

L.N. 22 of 2005**TELECOMMUNICATIONS (TELECOMMUNICATIONS
APPARATUS) (EXEMPTION FROM LICENSING)
(AMENDMENT) ORDER 2005**

(Made by the Chief Executive in Council under section 39
of the Telecommunications Ordinance (Cap. 106))

1. Commencement

This Order shall come into operation on a day to be appointed by the Telecommunications Authority by notice published in the Gazette.

2. Schedules 1 and 2 substituted

Schedules 1 and 2 to the Telecommunications (Telecommunications Apparatus) (Exemption from Licensing) Order (Cap. 106 sub. leg. Z) are repealed and the following substituted—

“SCHEDULE 1**[s. 5]****TECHNICAL CRITERIA FOR APPARATUS USED, ETC.
AS MOBILE EARTH STATIONS**

1. The operating frequency for transmission shall be within the frequency bands 1610 MHz to 1660.5 MHz, 1668 MHz to 1675 MHz or 1980 MHz to 2010 MHz.
2. The operating frequency for reception shall be within the frequency bands 1518 MHz to 1559 MHz, 1613.8 MHz to 1626.5 MHz, 2170 MHz to 2200 MHz or 2483.5 MHz to 2500 MHz.
3. The mean equivalent isotropically radiated power density produced by the mobile earth station shall not exceed -3 dBW/4kHz within the frequency band 1610 MHz to 1626.5 MHz.
4. The unwanted emissions generated by the mobile earth station shall comply with the relevant requirements in—
 - (a) Recommendation ITU-R M.1343 “Essential Technical Requirements of Mobile Earth Stations for Global Non-Geostationary Mobile-Satellite Service Systems in the Bands 1–3 GHz”; or

- (b) Recommendation ITU-R M.1480 “Essential Technical Requirements of Mobile Earth Stations of Geostationary Mobile-Satellite Systems that are Implementing the Global Mobile Personal Communications By Satellite (GMPCS)—Memorandum of Understanding Arrangements in Parts of the Frequency Band 1–3 GHz”,
approved by the International Telecommunication Union as revised from time to time.

SCHEDULE 2

[ss. 3 & 5]

TECHNICAL CRITERIA FOR APPARATUS USED, ETC.
OTHER THAN AS MOBILE EARTH STATIONS

Telecommunications apparatus shall operate within a frequency band shown in column 1 of the following table and the output level and spurious emission level generated by the apparatus shall not exceed the limits set out opposite to that frequency band in columns 2 and 3—

Column 1	Column 2	Column 3
Frequency Band	Limits on Output Level	Limits on Spurious Emission Level
3–195 kHz	electric field strength not to exceed 40 dB μ V/m and magnetic field strength not to exceed 48.4 dBnA/m at 100 m from the apparatus	spurious emission level not to exceed the limits set out in Note ^[9]
1627.5–1796.5 kHz ^[1]	electric field strength not to exceed 88 dB μ V/m at 30 m from the apparatus	electric field strength not to exceed 34 dB μ V/m at 30 m from the apparatus within 0.5–30 MHz; spurious emission level not to exceed the limits set out in Note ^{[9](b)}
13.553–13.567 MHz	(a) electric field strength not to exceed 80 dB μ V/m at 30 m from the apparatus; or (b) magnetic field strength not to exceed 42 dB μ A/m at 10 m from the apparatus	spurious emission level not to exceed the limits set out in Note ^[9]
26.96–27.28 MHz	mean power not to exceed 0.5 W	
33–33.28 MHz	e.r.p. not to exceed 10 mW	

Column 1	Column 2	Column 3
Frequency Band	Limits on Output Level	Limits on Spurious Emission Level
35.145–35.225 MHz	e.r.p. not to exceed 100 mW	(a) e.r.p. not to exceed 2 nW for frequency below 1 GHz; and (b) e.r.p. not to exceed 20 nW for frequency at or above 1 GHz
36.26–36.54 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
36.41–36.69 MHz		
36.71–36.99 MHz		
36.96–37.24 MHz		
40.66–40.70 MHz	e.r.p. not to exceed 100 mW	(a) e.r.p. not to exceed 2 nW for frequency below 1 GHz; and (b) e.r.p. not to exceed 20 nW for frequency at or above 1 GHz
42.75–43.03 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
43.71–44.49 MHz ^[2]	electric field strength not to exceed 10 mV/m at 3 m from the apparatus	spurious emission level not to exceed the limits set out in Note ^[10]
44.73–45.01 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
46.6–46.98 MHz ^[2]	electric field strength not to exceed 10 mV/m at 3 m from the apparatus	spurious emission level not to exceed the limits set out in Note ^[10]
47.13–47.41 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
47.43–47.56 MHz ^[1]	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^{[9](b)}
48.75–50 MHz ^[2]	electric field strength not to exceed 10 mV/m at 3 m from the apparatus	spurious emission level not to exceed the limits set out in Note ^[10]
72.00–72.02 MHz	carrier power not to exceed 750 mW	spurious emission level not to exceed 30 μ W
72.12–72.14 MHz		
72.16–72.22 MHz		
72.26–72.28 MHz		

Column 1	Column 2	Column 3
Frequency Band	Limits on Output Level	Limits on Spurious Emission Level
173.96–174.24 MHz	e.r.p. not to exceed 20 mW	spurious emission level not to exceed the limits set out in Note ^[9]
187.5–188.0 MHz	e.r.p. not to exceed 10 mW	
253.85–255 MHz ^[3]	e.r.p. not to exceed 12 mW	e.r.p. not to exceed 2.5 µW
266.75–267.25 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
313.75–314.25 MHz		
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380.2–381.325 MHz ^[3]	e.r.p. not to exceed 12 mW	e.r.p. not to exceed 2.5 µW
409.74–410 MHz ^[4]	e.r.p. not to exceed 0.5 W	e.r.p. not to exceed 50 µW
819.1–823.1 MHz	(a) e.r.p. not to exceed 100 mW; and (b) power spectral density not to exceed 10 mW per 25 kHz	spurious emission level not to exceed the limits set out in Note ^[9]
864.1–868.1 MHz ^[5]	carrier power or e.r.p. not to exceed 10 mW	(a) e.r.p. not to exceed 250 nW for frequency below 1 GHz excluding 41–68 MHz, 87.5–118 MHz, 162–230 MHz and 470–862 MHz; (b) e.r.p. not to exceed 4 nW for frequency in the bands 41–68 MHz, 87.5–118 MHz, 162–230 MHz and 470–862 MHz; and (c) e.r.p. not to exceed 1 µW for frequency at or above 1 GHz
865–868 MHz ^[13]	e.r.p. not to exceed 100 mW	(a) e.r.p. not to exceed 250 nW for frequency below 1 GHz excluding 47–74 MHz, 87.5–118 MHz, 174–230 MHz and 470–862 MHz; (b) e.r.p. not to exceed 4 nW for frequency in the bands 47–74 MHz, 87.5–118 MHz, 174–230 MHz and 470–862 MHz; and (c) e.r.p. not to exceed 1 µW for frequency at or above 1 GHz
865.6–867.6 MHz ^[14]	e.r.p. not to exceed 2 W	
865.6–868 MHz ^[15]	e.r.p. not to exceed 500 mW	

Column 1	Column 2	Column 3
Frequency Band	Limits on Output Level	Limits on Spurious Emission Level
919.5–920.0 MHz	e.r.p. not to exceed 10 mW	spurious emission level not to exceed the limits set out in Note ^[9]
920–925 MHz ^[6]	e.i.r.p. not to exceed 4 W	e.r.p. not to exceed 10 μ W for frequency outside the frequency band in which the fundamental frequencies are located
1880–1900 MHz ^[6]	(a) peak power not to exceed 250 mW for apparatus with antenna output terminal; or (b) peak e.i.r.p. not to exceed 250 mW for apparatus with integral antenna	(a) e.r.p. not to exceed 250 nW for frequency below 1 GHz; and (b) e.r.p. not to exceed 1 μ W for frequency at or above 1 GHz
1895–1906.1 MHz ^[7]	(a) carrier power not to exceed 10 mW for apparatus with antenna output terminal; or (b) e.r.p. not to exceed 10 mW for apparatus with integral antenna	(a) e.r.p. not to exceed 250 nW for frequency within 1895–1906.1 MHz; and (b) e.r.p. not to exceed 2.5 μ W for frequency within 30 MHz–10 GHz excluding 1895–1906.1 MHz
2400–2483.5 MHz	(a) peak e.i.r.p. not to exceed 4 W for frequency hopping spread spectrum modulation or digital modulation systems; or (b) aggregate e.r.p. not to exceed 100 mW for any modulation	e.r.p. not to exceed 10 μ W for frequency outside the frequency band in which the fundamental frequencies are located
5150–5350 MHz ^[11]	e.i.r.p. not to exceed 200 mW using only digital modulation	e.r.p. not to exceed 10 μ W
5470–5725 MHz ^[12]	e.i.r.p. not to exceed 1 W	
5725–5850 MHz	(a) peak e.i.r.p. not to exceed 4 W for frequency hopping spread spectrum modulation or digital modulation systems; or (b) aggregate e.r.p. not to exceed 100 mW for any modulation	e.r.p. not to exceed 10 μ W for frequency outside the frequency band in which the fundamental frequencies are located
18.82–18.87 GHz	(a) e.r.p. not to exceed 100 mW; and (b) power spectral density not to exceed 3 mW per 100 kHz	e.r.p. not to exceed 10 μ W for frequency outside the frequency band in which the fundamental frequencies are located

Column 1	Column 2	Column 3
Frequency Band	Limits on Output Level	Limits on Spurious Emission Level
76–77 GHz	carrier power not to exceed 10 mW	(a) power density not to exceed 600 pW/cm ² at 3 m from the apparatus for frequency above 40 GHz but below 200 GHz; and (b) power density not to exceed 1000 pW/cm ² at 3 m from the apparatus for frequency at or above 200 GHz
3000 GHz or above ^[8]	Not applicable	Not applicable

Note: ^[1] The apparatus shall operate within the frequency bands 1627.5–1796.5 kHz paired with 47.43–47.56 MHz and on one of the following pairs of frequencies—

Channel Number	kHz	MHz
1	1642.00	47.45625
2	1662.00	47.46875
3	1682.00	47.48125
4	1702.00	47.49375
5	1722.00	47.50625
6	1742.00	47.51875
7	1762.00	47.53125 or 47.44375
8	1782.00	47.54375

^[2] The apparatus shall operate within the frequency bands 43.71–44.49 MHz, 46.6–46.98 MHz and 48.75–50 MHz and on any one or more of the following pairs of frequencies—

Channel Number	MHz	MHz
1	43.720	48.760
2	43.740	48.840
3	43.820	48.860
4	43.840	48.920
5	43.920	49.020
6	43.960	49.080
7	44.120	49.100
8	44.160	49.160

Channel Number	MHz	MHz
9	44.180	49.200
10	44.200	49.240
11	44.320	49.280
12	44.360	49.360
13	44.400	49.400
14	44.460	49.460
15	44.480	49.500
16	46.610	49.670
17	46.630	49.845
18	46.670	49.860
19	46.710	49.770
20	46.730	49.875
21	46.770	49.830
22	46.830	49.890
23	46.870	49.930
24	46.930	49.990
25	46.970	49.970

- [3] The apparatus shall operate within the frequency bands 253.85–255 MHz paired with 380.2–381.325 MHz and the frequency pairs shall be as follows—

Speech Channel	$380.2 + n \times 0.0125$ MHz, where n is an integer in the range 1 to 88 (except 46)	$253.85 + n \times 0.0125$ MHz, where n is an integer in the range 1 to 88 (except 46)
Control Channel	380.775 MHz and 381.3125 MHz	254.425 MHz and 254.9625 MHz

- [4] The apparatus shall employ frequency modulation and the carrier frequencies of the apparatus shall be $409.7375 + (0.0125 \times n)$ MHz, where n is an integer in the range 1 to 20.
- [5] The carrier frequencies of the apparatus shall be $864.05 + (0.1 \times n)$ MHz, where n is an integer in the range 1 to 40.
- [6] The carrier frequencies of the apparatus shall be $1880.064 + (1.728 \times n)$ MHz, where n is an integer in the range 1 to 10.
- [7] The carrier frequencies of the apparatus shall be $1895.15 + (n - 1) \times 0.3$ MHz, where n is an integer in the range 1 to 37.

- [8] The apparatus shall satisfy at least one of the following conditions—
- the maximum usable range of the apparatus does not exceed 30 m;
 - the transmission path does not cross a public street or unleased Government land.
- [9] An apparatus with the following frequency range shall not generate a spurious emission level which exceeds the limits set out opposite to that frequency range—
- 3 kHz–30 MHz

Frequency Range	Limits on Spurious Emission Level
3–415 kHz	electric field strength not to exceed 17 dB μ V/m and magnetic field strength not to exceed 25.4 dBnA/m at 300 m from the apparatus
415 kHz–30 MHz	electric field strength not to exceed 30 dB μ V/m and magnetic field strength not to exceed 38.4 dBnA/m at 30 m from the apparatus

- 30 MHz–1000 MHz

Frequency Range	Limits on Spurious Emission Level
30–1000 MHz excluding 87–137 MHz and 470–790 MHz	e.r.p. not to exceed 300 nW
87–137 MHz and 470–790 MHz	e.r.p. not to exceed 60 nW

- 1–2 GHz

Frequency Range	Limits on Spurious Emission Level
1–2 GHz	e.r.p. not to exceed 1 μ W

- [10] An apparatus with the following frequency range shall not generate a spurious emission level which exceeds the limits set out opposite to that frequency range—

Frequency Range	Limits on Spurious Emission Level
1.705–30.0 MHz	electric field strength not to exceed 30 μ V/m at 30 m from the apparatus
30–88 MHz	electric field strength not to exceed 100 μ V/m at 3 m from the apparatus
88–216 MHz	electric field strength not to exceed 150 μ V/m at 3 m from the apparatus
216–960 MHz	electric field strength not to exceed 200 μ V/m at 3 m from the apparatus
above 960 MHz	electric field strength not to exceed 500 μ V/m at 3 m from the apparatus

- [11] Use of the band 5150–5350 MHz is restricted to indoor operations.
- [12] Use of the band 5470–5725 MHz shall comply with the technical requirements in Recommendation ITU-R M.1652 “Dynamic frequency selection (DFS) in wireless access systems including radio local area networks for the purpose of protecting the radiodetermination service in the 5 GHz band” approved by the International Telecommunication Union as revised from time to time.
- [13] The carrier frequencies of the apparatus shall be $864.90 + (0.2 \times n)$ MHz, where n is an integer in the range 1 to 15.
- [14] The carrier frequencies of the apparatus shall be $864.90 + (0.2 \times n)$ MHz, where n is an integer in the range 4 to 13.
- [15] The carrier frequencies of the apparatus shall be $864.90 + (0.2 \times n)$ MHz, where n is an integer in the range 4 to 15.
- [16] Use of the band 920–925 MHz is restricted to apparatus operating with frequency hopping spread spectrum modulation.”.

LAM Chik-ting, Tony
Clerk to the Executive Council

COUNCIL CHAMBER
22 February 2005

Explanatory Note

This Order expands and updates the types of telecommunications apparatus exempted from licensing under the Telecommunications Ordinance (Cap. 106) to reflect technological advancement and market situation.