

**Supplement to the Memorandum of Understanding On the
Rules of Behavior for Safety Of Air And Maritime
Encounters Between the Department of Defense of the
United States of America And the Ministry of National
Defense of the People's Republic of China**

On November 10, 2014, the Department of Defense of the United States of America and the Ministry of National Defense of the People's Republic of China signed *the Memorandum of Understanding Regarding the Rules of Behavior for Safety of Air and Maritime Encounters* (hereinafter referred to as “*Memorandum*”). The Memorandum was jointly announced by President Barack Obama and President Xi Jinping on November 12, 2014.

The *Memorandum* states that the content of related annexes may be modified and additional annexes may be added upon mutual consent, and both Sides decided to add the following content to the annexes of the *Memorandum*:

1. Rules of Behavior for Safety of Air-to-Air Encounters, to be listed as Annex III to the *Memorandum* (see Enclosure 1)
2. Newly Added Terms of Reference for Air-to-Air Encounters for Inclusion in Annex I of the Memorandum (see Enclosure 2)

This *Memorandum* supplement is signed at
BEIJING, SEPTEMBER 15, 2015,
WASHINGTON on SEPTEMBER 18, 2015 in duplicated texts in both
English and Chinese.

The Department of Defense of
the United States of America

The Ministry of National Defense of
the People's Republic of China

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ANNEX III

Rules of Behavior for Safety of Air-to-Air Encounters

SECTION I

Military aircraft that encounter each other in flight should operate consistent with the Convention on International Civil Aviation and its Annexes and guidance to the extent practicable when compatible with mission requirements. The Sides should also implement in good faith the Code for Unplanned Encounters at Sea (CUES) as it applies to air-to-air encounters as referenced in this Annex.

SECTION II

Military aircraft that encounter each other in flight should ensure navigation safety through professional airmanship, including the use of appropriate communications as defined in this Annex. The International Code of Signals (ICS), the Radio Regulations of the International Telecommunication Union, the Code for Unplanned Encounters at Sea (CUES), and relevant International Civil Aviation Organization (ICAO) Annexes are the references and guidance for communication and contact for military aircraft of both Sides.¹

SECTION III

¹ *Infra*, Sections III, V, and VII.

When military aircraft encounter each other in the air, both Sides should encourage active communications when in the interest of flight safety.² Communication between military aircraft should be conducted according to the following principles:

- i. If one military aircraft initiates a call, the other military aircraft should actively respond, if mission permits. Pilot discretion should determine when to conduct communications based on the situation at that time.
- ii. Communicated information may include, but is not limited to, the following content:
 - Clarification of identity;³
 - Aircraft maneuvering intentions;⁴
 - Events in progress or planned that may concern the safety of aircraft encountered;⁵ and
 - Other information related to flight safety.⁶
- iii. Military aircrew should refrain from the use of uncivil language or unfriendly physical gestures.
- iv. Communications between military aircraft during an emergency may be conducted by any method possible.⁷
- v. Although these rules encourage communications, they do not intend to obligate military aircraft to communicate.

² International Civil Aviation Organization (ICAO) Convention on International Civil Aviation, Annex 10, Volume II, Para. 5.1.8.8.

³ See also CUES, Paras. 3.4 and 3.6.

⁴ See CUES, Para. 3.6.1.

⁵ Cf. ICAO, Annex 10, Volume II, Chapter 5, Para. 5.1.8.4.

⁶ Cf. ICAO, Annex 10, Volume II, Chapter 5.

⁷ See, e.g., ICAO, Annex 10, Volume II, Chapter 5, ICAO Annex II, Appendices 1 and 2, and ICS, Chapter 4, Section 3.

SECTION IV

General Flight Rules

- i. When the military aircraft of both Sides have an unintentional encounter in flight, they should ensure safe separation to avoid creating a safety hazard.⁸ To determine safe separation, military aircraft should comprehensively consider their own national rules, relevant international guidance, and factors including the mission, meteorological considerations, and flight situation.
- ii. The safe separation between the military aircraft of both Sides determined in a specific circumstance is applicable to the situation at the time and should not be used as the basis for determining safe separation in other circumstances.
- iii. When the military aircraft of one Side intentionally approach the military aircraft of the other Side for the purpose of identification, verification, or escort, the pilots of both Sides are responsible to operate with professional airmanship and give due regard for the safety of the other Side's aircraft.⁹ Following the above-mentioned principles, the aircraft initiating the approach should maintain safe separation, while the aircraft of the other Side should avoid reckless maneuvers.

SECTION V

Rules for Specially Designated Areas

Air Danger Area or Warning Area

- i. When conducting activities that may affect the safety of nearby military vessels and military aircraft, commanders are to ensure the appropriate danger area or warning area has been

⁸ Cf. ICAO, Annex 2, Para 3.2.1.

⁹ UNCLOS, Articles 58 and 87.

established or declared.¹⁰ The on-scene commander also is to provide timely hazard warnings to vessels or aircraft in the vicinity.¹¹ Commanders should ensure that related activities are limited to the applicable area.

- ii. If there are operational safety concerns, military vessels or military aircraft in the vicinity or inside the applicable area should conduct timely, active communication to coordinate their actions and ensure safety.¹²
- iii. The military vessels and military aircraft of one Side should refrain from interfering with the activities in the applicable area established or declared by the other Side; however, military vessels and military aircraft always enjoy the rights and freedom of navigation, overflight, and other internationally lawful uses of the sea related to those freedoms.¹³

SECTION VI

Rules for Establishing Mutual Trust in the Air

- i. Peacetime Security Assurance Measures
 - The aircraft commander of a military aircraft is responsible for determining whether his or her aircraft is threatened by another aircraft. That determination must balance the potential threat from the other military aircraft and their right to operate in the area.

¹⁰ These areas are established and activated advising of the presence of hazards that may affect the safety of air navigation by issuance of a Notice to Airmen (NOTAM). See ICAO Annex 15, Chapter 5, Para. 5.1.1.1.; see also CUES Para. 2.10. For maritime warnings, see Joint International Hydrographic Organization (IHO) / International Maritime Organization (IMO) / World Meteorological Organization (WMO) Manual on Maritime Safety Information (MSI), Para. 4.2.2.; ICS, Chapter 4, Section 3 and Appendix.

¹¹ See MSI, Para 4.2.2.; ICS, Chapter 4, Section 3 and Appendix.

¹² Cf. ICAO, Annex 10, Volume II, Para. 5.1.8.4.

¹³ UNCLOS, Articles 56 and 58.

ii. The pilots of military aircraft should consider the potential ramifications before engaging in actions that could be misinterpreted. Actions that the prudent pilot generally should avoid include:

- Actions that impinge upon the ability of the other Side's military aircraft to maneuver safely;
- Approaching the other Side's military aircraft at an uncontrolled closure rate that may endanger the safety of either aircraft;
- The use of a laser in such a manner as to cause harm to personnel or damage to equipment onboard the other Side's military aircraft.¹⁴
- Actions that interfere with the launch and recovery of military aircraft by the other Side's military vessel;¹⁵
- Aerobatics and simulated attacks in the vicinity of the vessels encountered;¹⁶ and
- Except in the case of distress, the discharge of signal rockets, weapons, or other objects in the direction of military vessels or military aircraft encountered.¹⁷

iii. Rules for Emergency On-Scene Coordination

- During encounters in the air between the military aircraft of both Sides, if an emergency situation occurs, the pilots of both Sides involved should increase communication and take active measures to reduce flight hazard.¹⁸
- During encounters in the air, if an emergency situation occurs, whatever the cause, the military aircraft of the two Sides should separate immediately and should avoid taking any action that leads to escalation of the situation.

¹⁴ CUES, Para. 2.8.1.; *see also* Annex II, Rules of Behavior for Safety of Surface-to-Surface Encounters ("Annex II"), Section VI, Para. ii.4.

¹⁵ *See* UNCLOS, Articles 58 and 87.; *See also*, Section V above; *Cf.* ICAO Annex 2, Paras. 3.2.5.a. and 3.2.5.b.

¹⁶ CUES, Para. 2.8.1.; *see also* Annex II, Rules of Behavior for Safety of Surface-to-Surface Encounters Section VI, Para. ii.5.

¹⁷ CUES, Para. 2.8.1.; *see also* Annex II, Rules of Behavior for Safety of Surface-to-Surface Encounters Section VI, Para. ii.2.

¹⁸ *Cf.* ICAO, Annex 10, Volume II, Para. 5.1.8.4.

- iv. For situations of concern occurring in the air, such as an unsafe encounter or other actions that could lead to misperception and miscalculation, both Sides should take active measures to reduce tension, communicate with each other at appropriate levels, conduct professional assessments, and explore improvement measures through military and diplomatic channels, including the Military Maritime Consultative Agreement (MMCA) mechanism.

SECTION VII

Relevant Communication Rules

- i. Unless otherwise decided by the two Sides, all voice communications should be conducted in English as the internationally accepted language for flight operations.¹⁹ Use plain language whenever possible.
- ii. If voice communications are attempted in the interests of flight safety, the military aircraft initiating the call should identify the nationality or international radio call sign (“call sign”) of the military aircraft addressed, followed by its own nationality or call sign. If the aircraft initiating the call cannot identify the nationality or call sign of the other aircraft, it should address “unknown aircraft” with other supplemental information, such as the aircraft’s position, course heading, and speed in order to call attention to the other aircraft to respond.
- iii. Radio Communication Frequencies
- Main frequencies:
 1. International Air Distress – VHF 121.5MHz, or
 2. International Military Air Distress – UHF 243.0MHz²⁰

¹⁹ Cf. ICAO Annex 1, Chapter 1 and Annex 10 Volume II, Chapter 5.

²⁰ See, e.g., ICAO Annex 10, Volume V, Chapter 4, Table 4-1; ICAO Annex 2, Appendix 2, Para. 2.; and International Telecommunication Union (ITU) Radio Regulations, S5.200 and S5.111.

**Newly Added Terms of Reference for Air-to-Air Encounters for Inclusion in Annex I
Terms of Reference of the Rules of Behavior for Safety of Air and Maritime Encounters**

- i. Military aircraft include manned and unmanned fixed-wing aircraft, rotary-wing aircraft, and helicopters of both sides' militaries.
- ii. Air Danger Area or Warning Area is an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.¹

¹ ICAO, Annex 2, Chapter 1, page 1-3.