

## GEN 3.4 COMMUNICATION AND NAVIGATION SERVICES

### 1. RESPONSIBLE SERVICE

The authority responsible for organization and management of communication and radio navigation services is RSE «Kazaeronavigatsia»:  
Republican State Enterprise “Kazaeronavigatsia”

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AFS: UAAKYTYD  
Working Hours: 03.30–12.30 UTC except SAT, SUN and HOL

### 2. AREA OF RESPONSIBILITY

Negotiations on the provision of services for the use of radio communication and radio navigation on a continuing basis should be made with the administration mentioned in GEN-3.4.1 which is responsible for the application of the regulations concerning the design, type and installation of airborne facilities.

The branches of the Radio and Communication Maintenance Service located in the Area Control Centers and at each airport are responsible for a day-to-day operation of these services.

Claims and suggestions regarding telecommunication services should be submitted directly to the administration mentioned in GEN-3.4.1 or to the branches of the Radio and Communication Maintenance Service at the airport of landing.

### 3. TYPE OF SERVICES

#### Radio navigation services

The following types of radio navigation aids are provided:

- Non-directional Beacon (NDB). The average range of coverage is not less than 50 km;
- GEN-2.2 Omni-directional Radio Range (VOR);
- GEN-2.2 Direction Finder (GEN-2.2), operating on the same frequencies assigned to radio stations of Air Traffic Control Units;
- Instrument landing system (GEN-2.2);
- Landing system involving localizer and glide path beacons (GEN-2.2) similar to GEN-2.2 but with some technical differences. GEN-2.2-equipped aircraft cannot use the GEN-2.2 system without appropriate additional airborne equipment;
- OSP landing system, involving two NDB and two radio markers. Characteristics of systems are included in section AD 2.19, and SRE stations used for en-route are described in section [ENR-4.1](#);
- Radio Markers. According to their function radio markers are subdivided into:
  - a. LOM – Outer marker (the signal is two dashes per second);
  - b. LMM – Middle (inner) marker (six dots per second);
  - c. Obstruction marker (six dots per second).
- The radio markers combined with NDBs are listed together with these NDBs (NDB/MKR etc.);
- There are no stations interacting with special navigation systems such as LORAN, DECCA etc.
- Distance Measuring Equipment (DME)

#### Mobile/fixed service

#### **Mobile service**

The aeronautical stations provide a continuous watch on the stated frequencies during the published hours of service.

An aircraft crew should normally communicate via the radio station with an ATS unit that exercises control in the area in which the aircraft is flying. The crew should maintain a continuous watch on the appropriate frequency and should not abandon watch, except in an emergency, without informing the ATS unit.

#### **Fixed service**

The messages to be transmitted over the Aeronautical Fixed Service (AFS) are accepted only if:

- a. they meet the requirements of ICAO Annex 10, Vol.2, para 3.3;
- b. they are prepared in the form specified in ICAO Annex 10;
- c. the text of an individual message does not exceed 1800 characters.

#### **Broadcasting service**

HF and VHF meteorological broadcastings are described in table GEN 3.5.7.

#### **Language used**

Radiotelephony communication between aircraft crew and a ground-based aeronautical and ATS units is carried out by a radiotelephone in Russian and English languages. In radiotelegraph communications, aeronautical Q code should be used.

### **4. REQUIREMENTS AND CONDITIONS**

Aircraft crews operating within the area of responsibility of Kazakhstan Air Traffic Services shall maintain radio communication in accordance with ICAO Standards and Recommended Practices.

The names of aerodromes and geographical points are transmitted by their geographical location designations. The call sign of the facility is used instead of the geographical location designator if transmitting reporting points are designated by radio navigation facilities.

Coded reporting points transmitted with the 5-letters name-code, as listed in section [ENR-4.4](#)

In areas with intensive air traffic, communication frequencies are assigned to appropriate sectors defined with true degrees as indicated in sections [ENR-2.1](#) and AD 2.17. If aircrews fail to establish contact on assigned frequency, they may use any other frequency of the ATS unit.

Radio communication and radio navigation aids normally operate during the operational hours indicated in AIP ENR and AD sections. At other times, these facilities are available on ATC request basis.

HF radio communication stations, operating on different frequencies in day-time and night-time, are marked with index "HJ" (day) and "HN" (night). The absence of these marks indicates that stations operate continuously during working hours.

When requesting "REQUEST BEARING" from an aircraft by radio communication facilities marked with VDF, information about a magnetic bearing is reported to the radio direction finder.

Aeronautical station operating on emergency frequency 121.5 MHz may use any call-sign of the appropriate Air Traffic Control Unit. Procedures for the use of radio facilities by crews to transmit distress calls in emergency are listed in section GEN 3.6.

In the case of interference at assigned frequencies, a reserve (alternative) frequencies of 129.0 MHz and 124.6 MHz is applied.

In the case of interference on the primary LOM and LMM channels, ATS may coordinate the change of frequency to one of the following:

- a. LOM - 725 KHz / LMM - 355 KHz or
- b. LOM - 355 KHz / LMM - 725 KHz.

Transfer to reserve frequencies is performed when directed by ATS.

Traffic Information Broadcast by Aircraft (TIBA) within uncontrolled G class airspace shall be transmitted by following frequencies throughout the Republic of Kazakhstan:

- Primary Freq: 135.250 MHz
- Secondary Freq: 118.250 MHz

**5. MISCELLANEOUS**

VHF communication coverage at FL120, FL150 and FL200

This map illustrates the Pacific Northwest region, divided into 12 administrative or planning areas labeled AAB through AAM. The regions are defined by a network of colored lines: solid green lines for regional boundaries, solid blue lines for sub-regional or district boundaries, and dashed pink and green lines for further subdivisions. Key geographical features include the Pacific Ocean to the west, the Columbia River and Willamette River to the north, and the Cascade Range and Olympic Mountains to the east. Major cities and urban centers are marked with grey dots. Several regions (AAB, AAD, AAE, AAF, AAG, AAH, AAI, AAJ, AAK, AAL, AAM) are shaded in light blue, while regions AAC and AAM are shaded in light green. The map also shows various smaller water bodies, including Lake Superior, Lake Michigan, and Lake Huron, as well as the Great Lakes region.

**LEGEND**

- VHF RADIOSTATIONS
- ▭ VHF COMMUNICATION COVERAGE AT FL120
- ▭ VHF COMMUNICATION COVERAGE AT FL150
- ▭ VHF COMMUNICATION COVERAGE AT FL180
- ▭ VHF COMMUNICATION COVERAGE AT FL200
- ▭ STATE BOUNDARY
- ▨ DELEGATED AIRSPACE
- ▭ VHF INFORMATION REGION
- ▭ FFR SECTOR
- HYDROGRAPHY