



Transmittal Note

31/10/06

SUPPLEMENT TO
ANNEX 10 — AERONAUTICAL TELECOMMUNICATIONS
VOLUME V
(AERONAUTICAL RADIO FREQUENCY SPECTRUM UTILIZATION)
(Second Edition)

1. The attached Supplement supersedes all previous Supplements to Annex 10, Volume V, and includes differences notified by Contracting States up to 31 October 2006 with respect to all amendments up to and including Amendment 80.
 2. This Supplement should be inserted at the end of Annex 10, Volume V (Second Edition). Additional differences and revised comments received from Contracting States will be issued at intervals as amendments to this Supplement.
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**SUPPLEMENT TO
ANNEX 10 — AERONAUTICAL TELECOMMUNICATIONS**

**Volume V
(Aeronautical radio frequency spectrum utilization)**

(Second Edition)

Differences between the national regulations and practices of Contracting States and the corresponding International Standards and Recommended Practices contained in Annex 10, Volume V, as notified to ICAO in accordance with Article 38 of the *Convention on International Civil Aviation* and the Council's resolution of 21 November 1950.

OCTOBER 2006

INTERNATIONAL CIVIL AVIATION ORGANIZATION

RECORD OF AMENDMENTS TO SUPPLEMENT

<i>No.</i>	<i>Date</i>	<i>Entered by</i>	<i>No.</i>	<i>Date</i>	<i>Entered by</i>

**AMENDMENTS TO ANNEX 10, VOLUME V, ADOPTED OR APPROVED BY THE COUNCIL
SUBSEQUENT TO THE SECOND EDITION ISSUED JULY 2001**

<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>	<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>
77	27/2/02	28/11/02			
78	Not applicable to Volume V				
79	Not applicable to Volume V				
80	Not applicable to Volume V				

1. Contracting States which have notified ICAO of differences

The Contracting States listed below have notified ICAO of differences which exist between their national regulations and practices and the International Standards and Recommended Practices of Annex 10, Volume V (Second Edition) up to and including Amendment 80, or have commented on implementation.

The page numbers shown for each State and the dates of publication of those pages correspond to the actual pages in this Supplement.

<i>State</i>	<i>Date of notification</i>	<i>Pages in Supplement</i>	<i>Date of publication</i>
Australia	19/10/05	1	31/10/06
France	14/11/05	1	31/10/06
United Kingdom	28/4/06	1	31/10/06
United States	14/6/06	1	31/10/06

2. Contracting States which have notified ICAO that no differences exist

<i>State</i>	<i>Date of notification</i>	<i>State</i>	<i>Date of notification</i>
Argentina	14/11/05	New Zealand	5/11/05
Austria	14/6/05	Norway	19/8/05
Azerbaijan	26/8/05	Republic of Moldova	12/9/05
Belgium	27/10/05	Romania	20/10/05
Bolivia	2/6/05	Saudi Arabia	24/8/05
Canada	24/10/05	Singapore	5/7/05
Chile	14/10/05	Slovakia	4/11/05
China	13/6/05	Slovenia	30/6/05
China (Hong Kong SAR)	24/10/05	South Africa	13/5/05
Denmark	22/6/05	Sweden	24/10/05
Egypt	13/7/05	Switzerland	29/7/05
Gambia	8/6/05	The former Yugoslav Republic of Macedonia	4/7/05
Germany	20/10/05	Tunisia	18/7/05
Greece	5/10/05	Turkey	5/7/05
India	27/7/06	United Arab Emirates	24/5/05
Iran (Islamic Republic of)	30/7/05	Uruguay	4/4/06
Ireland	24/10/05	Uzbekistan	11/10/05
Lithuania	16/8/05	Venezuela	12/7/05
Malaysia	16/6/05		

3. Contracting States from which no information has been received

Afghanistan	Georgia	Nigeria
Albania	Ghana	Oman
Algeria	Grenada	Palau
Andorra	Guatemala	Pakistan
Angola	Guinea	Panama
Antigua and Barbuda	Guinea-Bissau	Papua New Guinea
Armenia	Guyana	Paraguay
Bahamas	Haiti	Peru
Bahrain	Honduras	Philippines
Bangladesh	Hungary	Poland
Barbados	Iceland	Portugal
Belarus	Indonesia	Qatar
Belize	Iraq	Republic of Korea
Benin	Israel	Russian Federation
Bhutan	Italy	Rwanda
Bosnia and Herzegovina	Jamaica	Saint Kitts and Nevis
Botswana	Japan	Saint Lucia
Brazil	Jordan	Saint Vincent and the Grenadines
Brunei Darussalam	Kazakhstan	Samoa
Bulgaria	Kenya	San Marino
Burkina Faso	Kiribati	Sao Tome and Principe
Burundi	Kuwait	Senegal
Cambodia	Kyrgyzstan	Serbia
Cameroon	Lao People's Democratic Republic	Seychelles
Cape Verde	Latvia	Sierra Leone
Central African Republic	Lebanon	Solomon Islands
Chad	Lesotho	Somalia
Colombia	Liberia	Spain
Comoros	Libyan Arab Jamahiriya	Sri Lanka
Congo	Luxembourg	Sudan
Cook Islands	Madagascar	Suriname
Costa Rica	Malawi	Swaziland
Côte d'Ivoire	Maldives	Syrian Arab Republic
Croatia	Mali	Tajikistan
Cuba	Malta	Thailand
Cyprus	Marshall Islands	Timor-Leste
Czech Republic	Mauritania	Togo
Democratic People's Republic of Korea	Mauritius	Tonga
Democratic Republic of the Congo	Mexico	Trinidad and Tobago
Djibouti	Micronesia (Federated States of)	Turkmenistan
Dominican Republic	Monaco	Uganda
Ecuador	Mongolia	Ukraine
El Salvador	Morocco	United Republic of Tanzania
Equatorial Guinea	Mozambique	Vanuatu
Eritrea	Myanmar	Viet Nam
Estonia	Namibia	Yemen
Ethiopia	Nauru	Zambia
Fiji	Nepal	Zimbabwe
Finland	Netherlands	
Gabon	Nicaragua	
	Niger	

4. Paragraphs with respect to which differences have been notified

<i>Paragraph</i>	<i>Differences notified by</i>	<i>Paragraph</i>	<i>Differences notified by</i>
2.1.1	Australia	4.1.3.1.1	France
2.1.2	Australia		United Kingdom
	United States	4.1.3.1.2	France
2.1.3	Australia	4.1.3.1.4	Australia
	United States	4.1.3.1.5	Australia
4.1.1	United Kingdom	4.1.5.1	France
4.1.2.1	United States	4.1.8.1.3	France
4.1.2.2.1	United States		United Kingdom
4.1.2.2.2	United States		

CHAPTER 2

- 2.1.1 The requirement for 121.5 MHz is not specifically mandated.
2.1.2
2.1.3 *Remarks.* Australian legislation under development will propose compliance.

CHAPTER 4

- 4.1.3.1.4 Australia does not continuously guard 121.5 MHz.
4.1.3.1.5
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CHAPTER 4

- 4.1.3.1.1 In addition to the uses specified in this paragraph, the frequency 121.5 MHz may be used for direction-finding requirements.
- 4.1.3.1.2 The frequency 121.5 MHz is implemented at certain international aerodromes only when it is considered necessary.
- 4.1.5.1 For the deployment of VHF frequencies and the avoidance of harmful interference, the 14 dB criterion is used only for services with a cylindrical designated operational coverage (DOC) and 25 kHz spacings. The radio horizon is used in the other cases (8.33 and 25 kHz spacings).
- Remarks.* Absence of regional agreements on this point.
- 4.1.8.1.3* The OPC frequencies are assigned outside the dedicated band.
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* Recommended Practice

CHAPTER 4

- 4.1.1 VHF communications frequencies are planned in accordance with planning agreements reached within Europe. These agreements do not respect the allotment table (Table 4-1).

Remarks. To maximize the number of frequency assignments and planning efficiency that can be achieved.

- 4.1.3.1.1 The United Kingdom encourages the use of practice PANS calls on 121.5 MHz in contradiction with the Annex 10 requirement for the frequency to only be used in genuine emergencies.

- 4.1.8.1.3* Within Europe the bands 131.400 – 132.000 and 136.800 – 136.875 MHz inclusive are designated for operational control communications. This has been agreed at a European regional level and hence frequencies to meet aircraft operating obligations under Annex 6 may not be assigned in the United Kingdom in the band 117.975 – 137 MHz, with the exclusion of the bands 131.400 – 132.000 MHz and 136.8 – 136.875 MHz.

Remarks. To maximize the number of frequency assignments and planning efficiency that can be achieved.

* Recommended Practice

CHAPTER 2

- 2.1.2 Emergency locator transmitters installed on or about 1 January 2002 do not have to operate on both 406 MHz and 121.5 MHz in the United States.

Remarks. Mandatory carriage of emergency locator transmitters operating on both 406 MHz and 121.5 MHz has been postponed in the United States.

- 2.1.3 Effective date of 1 January 2005 for emergency locator transmitters to operate on both 406 MHz and 121.5 MHz was not met in the United States.

Remarks. Mandatory carriage of emergency locator transmitters operating on both 406 MHz and 121.5 MHz has been postponed in the United States.

CHAPTER 4

- 4.1.2.1 Minimum channel spacing in the United States is not 8.33 kHz.

Remarks. 8.33 kHz channel spacing is not currently implemented in the United States. 25 kHz channel spacing is the minimum channel spacing.

- 4.1.2.2.1 No regional air navigation agreement on 8.33 kHz channel spacing has been made.

Remarks. Mandatory carriage of 8.33 kHz equipment has not been established in the United States.

- 4.1.2.2.2 8.33 kHz radios are not safeguarded with respect to their suitability for AM(R)S in the United States.

Remarks. 8.33 kHz channel spacing is not currently implemented in the United States. 25 kHz channel spacing is the minimum channel spacing.
