

NATIONAL AIR INTELLIGENCE CENTER



FREQUENCIES USED WITH SATELLITES (PART 1)



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Translated by: Edward A. Suter

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PREPARED BY:

TRANSLATION SERVICES
NATIONAL AIR INTELLIGENCE CENTER
WPAFB, OHIO

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Chinese Space Science and Technology (Zhongguo Kongjian Kexue Jishu)
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FREQUENCIES USED WITH SATELLITES (PART 1)

Classified According to the Satellites' Services

**From Article 8 of the International
Telecommunication Union Regulations**

(Romanized Title: *Weixing Yong Pinlü*)

By Chen Daoming (China Space Science and Technology Institute,
Beijing, 100081)

The International Telecommunication Union has designated operating frequencies for satellites. They are scattered in Article 8 of the Radio Regulations, where it is inconvenient to look them up. In light of this, the author has compiled this material from the Radio Regulations which were revised at the 1992 World Administrative Radio Conference and from the European Space Bureau's "Satellite Frequencies" data, and has classified it according to satellite services. However, the information here does not include frequencies shared between satellites and surface systems.

According to the Radio Regulations, radio services are mainly divided into primary, secondary, and footnote services of relatively large limited use. The world is divided into three regions, and China is in Region 3.

There are thirteen satellite services included in this material: (1). Space Operations; (2). Space Research; (3). Intersatellite; (4). Broadcasting Satellite; (5). Fixed Satellite; (6). Mobile Satellite (Land Mobile, Maritime Mobile, Aeronautical Mobile); (7). Earth Exploration Satellite; (8). Meteorological Satellite; (9). Radiodetermination Satellite; (10). Radio Positioning Satellite; (11). Radionavigation Satellite; (12). Standard Frequency and Time Signal Satellite; (13). Amateur Satellite.

This material utilizes some abbreviations:

No marking – Primary service;

S – Secondary service;

S 1, 2– Secondary service applicable only in regions 1 and 2;

(XXX) – Footnote allocation service; XXX is the footnote number;

(XXX) 1, 3 – Footnote allocation service applicable only in regions 1 and 3;

(XXX) cc– Footnote allocation service for a certain country;

(XXX) cc 3 – Footnote allocation service for a certain country in Region 3;

(S-E) – Space-to-Earth;

(E-S) – Earth-to-space;

(S-S) – Space-to-space;

Passive – Passive satellite reception;

Active – Active satellite reception.

1. Space Operations Service

| | | |
|-----------|-----|--|
| 136–137 | MHz | (595) S(S-E) |
| 137–138 | MHz | (S-E) |
| 148–149.9 | MHz | (607) (E-S) Must comply with Article 14 regulations ¹ |

¹ Original text in ITU Regulations: "...subject to agreement obtained under the procedure set forth in Article 14."

| | | |
|---------------|-----|---|
| 163-167 | MHz | (616) Used by China. (S-E) Must comply with Article 14 regulations |
| 174-184 | MHz | (619) Used by China. (S-E) Must comply with Article 14 regulations |
| 267-272 | MHz | S (S-E) |
| 272-273 | MHz | (S-E) |
| 400.15-401 | MHz | S (S-E) |
| 401-402 | MHz | (S-E) |
| 433.75-434.25 | MHz | (663) 2 cc (E-S); 1,2 cc S(E-S) |
| 449.25-450.25 | MHz | (668) (E-S) Must comply with Article 14 regulations |
| 470-485 | MHz | (673) Used by China. (S-E) Must comply with Article 14 regulations |
| 549.75-550.25 | MHz | (679) Used by India S(S-E) |
| 1525-1535 | MHz | (S-E) |
| 2025-2110 | MHz | (E-S and S-S) Must comply with Res. Com. 4/3 (750A) Non-fixed satellite network must have no interference |
| 2200-2290 | MHz | (S-E and S-S) Must comply with Res. Com. 4/3 Non-fixed satellite network must have no interference |
| 7125-7155 | MHz | 2 (E-S) Must comply with Article 14 regulations |
| 2182 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 2501-2502 | kHz | S |
| 3023 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 5003-5005 | kHz | S |
| 5680 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 8364 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 10,003 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 10,003-10,005 | kHz | S |
| 12,150 | kHz | (501) Manned spacecraft distress and rescue. Must comply with |

| | | |
|---------------|-----|---|
| | | Articles 38 and N38 |
| 14,993 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 15,005–15,010 | kHz | S |
| 18,052–18,068 | kHz | S |
| 19,990–19,995 | kHz | S |
| 19,993 | kHz | (501) Manned spacecraft distress and rescue. Must comply with Articles 38 and N38 |
| 25,005–25,010 | kHz | S |
| 30.005–30.01 | MHz | |
| 39.986–40.02 | MHz | S |
| 40.98–41.015 | MHz | S |
| 136–137 | MHz | (595) S (S-E) |
| 137–138 | MHz | (S-E) |
| 138–143.6 | MHz | S (S-E) 2, 3; (600) 1 cc |
| 143.6–143.65 | MHz | (S-E) |
| 143.65–144 | MHz | S (S-E) 2, 3; (600) 1 cc |

(To be continued.)

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