



# Advisory Circular

## AC139-12

Revision 1 (1)

### Aerodrome - Certification, Operation and Use

... .. 2022

#### UNICOM and AWIB Services

#### General

Civil Aviation Authority (CAA) advisory circulars (ACs) contain information about standards, practices, and procedures that the Director has found to be an acceptable means of compliance (AMC) with the associated rule.

Consideration will be given to other methods of compliance that are presented to the Director. When new standards, practices or procedures are found to be acceptable they will be added to the appropriate AC.

#### Purpose

This AC describes an AMC with Part 139, Subpart F. It is intended to clarify the intent of the rule for providers, those intending to provide UNICOM and AWIB services, and persons providing basic radio communications in the aeronautical radio bands. It provides advice on whether a service is a UNICOM or AWIB service and general advisory information and methods acceptable to the Authority for showing compliance with the UNICOM and AWIB service requirements under Part 139.

#### Related Rules

This AC relates specifically to Part 139, Subpart F.

#### Change Notice

ICAO 29th Assembly Resolution A29-3 of year 1992 urges States to promote global harmonization of national rules. In order to implement this Resolution, Mongolian Civil Aviation Regulation has been developed based on “Memorandum for Technical Cooperation” between CAA of Mongolia and New Zealand, signed on 06.May.1999.

Amendment 164 of Annex 1 to the Chicago Convention on International Civil Aviation urges pilots, navigators using radiotelephony, air traffic controllers and aeronautical station operators to comply with the language proficiency requirements; and

Under Article 14 of the Civil Aviation Act, “Use of foreign language in civil aviation” the AC has been released in English version only, in order to prevent any mistranslation and misuse of the aviation safety related documents.

This AC139-2 rev.1 was issued based on NZ AC139-12 rev.1, dated on 28.Apr.2021.

AC139-12 rev.1 updates out-of-date links at section **GM 139.357–AIS notification of service** and other places, and deletes sections relating to revoked parts of Rule 139.

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## Introduction

AC 139-1 is the cumulative result of the CAA Industry Rules Advisory Group's (CIRAG) Technical Study Group (TSG) work on developing the requirements for UNICOM and AWIB services in Mongolia. This AC aims to give an understanding of the requirements of Subpart F of Rule 139.

UNICOM and AWIB services are both services to facilitate aviation at an uncontrolled aerodrome. Neither service requires certification under the rules but both must comply with the rules prescribed in Subpart F of Part 139.

A UNICOM service is a basic aerodrome information service: it is not an Air Traffic Service. Pilots of both IFR and VFR aircraft retain full responsibility for the operation of their aircraft.

Pilots need to decide on their acceptance or rejection of the information provided, the use of the information, and for the continuing safety of their aircraft.

For both of these services, information on the operating frequencies and services provided is published in the AIP at [ais.mn/aipAip](http://ais.mn/aipAip).

**UNICOM** is an acronym derived from the US term “**U**niversal **C**ommunications”, and in Mongolia is:

- an air/ground communications service, that may be provided at aerodromes with no aerodrome control or aerodrome flight information service, to enhance the value of information normally available at an uncontrolled aerodrome;
- a service for passing on limited information to pilots, and other persons on the surface, in the locality of an aerodrome;
- not an air traffic service, so cannot provide traffic information;
- a service that may, on request, provide the general location of aircraft the operator is aware of, although the operator may not interpret or analyse the information for a pilot.

**AWIB** is an acronym for **a**erodrome and **w**eather information **b**roadcasts and is an automatically broadcast information bulletin. The information may be automatically or manually gathered. AWIB services are provided at some unattended aerodromes and may be provided in conjunction with a UNICOM service. They are intended to provide weather and other operational information.

The broadcast information may be obtained from automatic sensors, manual observations, or a combination of both, and may vary with location.

Included in both UNICOM and AWIB services may be **b**asic **w**eather reports (BWR) which are verbal comments on actual weather conditions at a particular aerodrome or place. BWR are defined in Rule Part 174.

It is intended that BWR only include:

- verbal provision of a basic weather report in support of aviation; and
- verbal comment on present weather conditions passed between aircraft and other aeronautically associated parties.

**NOTE:-** BWR and AWIB are not an alternative to the meteorological information, particularly meteorological reports, that are required for the normal planning and conduct of flights.

As well as being subject to the rules in this subpart, BWR and the weather reporting in AWIB and UNICOM services are subject to Part 174. The requirements of 174.6 cover equipment used for observations, checking of the equipment used, and training of the person providing the reports.

## Rule Compliance

Rules compliance guidance material (GM) is included in this section. Where the rule is self-explanatory further guidance material may be provided.

## Definitions

### “CAR interpretation summary” Amendments

The definitions of terms used in the UNICOM/AWIB Services Subpart F of Part 139 are the definitions generally used throughout the rules and are to be found, along with abbreviations, in Part 1. There are no terms used in the UNICOM/AWIB Services Subpart F for which the definitions are unique to the part. The most relevant terms are reproduced here for convenience.

**Aerodrome frequency response unit** means a ground based VHF radio, which, on receipt of a modulated VHF transmission from an aircraft on the appropriate frequency, automatically transmits either a voice or a tone response to confirm the pilot’s radio frequency selection.

**Aeronautical facility** means:

- (a) the various types of communication systems used for an aeronautical broadcasting service, or an aeronautical fixed service, that supports IFR flight or an air traffic service; or
- (b) the ground elements of the various types of communication systems used for an aeronautical mobile service; or
- (c) the various types of radio navigation aids used for the aeronautical radio navigation service; or
- (d) any other type of ground-based telecommunication system that supports IFR flight or an air traffic service; or
- (e) the various types of ground-based telecommunication systems that operate in the aeronautical mobile radio frequency bands and are used to provide basic weather information, local aerodrome information, or flight following services.

**Aeronautical mobile service** means a mobile service for communication between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate and emergency position-indicating radiobeacon stations may also participate on designated distress and emergency frequencies.

**Aeronautical station** means a land station in the aeronautical mobile service.

**Air traffic** means all aircraft in flight or operating on the manoeuvring area of an aerodrome.

**Altimeter setting (QNH)** means the aerodrome level pressure reduced to mean sea level in accordance with the ICAO Standard Atmosphere. This is specified by a mean sea level pressure of 1013.25 hectopascals, and temperature of 15.0 degrees Celsius with a lapse rate of 6.5 degrees Celsius per 1000 M and is the altimeter sub scale setting to obtain the elevation when on the ground.

**AWIB service** means an automatic broadcast of aerodrome and weather information provided specifically for the facilitation of aviation. For the avoidance of doubt, an AWIB service is not an air traffic service.

**BWR** means a verbal comment, in support of aviation, describing any of the following current weather conditions observed at a particular place or airspace:

- (1) wind direction and strength;
- (2) mean sea level air pressure;
- (3) air temperature; and/or
- (4) weather conditions and cloud cover.

**Broadcast** means a transmission intended to be received by all stations.

**Meteorological service** means any of the following services that provide meteorological information in support of aviation:

- (a) *Climatology service*: for the development and supply of climatological information for a specific place or airspace.
- (b) *Forecast service*: for the supply of forecast meteorological information for a specific area or portion of airspace.
- (c) *Information dissemination service*: for the collection and dissemination of meteorological information.
- (d) *Meteorological briefing service*: for the supply of written and oral meteorological information on existing and expected meteorological conditions.
- (e) *Meteorological reporting service*: for the supply of routine meteorological reports.
- (f) *Meteorological watch service*: for maintaining a watch over meteorological conditions affecting aircraft operations in a specific area.

**Traffic information** means information issued by an ATS unit, to alert a pilot to other known or observed air traffic which may be in proximity to their position or intended route of flight, and to help the pilot avoid a collision.

**UNICOM Service** means a ground radio communications service in the aeronautical mobile service providing local aerodrome information for the facilitation of aviation. For the avoidance of doubt, a UNICOM service is not an air traffic service.

## Abbreviations

**AFRU** means an Aerodrome Frequency Response Unit

**AWIB** means an Aerodrome and Weather Information Broadcast

**ATS** means Air Traffic Services

**BWR** means basic weather report

**QNH** means an altimeter sub-scale setting

**SARPs** means standards and recommended practices

## Aerodromes – Certification, Operation and Use

### Subpart A – General

#### GM 139.1 – Purpose

Rule 139.1 is self-explanatory. It indicates that the purpose of the rule is the prescription of requirements. A rule sub-paragraph has been added to cover the prescription of the requirements for the provision and operation of UNICOM and AWIB services.

### Subpart F – UNICOM and AWIB Services

Subpart F of Rule Part 139 prescribes the requirements for the provision and operation of services falling within the definitions of UNICOM and AWIB services that are broadcast and generally available to aviators.

Any person operating a service providing any of the services shown in 139.353(c)(1) to (3), or 139.353(d)(1) to (3), or 139.353(h)(1) to (7) must provide them in accordance with the requirements prescribed in Part 139 Subpart (F).

#### 139.351–Provision of UNICOM and AWIB Services

##### GM 139.351(a) & (b) – General restrictions

This rule prohibits the provision or operation of a UNICOM or AWIB service unless it is provided in accordance with Subpart F.

Controls in Subpart F are not intended to extend to private base radio stations usually unavailable to general aviators, nor to basic radio telephone systems operated by entities solely for the facilitation of their own operations. This subpart is also not intended to as guidance for persons providing basic weather reports.

The requirements to comply with the applicable parts of Annex 10 are basic requirements to ensure professional communications and that radio equipment is suitable for aeronautical band operation. There is also format information for broadcasts in the aeronautical bands.

Annex 10 Vol II Chapter 5 contains SARPs for aeronautical mobile service voice communications. Chapter 7 has similar standards and recommended practices for broadcasts in the aeronautical bands. These are both applicable to UNICOM and AWIB services.

For the safety of operations there cannot be more than one AWIB or UNICOM service operating at any one aerodrome. In addition, to ensure the aerodrome operator maintains control of facilities at the aerodrome, an AWIB or UNICOM service operator must obtain the aerodrome operator's permission.

**NOTE:-** AWIB and UNICOM service weather reporting, in their most basic state, are required to meet the requirements prescribed in 174.6. If an operator wishes to broadcast meteorological information it must be under an appropriate Part 174 certification.

### **GM 139.351(c) Restriction to one of each service**

This limits the numbers of services operating at a particular aerodrome. This is a safety requirement to ensure all aircraft operate on the same frequencies.

## **139.353—UNICOM and AWIB Service**

### **Requirements for the service provider/operator.**

This rule details the requirements that must be met before an AWIB or UNICOM service may be provided. It contains general requirements applicable to both AWIB and UNICOM services and the specific requirements for each service. Under rule 139.357 information on the specific services to be provided must be given to the AIS publisher at least 90 days before commencing service. Therefore, the lead in time to obtain the call-sign and radio licence must be taken into account.

### **AMC 139.353(a)(1) – Call signs**

Before operating an AWIB or UNICOM service a call sign must be obtained by applying to CAA on Form CAA 24171/02 and paying any applicable fee. CAA forms are available on the CAA website at <https://www.mcaa.gov.mn/>.

### **AMC 139.353(a)(2) – Radio licence**

The Communications Regulatory Commission manages the aeronautical radio frequencies in Mongolia. As UNICOM and AWIB operate in the aeronautical frequency band, the radio equipment needs to be licensed by Communications Regulatory Commission.

Before operating either of these services, a licence for the radio apparatus must be obtained from the Communications Regulatory Commission. Information on the requirements and application forms are available on the website at <https://www.crc.gov.mn>

### **AMC 139.353(a)(3) – Aerodrome operator consent**

An aerodrome operator who is certificated under part 139 is responsible for the supply of rescue fire services, apron management and aerodrome control services when aerodrome control is required by the Director. Whether certificated or not, aerodrome operators should also have control over the facilities operated at their aerodromes. Therefore, the rule requires the aerodrome operator's approval to operate a UNICOM or AWIB service at an aerodrome. This approval should be obtained in writing with a copy being available in the operator's records. It should also be reviewed regularly.

### **Requirements for AWIB and UNICOM services.**

### **AMC 139.353(b)(1) & (2) – Operational requirements**

The service provider/operator must obtain the call sign and radio licence before the service is operated. Refer rule subparagraphs 139.353(a)(1) and 139.353(a)(2).



**AMC 139.353(b)(3) – Compliance with ICAO system characteristics**

The radio equipment used by UNICOM service needs to meet the applicable frequency tolerance and spurious radiation requirements of ICAO Annex 10. One method of complying with the technical requirements of the rule for the radio equipment that would normally satisfy the Director would be the retention of manufacturer's specification information for the equipment. This information needs to indicate that the equipment meets the requirements of the aeronautical bands. If this information is not available, detail of the technical specification checks should be retained. The requirements written into the rule are intended to apply only to radio systems providing UNICOM and AWIB services.

**AMC 139.353(b)(4) – Compliance with ICAO communications procedures**

The applicable communications procedures are those general and specific procedures pertaining to VHF radiotelephony communications in the aeronautical mobile service, and broadcasting in the aeronautical mobile service. They are detailed in ICAO Annex 10 Vol. II Chapter 5 Aeronautical Mobile Service – Voice communications, and Chapter 7 Aeronautical Broadcasting Service. A summary of the index is shown in Appendix A.

One method of complying with rule requirements would be to cover applicable procedures in the basic training and assessment of operators. Also refer to the advisory information under 139.355.

Operators should observe the formality of operating in the aeronautical bands.

**GM 139.353(c)(1) – Erroneous or misleading transmissions**

The requirement for not transmitting erroneous or misleading information is twofold. In the first case, the service must suppress transmission during automated or manual testing, especially if the testing includes the generation of a range of data which may not present current conditions at the time of generation. In the second case, with an automated broadcast system, checks must be in place to ensure that if the conditions change either the broadcast is updated or suppressed.

The suppression of broadcasting erroneous information is necessary as it is a safety issue to avoid pilots relying on erroneous information.

**AMC 139.353(c)(2) – Onward transmission**

This requires a service provider/operator to have some system to ensure the information received is transmitted without change. To achieve this, especially with the relay of aircraft location information or a flight following service, the operator should have some system to record the details and a system of prompt cards/check lists for the action to be taken. A system of tear-off pads and clips or self-sticking pads and display board would satisfy the requirement.

**GM 139.353(c)(3) – Air traffic or Meteorological service confliction**

This is self-explanatory. The provision of UNICOM or AWIB services must not conflict with the provision of any certificated Air Traffic or meteorological services. Where a UNICOM or AWIB service is being provided, for example, to extend the operational hours of a certificated service, operators should have written agreements laying out the services each are providing. Agreements are to ensure there are no conflicts and they should include a conflict resolution agreement. They should be regularly reviewed.

The radio coverage of UNICOM and AWIB services should be checked to ensure they do not conflict with other adjacent service providers.

**GM 139.353(d)(1) – Safeguards against erroneous or misleading transmissions**

This is for a similar reason as (c)(1) above, in that there must be sufficient safeguards to ensure changing conditions are updated. This may be staff with a watch keeping role or failsafe systems if the UNICOM or AWIB is totally automated. Automated systems must suppress transmissions during any

automated testing, especially if erroneous information that does not represent current conditions is generated during the tests.

### **GM 139.353(d)(2) – Suspension of service if erroneous transmission suspected**

This is self-explanatory in that, as soon as a service provider or operator is given any cause to suspect that any erroneous information is being provided, the transmission must cease. Transmission of erroneous information is a safety issue.

### **GM 139.353(d)(3) – Minimum weather reporting requirements**

This ensures a service provider/operator will have minimum standards in place for any weather reporting. Part 174 lays down the definitions and prescribes the requirements for providing basic weather reports. Part 174 and its associated ACs should be studied in conjunction with this AC, particularly the definitions and explanatory material on basic weather reporting.

## **UNICOM Services**

Subparagraphs 139.353(e)(1) to 139.353(g) are directed at the providers/operators of UNICOM services and lay down services that may be provided and conditions under which they may be provided.

### **GM 139.353(e)(1) to (7) – UNICOM SERVICES**

These subparagraphs are self-explanatory and spell out the services that a UNICOM service provider/operator may provide. Detail on each subparagraph is provided below.

The most important area defined is the division between certificated ATS (AFIS, ATIS, Aerodrome control) and the non-certificated information provided by a UNICOM service.

MCARs are developed from the requirements laid down and defined in ICAO documentation.

In the case of ATS, Rule 172 is essentially developed to reflect the SARPS, and procedures for air navigation services (PANS), of Annex 11 *Air Traffic Services and Doc 4444 Rules of the Air and Air Traffic Services*, and the international standards from Annex 2, *Rules of the Air*.

The more stringent requirements required for certification under Part 172 are developed from the annexes and advisory material that ICAO publishes. The material reflects the wisdom of ICAO Member States and has been developed over time. The considerably less stringent requirements for UNICOM service operators mean a restriction has to be placed on services that can be provided. This is to delineate them from certificated ATS where advice is given and interpretation of the information and advice is passed on. With ATS, responsibility may pass from the pilot to the service operator and the pilot must comply except in exceptional circumstances.

A Part 172 service provides a comprehensive advice and information service which is certificated as fit for purpose, whereas UNICOM and AWIB services provide, without interpretation, isolated items of basic information which may be useful to pilots.

The main proviso is that, as a UNICOM service is not certificated under Part 172, it may not provide any services that fall within the services defined as ATS in Parts 1 and 172.

### **GM 139.353(e)(1) – Weather reporting**

Weather reporting for aviation is covered by Part 174. The requirements prescribed by Part 174 along with the associated advisory material in AC174-1 should be read in conjunction with this AC. The requirements for BWR are prescribed in 174.6 and the associated AC174-1 has explanatory material in clauses 174.1, 174.3 and 174.6. In most cases UNICOM service operators will be providing information on the basic weather conditions at the aerodrome with the UNICOM service. The elements and requirements of a BWR are covered in 174.6. In some cases the UNICOM service may be certificated under Part 174 (or be part of a 174 organisation) and will be able to provide meteorological information

such as meteorological reports and forecasts, as well as the basic weather information for the aerodrome.

Any UNICOM service operator providing meteorological information under a Part 174 certificate will have systems in place for that certification.

#### **GM 139.353(e)(2) – Preferred runway**

The operator of the UNICOM service may provide information to pilots and other people on the aerodrome on the preferred runway that is indicated by the wind direction from either a BWR, or other meteorological information as appropriate, and reports from pilots of aircraft using the aerodrome. The appropriate weather information, training, and a listening watch on the operational frequency is required before this service can be provided.

UNICOM service operators must not designate the runway-in-use. This decision remains with the pilot of the aircraft concerned.

#### **AMC 139.353(e)(3) – Flight following**

The provision of flight following services is intended to cover the certification requirements air operators have, under Parts 119 and 135, in respect to the provision of a flight following service. This is so that appropriate emergency activation action is taken if the aircraft becomes overdue. The requirements placed on the air operator are prescribed in Rules 119.73, 119.121 and 135.57 with advisory material in AC 119-3 and AC 119-1 under GM 119.73 and GM 135.57(c). These should be read in conjunction with this AC when developing any flight following service.

Any Part 119 air operator must have a flight following service for any of their flights that are operated without a flight plan being filed with an ATS unit. Rules 119.73 and 119.121 detail the requirements for any air operator using their own flight following service. In many cases the air operator will not want to establish their own flight following service but may wish to contract a UNICOM service to provide it. This can be done but it is still the air operator's responsibility to ensure that the flight following service meets the requirements of 119.73 or 119.121. If a UNICOM service is being used by an air operator to provide the flight following service, then it is likely that the UNICOM flight following service will be audited by CAA as part of the audit regime of the Part 119 air operator.

The air operators using this service have certification requirements (119.73, 119.121 and 135.91) which the UNICOM service would have to meet to the satisfaction of the air operator. These requirements could be met by documenting systems for the flight following service. These may include "Q" cards, check lists and a dedicated display board or similar systems.

**AMC 139.353(e)(4) – Initiating emergency responses**

As with the provision of flight following services, this service may be an integral part of a flight following service or it may be standalone. In either case, the systems used should be documented and should include “Q” cards, checklists and dedicated display boards or similar display systems.

**GM 139.353(e)(5) – AFRU**

Generally an AFRU is useful to give a pilot confirmation that a transmission has been made and that it included modulation. AFRUs may range from a simple beep back to a fully automated system that gives a sophisticated repeat of past transmissions with variations depending on how busy the aerodrome is. A general indication of features that an AFRU might provide is listed in Appendix C.

**GM 139.353(e)(6) – Requested provision of general location of aircraft**

This subparagraph covers one of the critical limiting functions of a UNICOM service: the relay of information on the general location of an aircraft.

It is fundamental that UNICOM service operators do not interpret anything from the whereabouts of aircraft they are aware of and pass on that interpretation. Nor should they attempt to correlate aircraft reports with observed aircraft or attempt to identify the aircraft. This is traffic information and to provide traffic information a person must be certificated under Part 172.

Upon request from a pilot, the operator may pass information indicating the general location of known aircraft. The information passed should not contain any assessment or interpretation made by the operator. It must not be indicated that it is traffic information, nor should it be indicated that the total traffic has been provided.

Below are examples of what would be considered acceptable and not acceptable under this Rule. If a pilot requests traffic information, eg XY, please advise traffic south east of the aerodrome. The reply should indicate that the response is not traffic information but that known aircraft are...

**Acceptable**

....reported traffic is Bravo Lima Tango who at 1105 reported 10 nm south at 1500 ft joining.

....A light aircraft is observed approximately 3 nm north at low level.

....A topdresser is reported to be operating low level 8 nm to the east.

If a pilot requests traffic information e.g. XY, please advise traffic south east of aerodrome. Then the response must indicate that what is passed is not traffic information but known aircraft .....

**Not acceptable**

....Bravo Lima Tango is observed 10 nm south at 1500 ft.

....Foxtrot Hotel Oscar is observed 3 nm north at 1000 ft

....Total circuit traffic is...

....is all the circuit traffic.

**Note:-** On request, UNICOM service operators may relay information on the general location of aircraft known to them. They must not interpret that information. See comments under AMC (c)(2).

**GM 139.353(e)(7) – Aerodrome information**

The intent of this subparagraph is to allow the operator to provide information on unexpected hazards to aviation to pilots or persons working in the immediate vicinity of the runway.

It is not intended to legislate for emergency situations. Common sense should be applied in these circumstances.

Aerodrome information must not include any traffic information.

Hazard information would relate to hazards to users of the aerodrome, such as unusable areas of the aerodrome or works on the aerodrome.

When providing hazard information, information must be validated from the source of the information and the operator must have appropriate training/knowledge of the environment of the aerodrome. Records should be maintained of the information and sources of any hazard information provided.

**GM 139.353(f) – UNICOM restrictions**

These subparts are self-explanatory. They reinforce that rule subpart F has been specifically written to cover the supply of UNICOM and AWIB services, limiting them to a level below that of certificated ATS.

If an aerodrome operator wishes to offer an ATS, the provider must apply for certification under Part 172.

**AMC 139.353(g) – UNICOM personnel requirements**

The intent of this subparagraph is to place the responsibility on the service provider to establish training and assessing programs that will ensure the operators are competent and current to operate the service. It also places responsibility on the provider to notify operators of the level of their authority to operate the service.

The level of training that operators require will be dependent on the level of service the UNICOM service is to provide and the traffic densities expected.

UNICOM service operators will require training to give them a working knowledge of civil aviation, including a good knowledge of limitations imposed by rules on information permitted:

- (a) local knowledge of the area
- (b) local knowledge of the aerodrome
- (c) proficiency in radiotelephone operating procedures
- (d) proficiency in basic weather observation, and
- (e) suitable knowledge of any other duties expected of them.

The minimum training to be provided should include, as applicable to the level of service to be provided, the subjects in Appendix B.

The provider of a UNICOM service is responsible for ensuring that operators of the UNICOM service are properly trained, assessed, and authorised.

The training should be carried out systematically with formal assessment and operator authorisation. The assessments and authorisations should be recorded and maintained in the Unit's records.

Individuals should be informed in writing of the results of the assessment and authorisation.

## **AWIB Services**

Subparagraphs 139.353(h)(1) to (7) are directed at the providers/operators of AWIB services and lay down the services that may be provided and conditions for the service provision.

### **GM 139.353(h)(1) to (5) – Basic weather reporting**

These subparagraphs list the weather information that may be provided by an AWIB service as a basic weather report.

The broadcast information may be obtained from automatic sensors, manual observations, or a combination of both, and may vary with location.

The weather information provided by the broadcast is to be provided to the standards prescribed in 174.6 basic weather reporting.

The requirements prescribed by Part 174, along with the advice in AC174-1, should be read in conjunction with this AC. These include requirements for the equipment that is used for the observations, checks that are required to be carried out on that equipment, and personnel training. AC 174-1 has explanatory material about clauses 174.1, 174.3 and 174.6.

### **GM 139.353(h)(6) – Preferred runway**

This aims to allow the operator of the AWIB service to include in their broadcast information on the preferred runway. This information on the preferred runway will be the runway that is indicated by the wind direction, from either a basic weather report or other meteorological information as appropriate, and reports from pilots of aircraft using the aerodrome.

The appropriate requirements for BWR, and a listening watch on the operational frequency, or an automated system is required before this service can be provided. Operators using automated systems would need to meet the requirements for “basic weather reporting” in Part 174. AWIB operators are not allowed, under the rule, to determine which runway will be used. This decision remains with the pilot of the aircraft concerned.

### **GM 139.353(h)(7)–Aerodrome information**

This covers any information that concerns the operation of aircraft or is of concern to the pilot operating an aircraft. It should not include information that would be issued under the privilege of a certificate under any rule part.

Examples of the type of information might be:

- Reported surface conditions.
- That a grass vector is closed.
- That pilots might expect sun strike.
- That work is in progress on the aerodrome.

## UNICOM operator requirements

### GM 139.355 – UNICOM operator requirements

This is directed at the provider of the UNICOM service and lays down the requirements for UNICOM service operators. The provider of the service should be able to show that all requirements have been met.

### AMC 139.355(1) – Communications procedures.

This is directed at UNICOM service providers and is included to ensure operators have the training to carry out their duties.

Operating a UNICOM service is operating a formal service in the aviation system in Mongolia and should be treated as such. Discipline should be observed by transmitting only those messages that are necessary for the provision of the service, or that otherwise contribute to safety.

Communication procedures should be to the same standards as any other communication a pilot would receive. These are based on the applicable procedures prescribed in Annex 10 Volume II.

They are implemented by conformance to the disciplines required for the flight radio-telephony operators training.

The operator must be able to show they have been satisfactorily assessed to the requirements laid down in Appendix D of this AC, or an equivalent. Records should be maintained to show this training and assessment.

### AMC 139.355(2) – Training to meet the requirements of the services offered

This is directed at the service provider/operator and is included to ensure operators have the appropriate training to carry out their duties.

The provision of a UNICOM service requires an appropriate working knowledge of the operation of the aerodrome in the aviation system.

This knowledge covers aspects such as the flight procedures and terminology used in aviation associated with operating on and in the immediate vicinity of an aerodrome, the appropriate areas of flight guides, the operation of vehicles on aerodromes, safety on aerodromes, the initiation of the alerting of emergency services and associated information appropriate to the services provided.

There should be records available to show that the operator has been trained and assessed as satisfactory in the applicable subjects. There may be special requirements if the service provider offers a flight following service, as the service must meet the requirements of an air operator under Parts 119.73, 119.121 and 135.91.

Operators must have a sound knowledge of the limitations imposed by the rules on the information they may provide. This does not mean that an operator has to have knowledge of the Act and rules per se, but if they do not they must have a sound knowledge of local procedures which will ensure they meet the requirements of the Act and rules.

Appendix B has lists of subjects – it should not be considered that the lists are comprehensive, so training should be appropriate to the services provided.

**AMC 139.355(3) – Evidence of scope of authority**

This is directed at the service provider and included to ensure operators know the scope of their authority.

Operators should be provided with written certificates showing the scope of their authorisation and the period it is valid for before they require further assessment. The service provider should keep records of these authorisations.

**Notification of service****GM 139.357 – AIS notification of service**

This is directed at UNICOM and AWIB service providers and is intended to ensure that information is provided accurately and in sufficient time to be published. It details the requirements that must be met for the notification of AWIB and UNICOM service information and it contains both general and specific requirements for AWIB and UNICOM services.

The information required needs to be provided to the AIS publisher in a timely manner as the lead in time for the publishing cycle for changes is 90 days.

A person proposing to provide a UNICOM or AWIB service should contact the AIS publisher before the minimum 90-day lead in time begins and agree on the format and detail of information to be provided.

The current AIS publisher (Aeropath) has information and pro forma application forms available to intending service providers. These can be obtained from AIS:

**Contact details:**

Mail: P.O.Box 59

Address: Khan-Uul district, "Chinggis khaan" international Airport

Ulaanbaatar 17120, Mongolia

Tel: 976-11-283131, 976-11-283126

Fax: 976-70049838

E-Mail: [ais@mcaa.gov.mn](mailto:ais@mcaa.gov.mn)

Web site: <http://ais.mn>

**GM 139.357(1) – Station identification**

Paragraph 1 is self-explanatory.

**GM 139.357(2) – Aerodrome identification**

Paragraph 2 is self-explanatory.

**GM 139.357(3) – Hours of service**

Paragraph 3 is self-explanatory.



**GM 139.357(4) – Services provided**

Paragraph 4 requires the provider to provide information on the services that will be listed on the aerodrome page and tabulation lists in the AIP.

**GM 139.357(5) – Other relevant operational information**

Paragraph 5 requires the provider to provide information on any other relevant operational information to be listed on the aerodrome page and tabulation lists.

**GM 139.357(6) – Administrative details**

Paragraph 6 requires the provider to forward details on both the formal provider of the service and of a person who has the technical knowledge to check and ensure published information is correct and has sufficient knowledge to initiate and check NOTAMs as required. These may be one and the same person. The AIS provider would normally require specimen signatures for authentication purposes.

## Appendix A

### Relevant parts of the TABLE OF CONTENTS ANNEX 10—VOLUME II

The clause numbers refer to the clause numbers of Annex 10 Volume II Chapter 5 or 7

#### Chapter 5. Aeronautical Mobile Service

##### 5.1 General

- Categories of messages
- Cancellation of messages

##### 5.2 Radiotelephony procedures

###### 5.2.1 General

- Language to be used
- Word spelling in radiotelephony
- Transmission of numbers in radiotelephony
- Transmitting technique
- Composition of messages
- Calling
- Test procedures
- Exchange of communications

###### 5.2.2 Establishment and assurance of communications

- Communications watch/Hours of service
- Transfer of VHF communications
- Communications failure

##### 5.3 Distress and urgency radiotelephony communications procedures

###### 5.3.1 General

###### 5.3.2 Radiotelephony distress communications

- Action by the aircraft in distress
- Action by the station addressed or first station acknowledging the distress message
- Imposition of silence
- Action by all other stations
- Termination of distress communications and of silence

###### 5.3.3 Radiotelephony urgency communications

- Action by the aircraft reporting an urgency condition except as indicated in 5.3.3.4
- Action by the station addressed or first station acknowledging the urgency message
- Action by all other stations
- Action by an aircraft used for medical transports
- Action by the station addressed or by other stations receiving a medical transports message

##### 5.4 Communications related to acts of unlawful interference

## **Chapter 7. Aeronautical Broadcasting Service**

### **7.1 General**

- 7.1.1 Broadcast material
- 7.1.2 Frequencies and Schedules
- 7.1.3 Interruption of service

### **7.2 Radiotelephone broadcast procedures**

- 7.2.1 Broadcast technique
- 7.2.2 Preamble of the general call

## Appendix B

### UNICOM Service Operator Training

This is an outline of the type of training that should be addressed to satisfy requirements of 139.353(g). Subjects and levels of training should be appropriate to the level of service and services being provided.

#### UNICOM Service Operators - Training Program

(a) Trainees

It is considered that there could be 2 classes of trainees for UNICOM service operators.

1. Those who have held an ATS or Commercial Pilots Licenses within the last 10 years, and
2. Those who have neither of these backgrounds.

(b) Training Periods

For those classed in 1 above, not less than 10 working days.

For all other trainees, not less than 40 working days.

(c) Training Curriculum

The training program should be to a documented curriculum which is a mixture of practical and theoretical training. An example of the subjects that should be covered is included below. The trainee should demonstrate competence and a record be kept of their competence in all areas of the curriculum.

(d) Advice of Competence

UNICOM service operators should be issued with written confirmation of their competence and the period for which this will be considered valid without further assessment. The operator should document the requirements for the issue of written confirmation of competence. This may be in the form of a certificate. Records should be held showing who has been deemed competent to operate the UNICOM service.

(e) Currency and Continued Competence

The UNICOM service provider should document the requirements for continuing proficiency assessments and under what circumstances the confirmation of competence would be withdrawn. Proficiency assessments like those for flight service operators in Part 65.357 and 65.359 should be in place.

Examples of the reasons for withdrawal may be for health, misconduct, or lack of competence.

#### Unicom Service Training Modules

- (a) Due to differing levels of service provided, UNICOM service operators will need to develop training for the staff operating the UNICOM service appropriate to the services provided. Providers incorporating certificated services will be subject to training requirements under their certification. Providers of flight following services will be subject to the audit requirements of the certificated air operator the flight following service is provided for.

- (b) In the weather information area, subject applicability will depend on the level/ certification of weather observation being carried out.
- (c) The following syllabus is typical of the training required. The subjects and level of training will vary depending on the services and level of service provided. This is particularly relevant to the weather, flight following, emergency activation action, and inspection services provided.

### Training Modules Syllabus

#### Unit 1 - Aerodrome Familiarisation

For Units 1 and 2 the trainee should be orally tested on their ability to locate information from the appropriate manual/s or document/s and practically tested for local knowledge.

Aerodrome locality	Conducted tour of aerodrome.
Local operators	Who they are and what they do.
Airside driving	An introduction to driving procedures.
UNICOM service office layout	Where and what is in the office.

#### Unit 2 - Documentation and Agreements

Aerodrome exposition	Basic working knowledge.
Aerodrome manual	Basic working knowledge.
Aerodrome safety manual	Basic working knowledge.
UNICOM service operations	Comprehensive knowledge.
Emergency plan	Comprehensive knowledge /test messages.
Visual flight guide	Comprehensive knowledge of particular aerodrome section.
Instrument flight guide	Working knowledge of particular aerodrome section.
Local Instructions	Comprehensive knowledge.
Special agreements/ memorandum (typically agreements with operators)	Comprehensive working knowledge.
Local alerting watch agreements	Comprehensive working knowledge.
Flight following agreements	Comprehensive working knowledge.

### Unit 3 – Unicom Service Basic Training

For Unit 3 the trainee should be required to demonstrate competence by answering oral questions and the practical application of the procedures.

UNICOM service overview	What is a UNICOM service.
Duties	What does the UNICOM service operator do.
Responsibilities	Duty of care.
Radio-telephony	Aviation radio procedures covering the applicable Annex 10 procedures.
Time	The local and 24-hour clocks – UTC.
Runways	What are runways and how are they used.
The aerodrome circuit	Aircraft flight procedures near an aerodrome.
Vehicles on aerodromes	Procedures for driving on the aerodrome.
Aerodrome emergencies	Response to aircraft emergency situations.
Emergency activation action	Comprehensive knowledge, procedures, actions, priorities, VFR flight plan information/test messages.
Flight following services	Comprehensive knowledge procedures, actions, priorities, VFR flight plan information/test messages.
Common terms	Common phases and terminology.
Equipment maintenance	Overview knowledge of requirements and suppliers.
Other services	Procedures, actions, and priorities.

### Unit 4 - Aerodrome Inspections

For Unit 4 the trainee should be required to carry out at least two supervised inspections and post inspection recording prior to solo duty. Inspection checklists should detail what is to be inspected for and the acceptable limits

Driving rules / RTF calls	Give way to aircraft - Speed. - Correct calls.
Foreign objects	An overview.
Inspection frequency	When to inspect.
Areas to be inspected	Grass, Seal, Lights, Vasis, Fences, Gates, Windsock, Security of other nav aids.
Braking action	How to determine.
Birds	Monitoring.
Problem actions	Action when problems are determined.
Records	Completion of check sheets, non-compliances, NOTAM, Log.

## Unit 5 - Weather

For Unit 5 the trainee should be required to answer questions, applicable to the services provided, on the local geography, cloud and visibility distance points and cloud spot heights. At least 50 supervised reports should be carried prior to solo duties.

Weather reporting under a Part 174 certification will be carried out under the requirements of the certification exposition which will lay down the requirements.

Subjects as applicable to the level of reporting.

Weather observations	Overview.
Local geography	Prominent features in the area.
Cloud	Using known geographical features.
The equipment	Use of the Met equipment.
Mean sea level air pressure	Need for accuracy and significance.
Timeliness	The importance of on time reporting.
Record keeping	Forms/Maintenance of weather records.

## Unit 6 - Automated Weather and Information Broadcasts

For Unit 6 the trainee should be required to answer oral questions and demonstrate competency in use of the equipment, determination of preferred runway, and timely updating of both weather and operational information. The trainee should, under supervision, prepare and enter at least 50 AWIBs.

AWIB Service	System operational overview.
Aeronautical Band Broadcasting	Knowledge of Annex 10 Vol II chapter 7 or procedures to ensure compliance
Equipment	Equipment operation.
Manual information	Gathering weather and aerodrome information.
Preferred Runway	Determination of preferred runway.
Manual Data	Operational information.
Data Entry	When to update, timely updating.
24 Hour Operation	Operation when UNICOM is closed.
Standby AWIB Equipment	Operation of standby equipment.
Records	Maintenance of forms.

## Appendix C

### Aerodrome Frequency Response Unit (AFRU)

#### Typical Features

This is not a comprehensive list but is indicative of what may be offered in an AFRU.

- (a) Optional tape recorder output for traffic call sign recording (AVDATA style of system).
- (b) Optional aerodrome remote monitoring. Monitor temperature, wind direction, wind speed, etc. via computer and modem from anywhere in the world with standard telephone modem & PC.
- (c) Supplied as a control unit to be connected to existing VHF communications radio, or as a stand-alone complete system.
- (d) Stand-alone complete unit with type approved radio modified for AFRU operation.
- (e) Internal battery backup supply for 24-hour operation.
- (f) Secure cabinet.
- (g) Simple programming with simple record and playback test press buttons.
- (h) All timing parameters adjustable and stored in non-volatile memory (password protected).
- (i) Record microphone.
- (j) Recorded message test playback with optional monitor speaker.
- (k) Transmit carrier time out timer with alarm lamp indicator.
- (l) In battery back-up mode indicator lamp.
- (m) Mains power indicator lamp.
- (n) Microcontroller running OK indicator lamp (if fitted).
- (o) Carrier received indicator lamp.
- (p) Transmit ON indicator lamp.
- (q) Automatic P.A.L. (On MBZ/UNICOM frequency or on separate PAL radio channel).
- (r) Up to 16 seconds of high-quality speech.
- (s) 1 KHZ beep tone for 300 milliseconds.
- (t) Remote enable/disable for connection to timer or other external control system.
- (u) Programmable transmit response time.
- (v) Programmable transmitter lead in delay time.
- (w) Programmable carrier off release time.
- (x) Programmable speech re-trigger timer for minimum and maximum button press duration.



- (y) Programmable transmit hold-off time timer in case of close proximity aerodromes.
- (z) Microprocessor watchdog & brown out detection and correction.
- (aa) Remote control and monitoring capability.
- (bb) Optional PAL lighting control (which should have failsafe switching).

## Appendix D

### Communications Procedures

Rule 139.355(1) requires operators of a UNICOM service to have been assessed as having been trained to the equivalent requirements of the flight radio telephone operator's (FRTO) certificate or an equivalent. Attainment of the written and practical syllabus given in this appendix would meet this requirement.

An operator using an equivalent to the FRTO would need documentary evidence that their training and assessment covered the same requirements as the flight radio-telephony requirements of a private pilot's licence.

It is acceptable that the practical test be conducted in a classroom environment.

### Radiotelephony Communications Procedures Syllabus

This syllabus is based upon the requirements of the Rules, ICAO courses, submissions from industry unit standards. Appropriate references to the ICAO courses and unit standards are included for information and guidance.

TOPIC	EXAMPLE	ICAO
<b>Controls</b>	Correct manipulation and adjustment of the controls of aeronautical radiotelephone equipment	052
<b>General radiotelephony procedures</b>		052
Language to be used	All communications to be conducted in English	052
Speed	Constant rate of speech	052
Pitch	High-pitched voices transmit better than low- pitched ones	052
Rhythm	Natural rhythm of ordinary conversation should be preserved by transmitting each sentence phrase by phrase	052
Microphone position	Maintain at all time the correct position between mouth and microphone for the type of microphone in use	052
Word spelling	A ALFA <u>AL FAH</u> etc.	052
Transmission of numerals	0 ZE-RO 5 FIFE 9 NINer etc.	052

TOPIC	EXAMPLE	ICAO
Procedure words and phrases	ACKNOWLEDGE AFFIRM GO AHEAD WILCO etc.	052
Time system	Method of transmitting time	052
Establishment of communications	Listening watch	052
Frequencies to be used	Station to select the frequency or frequencies to be used under normal conditions specified for the service.	052
Failure of communications	Use of another frequency appropriate to aerodrome. Compliance with radio failure procedures	052
Identification of service	XX UNICOM	052
Radiotelephony call signs of aircraft	RT designator followed by flight number Criteria for abbreviating call signs Action with similar call signs	052
Procedures for exchange of communications	Station being addressed Frequency Continuous two-way communication Omission of— ROGER OVER THIS IS Read back	052
Corrections and repetitions	CORRECTION SAY AGAIN NEGATIVE.	052
Tests	ID of station being called Calling station ID RADIO CHECK Frequency	052
Readability scale	1 – 5	052

TOPIC	EXAMPLE	ICAO
<b>Distress and urgency communications</b>		052
Definitions	DISTRESS URGENCY.	052
Distress and urgency signals	MAYDAY PAN	052
Action by aircraft in distress	MAYDAY Air-ground frequency to be used Format of message Use of 121.5 MHz or marine distress frequencies	052
Imposition of silence	Control of silence STOP TRANSMITTING MAYDAY	052
Actions by all other stations	Priority Use of frequency Cancellation/termination of distress Transfer of distress traffic Permission Render assistance	052
Termination of distress conditions and imposition of silence	Aircraft or ground station action	052
<b>Urgency communications</b>		052
Action by aircraft reporting an urgency condition	PAN Air-ground frequency to be used Format of message	052
Actions by all other stations	Priorities Use of frequency	052

## Table of Service Provision

<b>UNICOM services may provide</b>	<b>UNICOM services must not provide</b>
When requested by a pilot, the relay of information, including the relay of a basic general location of aircraft report (this reporting must not interpret or assess the known information).	Traffic information including air traffic separation or traffic avoidance advice.
Information on the runway currently in use.	Designation of runway to be used.
Weather information in the form of basic weather reports as defined by Part 174.	Meteorological information unless certificated to Part 174
Aerodrome and Weather Information Broadcasts (AWIB), as defined in Part 139 Subpart F.	Briefing information.
Information (not traffic information) about hazards to navigation in the vicinity of the aerodrome.	ATIS.
Other aerodrome information relating to the physical characteristics of the aerodrome.	
Emergency activation action.	Alerting services.
Flight following services to meet an air operator's requirements under Rules 119.73, 119.121 and 135.91.	Flight planning services.

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