIS | 'T' Visual Approach Slope Indicator System |
| UTC | Universal Time Code |
| U/S | Unserviceable |
| VFR | Visual Flight Rules |
| VHF | Very High Frequency |
| VOR | VHF Omni-directional Radio Range |
| WMO | World Meteorological Organization |

## 5. INTRODUCTION AND BACKGROUND

**5.1** In the late 1990s CASA developed an aerodrome radio information service termed 'Certified Air/Ground Radio Service' (CA/GRS). The service was originally regulated under Civil Aviation Order (CAO) 92.3. However, with the promulgation of Civil Aviation Regulation (1998) Part 139, CAO 92.3 was repealed and the CA/GRS is now regulated under CASR Part 139 Division F.3 and the Manual of Standards for Part 139 (Chapter 14, Section 2). It is recommended that readers of this AC refer to that regulatory documentation.

**5.2** This AC contains guidelines for the establishment and operation of a CA/GRS, as well as the process for the certification of prospective Certified Air/Ground Radio Operators (CA/GROs). The annexes to this AC contain:

(a) at Annex A, procedures and phraseology for CA/GROs;

(b) at Annex B, procedure for pre-commissioning and annual compliance check of a CA/GRS and its operators;

(c) at Annex C, the competency standard for CA/GROs and the recommended training syllabus for the training course for prospective CA/GROs; and

(d) at Annex D, an example of a CA/GRO Examination Report form for use by CASA-approved CA/GRO instructors.

## 6. SAFETY ENHANCEMENT PROVIDED BY CA/GRS

**6.1** The CA/GRS is an addition to, not a replacement for, Common Traffic Advisory Frequency (CTAF/CTAF(R)) procedures undertaken by pilots. In essence, a CA/GRS enhances the existing procedures used by pilots by providing them with the following relevant operational information:

(a) The CA/GRS is a frequency confirmation system - that is, pilots receive a confirming response to their CTAF broadcasts so that they know they have selected the correct radio frequency;

(b) Pilots are provided with relevant traffic information for conflict avoidance purposes. However, the CA/GRO should not burden pilots with traffic that is clearly not in potential conflict, or traffic that the pilot has already become aware of by pilot-to-pilot communication, or by copying a traffic broadcast made immediately beforehand by the CA/GRO to another aircraft in the CTAF; and

(c) Pilots are provided with current aerodrome weather information, meteorological parameters, the preferred runway to use, and other current aerodrome information, to assist in decision making.

## 7. WHERE MAY A CA/GRS BE PROVIDED?

**7.1** Subregulation 139.400(1) provides that CASA may direct the operator of an aerodrome to provide a CA/GRS at the aerodrome. At the date of issue of this AC, there are two aerodromes subject to such a direction. Those aerodromes are Ayers Rock Airport and Broome International Airport. In addition, the Department of Defence may provide a CA/GRS at its aerodromes subject to Defence requirements.

**7.2** Subregulation 139.400(2) provides that CASA must not give a direction under Regulation 139.400(1) unless an aeronautical study for the aerodrome has found that a CA/GRS is required at the aerodrome for the safety of air navigation.

**7.3** Regulation 139.405 provides that an aerodrome operator who has not been given a direction under Regulation 139.400 may voluntarily provide a CA/GRS at any non-controlled aerodrome.

**7.4** Subregulation 139.395(1) requires that a CA/GRS must be certified by CASA. Subject to such CASA certification, a CA/GRS may be provided at any non-controlled aerodrome. Depending upon the particular application, such a service may be provided on a permanent or temporary basis.

**7.5** As well as being permanently provided at two of the busiest regional aerodromes (i.e. at Ayers Rock and Broome) where there is a mix of RPT and general aviation aircraft, the service is also well suited to one-off events where there is a short term traffic concentration such as at air-shows or fly-ins where an air traffic control service is not feasible or justified.

## 8. INFORMATION PROVIDED BY A CA/GRS

**8.1** A CA/GRS provides the following:

(a) advice of **relevant traffic** in the airspace or on the aerodrome;

*Note: The meaning of the term **'relevant traffic'** is defined in section 4 above.*

(b) for departing aircraft, a time check; and

(c) aerodrome information, broadcast by means of an Automatic Aerodrome Information Service (AAIS, similar to Automatic Terminal Information Service (ATIS), including:

(i) AAIS sequence identifier Alpha, Bravo, Charlie, etc., and time (UTC) of the AAIS report;

(ii) The runway(s) preferred by wind, or by noise abatement requirements;

(iii) Runway surface conditions;

(iv) Wind direction and wind speed;

(v) Visibility;

(vi) Present weather or CAVOK;

(vii) Cloud base and coverage;

(viii) Temperature;

(ix) QNH;

(x) Other aerodrome related operational information as applicable.

*Note: As the QNH must be provided from a source meeting Bureau of Meteorology (BoM) standards of accuracy for aviation use, and the CA/GRO is a CASA approved meteorogical observer, it meets the criteria for reduction of published IAL minima (reference AIP ENR 1.5 paragraph 5.3.2).*

**8.2** A CA/GRS may also provide other information as requested by pilots. Pilots should request any information that may assist them in decision-making or provision of necessary information for operational purposes.

## 9. PROCEDURES AND USE OF INFORMATION BY PILOTS

**9.1** The operating procedures used by pilots where a CA/GRS is operating are the same as those in any CTAF where mandatory radio carriage and use applies (termed CTAF(R)). The required broadcasts as set out in regulation 166 of the CARs are those that are used where a CA/GRS is operating. The decision to use, or not to use, information provided by a CA/GRO rests with the pilot in command.

## 10. ADDITIONAL SERVICES THAT MAY BE PROVIDED BY A CA/GRO

**10.1** In addition to the above services provided by a CA/GRS, a CA/GRO may also:

(a) call out emergency services when requested by a pilot to do so, or in their own judgement where such action is warranted;

(b) provide aerodrome information to pilots who telephone the service;

(c) monitor and inform aircraft on the movements of surface vehicles on the aerodrome movement area;

(d) briefly communicate with surface vehicles on the aerodrome to co-ordinate their safe operation.

## 11. FACILITIES AND DOCUMENTATION FOR PROVISION OF A CA/GRS

**11.1** The facilities and documentation to be available on-site to a permanent CA/GRS are:

(a) a suitable work area that provides the CA/GRO with a full view of the manoeuvring area and circuit area, and preferably the apron movement area as well;

(b) reliable two-way VHF radio telephony (R/T) equipment;

(c) equipment to provide a recorded AAIS on a discrete VHF frequency;

(d) a telephone;

(e) an on-line means of accessing NOTAMs;

(f) instrumentation, that meets the Bureau of Meteorology (BoM) standards for aviation use, to provide accurate readouts of:

  (i) the wind direction (degrees magnetic) and wind speed (knots);

  (ii) aerodrome QNH in hectopascals; and

  (iii) air temperature in degrees centigrade.

*Note: An on-line read-out from an Automatic Weather Station (AWS) located at the aerodrome that provides wind direction, wind speed, QNH, and air temperature, to BoM standards for aviation use, meets this requirement. If an AWS connection and read-out is not available at the aerodrome, the meteorological measuring equipment used by the CA/GRS must meet BoM and/or ICAO Annex 3 standards for accuracy. For further information on such standards, contact CASA's Airways and Aerodromes Branch.*

(g) current aeronautical documentation, NOTAMs, and aeronautical charts appropriate to IFR and VFR operations within the CTAF and adjoining airspace;

(h) the Aerodrome Emergency Plan (AEP) for the aerodrome; and

(i) a copy of this AC.

*Note: Depending on their function, temporary CA/GRS may not need all the above facilities. Contact CASA's Airways and Aerodromes Branch for advice and approval.*

## 12. PROCEDURES AND PHRASEOLOGY

**12.1** A CA/GRO will use the standard aviation communication techniques and phraseology set out in AIP GEN 3.4. Where no standard phraseology is available for a particular situation, the CA/GRO should use plain English.

**12.2** A guide to procedures and phraseology for CA/GROs is in Annex A of this AC.

## 13. WHO CAN BE A CA/GRO?

**13.1** The information in this section is essentially repeated from the standards that appear at Chapter 14.2 of the Manual of Standards (MOS) Part 139.

**13.2** The primary purpose of a CA/GRS is to enhance the safety of RPT aircraft operations by the provision of relevant, timely and accurate air traffic information and meteorological observations. These aspects of the service require CA/GROs to have special competencies acquired as a result of specific training and experience. The service is referred to as '*certified*' because the operators will be certified by CASA as having the competencies required of this type of aeronautical radio operator.

**13.3** The CA/GRO Competency Standard that is included in the Part 139 MOS is the basis for the training and examination of those persons who do not hold the necessary prerequisite qualifications and experience to be granted a CA/GRO certificate without undergoing the specific training defined hereunder.

### 13.4 CA/GRO Prerequisite Aeronautical Knowledge Requirements

**13.4.1 Air Traffic Controller (ATC) or Flight Service Officer (FSO) licence holders.** The competency and aeronautical knowledge requirements for the award of a CA/GRO certificate are completely satisfied if a person has previously undertaken training leading to the award of an ATC licence or an Australian FSO licence. Accordingly, CASA will issue a CA/GRO certificate, without the requirement for any further training and written examination or practical test, to any person who provides evidence that he or she holds, or has held within the last 10 years, an ATC licence or an Australian FSO licence.

*Note: The 10 year restriction is to provide assurance of appropriate recency of capability.*

**13.4.2 Persons who hold a Pilot Licence.** Persons who hold a Private Pilot Licence (PPL) or a Commercial Pilot Licence (CPL) or an Air Transport Pilot Licence (ATPL) or the military equivalents possess the prerequisite aeronautical knowledge requirements for CA/GRO training. Such persons must undergo a CA/GRO course of training that addresses the competency and knowledge requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.

**13.4.3 Holders of overseas issued aeronautical radio operator licences.** Persons who hold an overseas aeronautical radio operator licence must in the first instance contact CASA for the assessment of their prerequisite knowledge and experience by providing a copy of their overseas licence/certificate, and details of their previous relevant experience and employment. If CASA accepts that the person possesses the required prerequisite qualifications, such persons must undergo a CA/GRO course of training that addresses the competency requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.

**13.4.4 Other applicants.** All other persons must possess the prerequisite aeronautical knowledge requirement of a pass in the CASA Private Pilot Licence Theory Examination (or passes in the CASA CPL Theory examinations). Such persons must undergo a CA/GRO course of training that addresses the competency requirements specified hereunder, and pass a written and practical test relevant to those specified competencies and knowledge requirements.

### 13.5 Training Course and CA/GRO Instructors

**13.5.1** All prospective trainees must hold the prerequisite aeronautical knowledge qualifications as specified at section 13.4 above.

**13.5.2** Training for the CA/GRO certificate must be in accordance with a syllabus of training that addresses the competency standards specified in the Part 139 MOS and training must be delivered by a person who is a ***CASA-approved CA/GRO Instructor***. The names of CASA-approved CA/GRO Instructors and approved training providers are available on application to CASA's Airways and Aerodromes Branch (call 131 757).

**13.5.3** Training by a CASA approved CA/GRO Instructor may be carried out at an aerodrome at which a CA/GRS service is provided, using the CA/GRS facilities (after-hours of normal operation of the CA/GRS).

**13.5.4 CA/GRO Training Course.** As a guide only, and depending upon the previous level of aviation experience, about 80 hours of instruction could be expected to address the training course of all competencies. This estimate is based on face-to-face classroom and practical tuition, a general rather than in-depth treatment of the syllabus items, and that the trainees hold a pass in the CASA PPL theory examination and have previous practical experience in aviation radio communications as a pilot.

**13.5.5 Qualification for Approval as a CA/GRO Instructor.** For a person to be eligible for approval by CASA as a CA/GRO Instructor, a person is required to hold a CA/GRO Certificate and to have at least 12 months experience as a CA/GRO at an operational CA/GRS, or similar work experience as an ATC, FSO, or an Overseas Aeronautical Radio Operator that has carried out duties similar to the CA/GRO duties.

### 13.6 Examination and Practical Testing of Trainee CA/GROs

**13.6.1** Trainee CA/GROs must pass both the written CA/GRO examination and the practical test, prior to being granted a CA/GRO certificate.

**13.6.2** Both the written examination and the practical test are to be conducted by a CASA-approved CA/GRO Instructor.

**13.6.3** The written examination and the practical test will be conducted in the English language only. Trainees may make use of the following reference documentation in the examination:

AIP Book;
AIP En-Route Supplement Australia (ERSA);
Visual Flight Guide published by CASA;
Aeronautical Charts published by the Aeronautical Information Service (AIS)
CARs and CASRs;
Civil Aviation Orders.

*Note: Other reference material such as notes and other aviation documentation is not permitted.*

**13.6.4** Candidates must pass both the written examination and the practical test to be eligible for award of a CA/GRO Certificate.

### 13.7 Applying to CASA for CA/GRO Certification

**13.7.1** The application form for a CA/GRO certificate is CASA Form 715. See CASA website http://www.casa.gov.au/manuals/ to access CASA Form 715.

**13.7.2 CASA action.** After receiving an application, before issuing a CA/GRO certificate to an applicant, CASA will:

(a) confirm the applicant's identity and the prerequisite qualifications; and

(b) confirm that the applicant has passed the CA/GRO training course (ATC and FSO licence holders excepted).

If the applicant satisfies these requirements, CASA will issue the applicant with a Certified Air/Ground Radio Operator Certificate (CASA Form 716).

### 13.8 Currency of CA/GRO Certificate

**13.8.1** A CA/GRO certificate is valid and remains current for 10 years from the date of issue of the certificate.

**13.8.2** The 10 year currency restriction is to provide for some assurance of recency of capability.

## 14. LOCATION SPECIFIC ON-THE-JOB TRAINING AND FAMILIARISATION – MANDATORY REQUIREMENT

**14.1** The Part 139 MOS specifies that all CA/GROs must undergo location specific on-the-job training and familiarisation to the satisfaction of the Aerodrome Operator providing the CA/GRS. There is no exception to this safety and quality assurance requirement.

**14.2** At CASA's discretion, CASA may undertake a check of the CA/GRO on completion of the location specific on-the-job training and familiarisation prior to a CA/GRO being permitted to operate a CA/GRS unsupervised.

**14.3** Aerodrome operators are responsible to advise CASA that a CA/GRO has undergone location-specific on-the-job familiarisation and is capable of operating at the particular location without supervision. CASA will then inform the aerodrome operator whether CASA will undertake an independent check of the CA/GRO before being permitted to operate the service.

**14.4 Other regulatory authorisations necessary.** There are two other pre-existing regulatory requirements under CAR 1988 which have to be satisfied before a CA/GRO can be authorised to operate a service at a particular aerodrome. If an applicant does not hold an Australian pilot's licence, CASA will also issue the applicant with an Aircraft Radiotelephone Operator Certificate of Proficiency under regulation 83A of the CARs. Additionally, prior to operating a service at a particular aerodrome, a CA/GRO will be issued with an instrument of approval under regulation 120 of the CARs that applies to the provision of meteorological observations at a particular aerodrome. (CAR 120 requires that meteorological observations provided to pilots be from an approved source).

## 15. CA/GRO SYLLABUS OF TRAINING

**15.1** The recommended syllabus of training for a CA/GRO training course is in Annex C of this AC. Training organisations should use this syllabus unless otherwise agreed by CASA.

## 16. STATION CALL-SIGN

**16.1** A CA/GRS call-sign is the location name of the aerodrome followed by the word 'Radio'.

*For Example: 'Ayers Rock Radio'*

## 17. NOTIFICATION OF SERVICE HOURS OF OPERATION

**17.1** AIP ERSA FAC will contain information on CA/GRS, including the radio frequency of operation (CTAF), the hours of operation of the service, and the Very High Frequency (VHF) on which the AAIS is broadcast.

**17.2** The aerodrome certificate holder must inform AIS of the establishment of, or any significant changes to (such as the hours of operation) a CA/GRS.

## 18. ACMA LICENSING AND EQUIPMENT REQUIREMENTS

**18.1** It is a legal requirement under the *Radio Communications Act 1992* that all aeronautical ground transmitting stations, other than hand-held radios, must have an assigned aeronautical frequency licence issued by the Australian Communications and Media Authority (ACMA).

**18.2** Further information about Aeronautical Licences and licence fees may be obtained from the ACMA's Internet website http://www.acma.gov.au.

**18.3** The ACMA requires that aeronautical radio communication equipment of the type used for a CA/GRS meets its Equipment Compliance Requirement (ECR) 203A.

**18.4** For the aeronautical band frequencies including the CTAF frequency used by a CA/GRS, Airservices Australia is the licensing agent of ACMA. Accordingly, in the first instance aerodrome operators should approach Airservices Australia (attention: Spectrum Manager) in making applications for frequency licensing of CA/GRS radio transmissions.

## 19. PRE-COMMISSIONING AND ROUTINE COMPLIANCE CHECKS

**19.1 Pre-commissioning check by CASA.** Subregulation 139.395(1) provides that the operator of an aerodrome must not operate, or permit to be operated at the aerodrome, an air/ground radio service that is not certificated by CASA. A pre-commissioning compliance check, in accordance with the checklist in Annex B of this AC, will be undertaken by CASA before any CA/GRS is approved for operation. This applies to both permanent and temporary services, whether directed by CASA to be provided or provided voluntarily by an aerodrome operator.

**19.2 Routine compliance checks by CASA.** CASA may undertake routine checks of the operation of a CA/GRS from time to time. Such checks will also be undertaken in accordance with the checklist in Annex B to this AC. CASA will provide an aerodrome operator with advance notification of the intention to undertake a routine check of a CA/GRS.

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Patrick Murray
Group General Manager
Air Transport Operations Group

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**ANNEX A**

## PROCEDURES AND PHRASEOLOGY FOR CA/GRS

### 1. Introduction

**1.1** Radio communication procedures and phraseology are internationally standardised with the object of ensuring uniformity in R/T communications. CA/GROs are to comply with the general radiotelephony procedures and phraseology set out in AIP GEN 3.4.

**1.2** In radio communications, a primary goal of the CA/GRS is the use of precise and concise phraseology to minimise frequency congestion.

**1.3** It is also important that CA/GROs use a straight-forward, easily understood, communication technique.

### 2. Records

**2.1 Running Sheets.** A form of 'running sheet' should be used to write down aircraft movement details, call-signs and other relevant information. As a guide, the 'running sheet' may comprise traditional flight progress strips adapted or modified to suit the location and service provided, flight progress strips reproduced on sheets of paper, or a paper form that has appropriate headings and columns.

**2.2 AAIS Message Records.** A written record, including a date/time group, of the content of each AAIS message that is broadcast should be kept as part of the daily records.

### 3. Radio Procedures

**3.1** A CA/GRO responds to the first broadcast an aircraft makes when arriving, departing or transiting the CTAF. Thereafter, the CA/GRO does not normally respond unless an aircraft specifically calls the service.

***Examples:***

'Traffic Broome, SAAB Skywest one twenty three, one five miles north, passing three thousand five hundred, inbound, estimating Broome three two, received Bravo.'

'Skywest one twenty three, Broome Radio, traffic is a Cessna 172 Delta Juliet Romeo, taxiing for departure runway two eight.'

**3.2 Visual Observations**. CA/GROs need to maintain a vigilant look out to assess the ongoing positions of aircraft, so that relevant traffic information can be provided.

**3.3** As an example, an aircraft calls taxiing for the preferred runway. An arriving aircraft has already called and advised that its ETA is 28. The CA/GRO observes the arriving aircraft on mid downwind.

***Example:***

'Traffic Ayers Rock Radio, BAe 146 Juliet Juliet Uniform, taxiing for Alice Springs, runway 13, received Delta.'

'Juliet Juliet Uniform, Ayers Rock Radio, traffic is a B737 Tango Juliet Delta mid downwind for runway 13, time one six.'

**3.4** Similarly, at airports where circuit training is being conducted, an arriving aircraft on entering the circuit and/or reporting *'DOWNWIND'*, should be provided with traffic information on relevant aircraft ahead of it in the circuit.

***Example:***

'Beech Bonanza Alpha Bravo Charlie, joining downwind, runway 24 right, full-stop.'

'Alpha Bravo Charlie, traffic is a C-152, mid downwind.'

**3.5** **Aerodrome Information** is broadcast on the AAIS. However, if a CA/GRO is requested to provide the information, it should be given in the same order as it is on the AAIS, i.e.:

- preferred runway;
- runway surface conditions;
- wind direction and wind speed;
- visibility;
- present weather or CAVOK;
- cloud and cloud base;
- temperature;
- QNH; and
- aerodrome operational information.

**3.6** While the AAIS broadcast should be kept current, there will be occasions when the wind will be fluctuating to such a degree that it does not reflect the actual conditions. In these circumstances, the provision by CA/GROs of a wind check immediately prior to take-off or on final will be of assistance to pilots.

***Example:***

AAIS Broadcast: '(airport) Information Charlie, preferred runway 31, wind 260 degrees 15 to 25 knots, cross wind runway 31 up to 18 knots, QNH 1012, temperature 24, CAVOK.'

CA/GRO: 'Wind two five zero at one eight knots.'

**ANNEX B**

## PRE-COMMISSIONING AND ROUTINE COMPLIANCE CHECK LIST

### 1. Service Facilities and Documents

**1.1** Check that following facilities and documents are in place and operational:

- work station with full view of the circuit area and manoeuvring area;
- VHF transmitter/receiver operating on the CTAF frequency;
- AAIS facility on a separate VHF;
- meteorological instrumentation meeting BoM standards for aviation use that measures:
  - wind direction in degrees magnetic;
  - wind speed in knots;
  - QNH; and
  - aerodrome air temperature in degrees Celsius.
- current aeronautical documents including NOTAM, appropriate to IFR and VFR operations within the CTAF;
- a telephone;
- AC 139-24; and
- Aerodrome Emergency Plan.

### 2. Operator Certification Status and Practical Skills at the Location

**2.1** Check that each operator holds a CA/GRO certificate, and holds authorisations from CASA under regulation 83A and regulation 120 of the CARs.

**2.2** Carry out a sample of the following checks in respect of each operator's capabilities at the location. The sample checks must include testing the capability of the operator in the provision of traffic and weather advice.

### 3. Traffic Assessment

**3.1** Operator to demonstrate the correct use of a Running Sheet in recording:

- time, aircraft call-signs and types;
- arrival, departure and transiting broadcasts;
- traffic information and weather information passed to aircraft; and
- completion of action.

**3.2** Operator to identify and describe the position of aircraft:

- on the aerodrome;
- in the circuit;
- arriving, departing; and
- transiting.

**3.3** Operator to identify potential traffic conflictions and pass advice to aircraft.

**4. Weather Assessment**

**4.1** Using an aerodrome weather information sheet, operator to demonstrate how to record:

- AAIS code letter;
- preferred runway;
- runway surface conditions;
- wind direction and wind speed;
- visibility;
- present weather or CAVOK;
- cloud amount and base; cumulonimbus if applicable;
- air temperature;
- QNH; and
- Any available information on significant meteorological phenomena in the approach, takeoff and climb-out.

**4.2** Using wind instrumentation, operator to demonstrate:

- how to obtain the wind direction and speed; and
- the use of wind direction and speed in determining the preferred runway.

**4.3** With reference to an aerodrome visibility chart, operator to identify common landmarks and determine their visual range in bearings and distances from the station.

**4.4** Operator to demonstrate how to obtain aerodrome QNH.

**4.5** Operator to interpret automatic weather station data.

**4.6** Operator to demonstrate correct recording of weather and other aerodrome information onto the AAIS.

## 5. Radio Telephony Procedures

**5.1** Operator to demonstrate an understanding of the correct phraseology and phonetics:

- aircraft call-signs;
- levels, bearings and distances;
- standard procedural words and phrases;
- time;
- establishing communications;
- responding to emergency transmissions; and
- radio test procedures and readability scales.

**5.2** Operator to demonstrate the correct phraseology to be used when passing traffic and other information to aircraft:

- arriving;
- departing; and
- transiting.

**5.3** Microphone and communication technique:

- clear, concise transmissions;
- correct use of phonetics and numbers;
- establishing and maintaining communications; and
- not creating frequency congestion.

## 6. Emergency services alerting

**6.1** Recognition of abnormal aircraft operations.

**6.2** Emergency notification procedures:

- correct assessment of emergencies; and
- authorities and/or emergency services alerted in order of priority.

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**ANNEX C**

## SYLLABUS OF TRAINING – CA/GRO TRAINING COURSE

### 1. The CA/GRO Competency Standard

**1.1** Competency is defined as the combination of knowledge, skills and attitude required to perform a task to the standard required by CASA and industry. The competency standards specify all those skills which must be demonstrated by radio operators to perform the functions of a CA/GRO safely and efficiently.

**1.2** The CA/GRO Competency Standard is in Section 14.2 of the Part 139 MOS. The Competency Standard specifies the minimum level of skills and capabilities that a person must possess to safely and satisfactorily carry out the functions of a CA/GRO. It also defines how each competency is to be assessed.

### 2. The CA/GRO Syllabus of Training

**2.1** The Syllabus of Training in this Annex is designed to impart to trainees the necessary aeronautical knowledge and the practical communication and operating skills (practical competencies) which lead to the award of the CA/GRO certificate.

### 3. CA/GRO Training Course.

**3.1** Training for the CA/GRO certificate is to be in accordance with the recommended Syllabus of Training in this Annex, unless otherwise agreed by CASA.

**3.2** It is required that prospective CA/GROs undertake a structured course of study which is provided by an approved training provider and covers all the items specified in the Syllabus of Training.

**3.3** As a guide only, a minimum of approximately 80 hours of instruction could be expected to address all the items of the Syllabus of Training. This estimate is based on face-to-face classroom and practical tuition, a general rather than in-depth treatment of the syllabus items, and assumes that trainees will have had previous exposure to civil aviation procedures and standards.

### 4. Document References

### 4.1 Legislation and Standards

- CASR Part 139, Division F.
- MOS Part 139 Chapter 14.
- AC 139-24(0).
- AIP Book GEN 3-4, 3-5.
- AIP ERSA INTRO and FAC.

### 4.2 Information Documents

- UK CAP 452, Aeronautical Radio Station Operator's Guide.
- FAA Advisory Circular 90-42F, Traffic Advisory Practices at Airports without Operating Control Towers.

## 5. Theoretical Knowledge Syllabus

### 5.1 CA/GRO Role and Responsibility

**5.1.1** Understand the requirements for and privileges of a CA/GRO certificate.

- requirements to obtain a CA/GRO certificate;
- the roles of a CA/GRO, as per Part 139 MOS Chapter 14 and AC 139-24; and
- limitations on the information provided by a CA/GRO (information service only, no control instructions).

### 5.2 Module 1 – Operation of VHF Radio Communication Systems

**5.2.1** Function and use of the following components of a VHF radiotelephone system:

- power source/battery, fuses and circuit breakers;
- transmitter, receiver, antenna, headphones/microphone, speaker;
- all control switches;
- use of radio transmit/receive/PTT switches;
- turning radio on;
- selecting correct frequency;
- use of squelch control;
- correct use of microphone;
- check of R/T system serviceability before commencement of duty;
- R/T main/standby changeover; and
- de-activate/activate the AFRU.

**5.2.2** Characteristics of VHF radio wave propagation, transmission and reception:

- propagation of VHF radio waves; and
- factors affecting the propagation of VHF radio waves
  - terrain
  - interference by other electrical equipment
  - thunderstorms
  - attenuation by spreading.

**5.2.3** Requirement for ACMA licence:

- assigned aeronautical frequency licence issued by ACMA.

### 5.3 Module 2: Maintain Watch of the Airspace and Movement Area

**5.3.1** Explain airspace architecture and organisation and operational standards in relation to CA/GRS relevance:

- Control Areas (CTA) and Class G airspace above CTAFs;
- Class G airspace;
- uncontrolled terminal areas at aerodromes; CTAF(R), CTAF, Multicom - no discrete CTAF; and
- CTAFs – CAR 166 and CAR 166A standards.

**5.3.2** Emergency radio procedures by pilots:

- pilot declaration of an emergency;
- distress message ('Mayday' broadcast);
- urgency message ('PAN' broadcast);
- priority of broadcasts;
- imposition of radio silence;
- loss of radio (receiver, transmitter, receiver and transmitter); and
- procedure in event of failure to establish or maintain communications.

**5.3.3** Aerodromes:

- runway numbering;
- runway threshold;
- runway centreline;
- movement area;
- holding points;
- taxiways;
- apron area;
- cone and gable markers;
- obstacles;
- lighting; T-VASIS; PAPI; Runway lighting; Taxiway lighting;
- use of Navaids; NDB, VOR, DME,
- RNAV (GNSS) and RNAV (RNP) approaches;
- Aerodrome Reference Code; and
- declared runway distances, TORA, TODA, LDA.

**5.3.4** Operational Procedures in CTAF(R):

- difference between IFR and VFR;
- straight-in approaches;
- standard traffic circuit for arrivals and departures;
- take-off procedures by aircraft (distinguish between G/A and Airline aircraft); and
- approach procedures by aircraft (distinguish between G/A and Airline aircraft).

**5.3.5** Standard radio procedures in CTAF(R):

- mandatory carriage and use of radio in all aircraft using CTAF(R);
- pilot broadcast on entry to CTAF(R);
- broadcasts for straight-in approaches;
- broadcast for joining the circuit;
- broadcast for taxiing for departure;
- broadcast for overflying;
- awareness of possible no-radio aircraft entry; and
- awareness of inoperative radio in aircraft (U/S transmitter only, U/S receiver only).

**5.3.6** Visual scan technique:

- procedure to maintain visual scan of aerodrome and circuit area; and
- procedure to visually detect arriving aircraft.

**5.4 Module 3: Assess Relevant Air Traffic**

**5.4.1** Performance characteristics of different types of aircraft:

- on initial approach;
- on final approach to landing;
- on take-off;
- on climbout; and
- on visual manoeuvring (circling).

**5.4.2** Define 'relevant traffic':

- knowledge of the factors conducive to mid-air collisions; and
- when is an aircraft ‘relevant traffic’.

**5.5** Ability to maintain a mental awareness of all aircraft positions and their intentions:

- maintain vigilant visual lookout and radio awareness to assess the ongoing positions of aircraft so that relevant traffic information can be provided at any time.

**5.5.1** Flight Progress Strips or log of movements:

- record of time of arrival/landing/taxiing takeoff, aircraft callsign, type, arrival or departure, runway, track.

### 5.6 Module 4: Communicate with Aircraft

**5.6.1** Understanding and use of phonetics and standard phraseology:

- phonetic alphabet and numbers;
- standard procedural words and phrases;
- correct use of aircraft call-signs;
- transmission of numbers;
- transmission of time;
- radio test procedure/readability scale;
- avoiding over-transmissions;
- establishing communication;
- clipped transmissions and consequences; and
- CA/GRO broadcast procedures in response to pilot broadcasts;
  - entry to CTAF;
  - taxiing for departure;
  - overflying CTAF;
  - radio silence otherwise maintained when appropriate.

### 5.7 Module 5: Make Meteorological Observations and Reports

**5.7.1** Quick Revision of Basic Aviation Meteorology (syllabus similar to PPL), only if necessary for recency:

- The causes of weather;
- The movement of air;
- Humidity, RH, Dew-point temperature;
- International Standard Atmosphere;
- Environment lapse rate, DALR, SALR;
- Cloud production and classification, cloud forming mechanisms;
- High level cloud; middle level cloud; low level cloud;
- Types of precipitation;
- Airframe and engine icing causes and effects;
- Cold fronts, squall lines; warm fronts;
- Hazardous weather; mountain waves; thunderstorms; micro-bursts;
- Local weather; sea breeze, land breeze, anabatic winds; katabatic winds, thermal and mechanical turbulence, temperature inversions, fog formation;
- Synoptic meteorology;

- Winds in the friction layer; veering and backing; and
- Tropical cyclones; four stages, warning symptoms.

**5.7.2** Meteorological observation and reporting:

- Define the term 'visibility';
- Describe the effects that precipitation, mist and fog, dust storms, haze and smoke, has on visibility;
- Describe hazardous aerodrome weather conditions; wind shear; microburst; tropical storms;
- Identify low level cloud types;
- Observation of cloud amount; cloud type; cloud height;
- Altimetry: Describe the basis of altimetry;
- Recall the datum height from which an altimeter indicates height when the following are set on the altimeter sub-scale;
- Area QNH;
- Local QNH;
- Standard Pressure Setting;
- Define the WMO/ICAO SARP for observations and reporting of surface wind for automated and non-automated measurement systems (ICAO Annex 3 paragraph 4.5);
- Location of sensor;
- Averaging period of 2 minutes;
- Reporting of variations in direction and speed (gusts);
- Define the WMO/ICAO SARP for the observing and reporting of visibility (ICAO Annex 3 paragraph 4.6);
- Define the WMO/ICAO SARP for the observing and reporting of present weather at an aerodrome (ICAO Annex 3 paragraph 4.8);
- Define the WMO/ICAO SARP for the observing and reporting of cloud (ICAO Annex 3 paragraph 4.9);
- Define the WMO/ICAO SARP for the observing and reporting of air temperature (ICAO Annex 3 paragraph 4.10);
- Define the WMO/ICAO SARP for the observing and reporting of pressure values (ICAO Annex 3 paragraph 4.11); and
- Define the WMO/ICAO SARP for the observing and reporting of supplementary information (ICAO Annex 3 paragraph 4.12).

## 5.8 Module 6: Operate the Automatic Aerodrome Information Service

- Describe the format and content of the AAIS voice report.
- Describe the criteria for change to the AAIS recording (changes of 10 degrees/ 5 knots wind, 1hPA rounded QNH, 1 degree air temperature, 1 okta change in cloud amount, visibility changes by 1 km, wind shear occurrence).

**5.9 Module 7: Communicate with Surface Vehicles on the Movement Area**

- Standard communication phraseology between CA/GRO and surface vehicles.
- Clearance distance requirements between and aircraft operating on the movement area/apron and surface vehicles.

**5.10 Module 8: Manage Abnormal and Emergency Situations**

- Reference: AIP ERSA EMERG.
- Recognition of aircraft abnormal operation and emergencies.
- Aircraft urgency and distress messages.
- Aerodrome AEP.
- Action by CA/GRO in response to abnormal operations and emergency operations.

**6. Practical Syllabus**

**6.1** Demonstrate for VHF communication equipment:

- The method of operating the communication transmitter and receiver; and
- The correct procedure for a routine check of the VHF R/T equipment at the commencement each day.

**6.2** Demonstrate during a simulated CA/GRS communication exercise:

- Correct use of the R/T system;
- Correct transmission and reception technique;
- Correct and timely use of phraseology relevant to the CA/GRS;
- Reporting of relevant traffic and other alerting transmissions; and
- Correct R/T response to a simulated emergency.

**6.3 Traffic Assessment**

**6.3.1** Operator to demonstrate the use of a running sheet/flight strips in recording:

- time, aircraft call-signs, and aircraft types, and movement;
- arrival, departure and transiting broadcasts;
- traffic information passed to aircraft; and
- completion of action.

**6.3.2** Operator to identify and describe the position of aircraft:

- on the aerodrome;
- in the circuit;
- arriving, departing; and
- transiting.

**6.3.3** Operator to identify potential traffic conflictions.

### 6.4 Weather Assessment

**6.4.1** Using an aerodrome weather information sheet, operator to demonstrate how to record:

- AAIS code letter;
- preferred runway;
- wind direction and wind speed;
- visibility;
- present weather;
- cloud amount and base;
- air temperature;
- QNH; and
- Any available information on significant meteorological phenomena in the approach, takeoff and climb-out.

**6.4.2** Using wind instrumentation, operator to demonstrate:

- how to obtain the wind direction and speed; and
- the use of wind direction and speed in determining the preferred runway.

**6.4.3** With reference to an aerodrome visibility chart, operator to identify common landmarks and determine their visual range in bearings and distances from the station.

**6.4.4** Operator to demonstrate how to obtain aerodrome QNH.

**6.4.5** Operator to interpret automatic weather station data.

**6.4.6** Operator to demonstrate correct recording of weather and other aerodrome information onto the AAIS.

### 6.5 Radio Telephony Procedures

**6.5.1** Operator to demonstrate an understanding of the correct phraseology and phonetics:

- aircraft call-signs;
- levels, bearings and distances;
- standard procedural words and phrases;
- time;
- establishing communications;
- responding to emergency transmissions; and
- radio test procedures and readability scales.

**6.5.2** Operator to demonstrate the correct phraseology to be used when passing traffic and other information to aircraft:

- arriving;
- departing;
- transiting; and
- microphone and communication technique;
  - clear, concise transmissions;
  - correct use of phonetics and numbers;
  - establishing and maintaining communications; and
  - not creating frequency congestion.

**6.6 Emergency services alerting**

**6.6.1** Recognition of abnormal aircraft operations.

**6.6.2** Emergency notification procedures:

- correct assessment of emergencies;
- AEP initiation; and
- authorities and/or emergency services alerted in order of priority.

**7. Written Examination and Practical Test**

**7.1** A written theory examination and a practical test must be completed and each passed.

**7.2** The pass mark for the written examination and the practical test is 70% each.

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**ANNEX D**

## EXAMPLE OF CA/GRO EXAMINATION REPORT FORM

| **NAME OF TRAINING ORGANISATION** | **REPORT ON RESULTS OF CA/GRO EXAMINATION AND PRACTICAL TEST** |
|---|---|

**CANDIDATE'S NAME AND DETAILS**

| Family Name | Given Names | Title | Date of Birth |
|---|---|---|---|
| | | | |

| Residential Address |
|---|
| |

| Postal Address (If Different) |
|---|
| |

| Telephone No:<br>Home | Work | Mobile | Fax | ARN (if applicable) |
|---|---|---|---|---|
| | | | | |

| Details of Aeronautical Licences held: | Licence No and Date |
|---|---|
| Air Traffic Controller's Licence ..... | ..... |
| Flight Service Officer's Licence..... | ..... |
| Air Transport Pilot's Licence ..... | ..... |
| Commercial Pilot's Licence..... | ..... |
| Overseas Radio Operator's Licence ..... | ..... |
| Other | ..... |

| Signature of Applicant | Date |
|---|---|
| | |

**DECLARATION BY CASA APPROVED CA/GRO INSTRUCTOR**

| Name of Approved Training Organisation | | |
|---|---|---|
| Result of WRITTEN EXAMINATION (Holders of ATC, FSO licences are exempt) | PASS | FAIL |
| Result of PRACTICAL TEST<br>(Holders of ATC, FSO licences are exempt) | PASS | FAIL |

I certify that the applicant has met the standard of the CA/GRO competency requirements specified in the Part 139 MOS. I recommend him/her for a CA/GRO certificate:

| Signature of Examiner | Date | Printed Name |
|---|---|---|
| | | |

## Please forward your response to CASA by *19 February 2007* by one of the following means:

**Online (preferred method)**
rrp.casa.gov.au/respond

**Fax**
To: Regulatory Documentation Coordinator
1800 653 897 (free fax) or international +612 6217 1691

**Post (no stamp required in Australia)**
Reply Paid 2005
Regulatory Documentation Coordinator
CASA's Regulatory Development Management Branch
Canberra ACT 2601, Australia

**E-mail (use the response format in this NPC)**
npc139_02@casa.gov.au

## Additional information is available from:

**Brian Harris, MOS Part 139 Chapter 14 Project Officer**

**Post (no stamp required in Australia)** Reply Paid 2005
Airways and Aerodromes Branch
Civil Aviation Safety Authority
Canberra ACT 2601, Australia

**E-mail** brian.harris@casa.gov.au

**Telephone** 02 6217 1808 or 131 757 (for the cost of a local call)
International +612 6217 1808

**Fax** 02 6217 1500
International +612 6217 1500