



GUIDELINES ON THE PURCHASE, USAGE AND POSSESSION OF CELLULAR BOOSTER OR REPEATER

1 January 2021

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A. OBJECTIVE

1. The objectives of these guidelines ("**Guidelines**") are as follow:
 - i. to control the purchase, usage and possession of cellular booster or repeater by the public and the cellular and wireless broadband service providers ("**Service Provider(s)**") in order to prevent spectrum interference to cellular and wireless broadband networks; and
 - ii. to provide guidance to the public on the precise steps of making a complaint regarding coverage issue.

B. DEFINITION

2. For the purpose of these Guidelines, the following terms in **Table 1** shall be defined as follow:

No.	Terms	Definition
i)	Anti-Oscillation	Cellular booster or repeater is able to detect and mitigate any unintended oscillations in uplink and downlink bands that could occur due to insufficient isolation between donor and serving antennas
ii)	Automatic Power Down	Cellular booster or repeater must automatically power down or cease amplification as a closer cellular base station starts on-air
iii)	Cellular Service(s)	A mobile telephone service provided by a network of base stations, each of which covers one geographic cell within the total cellular system service area
iv)	Cellular Booster	A type of bi-directional amplifier used to improve cellular phone coverage
v)	CFM	Communications and Multimedia Consumer Forum Malaysia
vi)	Commission	Malaysian Communications and Multimedia Commission
vii)	CMA 1998	Communications and Multimedia Act 1998 [Act 588]
viii)	IMT	International Mobile Telecommunication

No.	Terms	Definition
ix)	ITU	International Telecommunication Union
x)	NFP	Network Facilities Provider
xi)	NSP	Network Service Provider
xii)	Repeater	Includes a common cellular booster, a low or high power repeater, a wide-band or carrier specific repeater and a smart repeater with smart features such as self-monitoring, anti-oscillation and automatic power down to avoid from causing interference to nearby cellular base stations
xiii)	Self-monitoring	Cellular booster or repeater automatically self-monitors its operation to ensure compliance with applicable noise and gain limits and either self-correct or shut down automatically if its operation exceeds those parameters
xiv)	SMS	Short messaging service provided by a service provider and is used to transmit and receive short text messages to and from short messaging service enabled devices
xv)	TSR 2000	Communications and Multimedia (Technical Standards) Regulations 2000
xvi)	Wireless Broadband Access Service(s)	A wireless connectivity of communication bandwidth service that has a minimum downstream capacity of 650 kbps

Table 1: Terms and its definitions as used in these Guidelines

C. INTRODUCTION

3. The IMT system is a generic term used by the ITU to designate mobile broadband system. The IMT system is envisaged to ultimately provide Public Cellular Services and Wireless Broadband Access Services.
4. There are eight (8) frequency bands assigned by the Commission to the Service Providers to provide Cellular Services and Wireless Broadband Access Services using the IMT system:

No.	Frequency Band	Frequency Range	Type of Assignment
i)	850 MHz	824 MHz to 834 MHz paired with 869 MHz to 879 MHz	Apparatus Assignment
ii)	900 MHz	885 MHz to 915 MHz paired with 930 MHz to 960 MHz	Spectrum Assignment
iii)	1800 MHz	1710 MHz to 1785 MHz paired with 1805 MHz to 1880 MHz	Spectrum Assignment
iv)	2100 MHz	1920 MHz to 1980 MHz paired with 2110 MHz to 2170 MHz;	Spectrum Assignment
v)	2100 MHz TDD	1915 MHz to 1920 MHz; and 2010 MHz to 2025 MHz	Spectrum Assignment
vi)	2300 MHz TDD	2300 MHz to 2390 MHz	Apparatus Assignment
vii)	2600 MHz	2500 MHz to 2570 MHz paired with 2620 MHz to 2690 MHz	Apparatus Assignment
viii)	2600 MHz TDD	2575 MHz to 2615 MHz	Apparatus Assignment

Table 2: IMT Frequency Bands

5. The NFP will roll out base stations for Service Providers to provide services and coverage for their customers. The main challenge for the NFP is to ensure sufficient coverage via deployment of base stations especially for indoor coverage in every building due to great difficulties in penetrating concrete, steel and low-e glass windows used in the construction of many buildings today.
6. The use of Cellular Booster(s) or Repeater(s) provide an alternative solution in addressing coverage issue whenever feasible. The common type of Cellular Booster or Repeater includes a low or high power repeater, carrier specific repeater, and a smart repeater.
7. While a Cellular Booster or Repeater is able to address indoor coverage issue in some cases, incautious use of these equipment by the public and the Service Providers will cause adverse impact to the network quality of existing cellular and wireless broadband networks.

D. GUIDELINES FOR THE PUBLIC

8. The public shall not purchase any Cellular Boosters or Repeaters from unverified resources. For the purpose of eliminating or reducing spectrum interference, Cellular Boosters or Repeaters which have been certified by the Commission or its registered certifying agency shall only be purchased from the Service Providers.
9. The usage of a non-standard Cellular Booster or Repeater by the public to resolve coverage issue(s) may inadvertently cause spectrum interference to nearby base stations and degrade network quality in the

surrounding areas. The possession of such equipment is also an offence under the CMA and TSR 2000.

10. Any member of the public that experiences coverage reception issues can lodge an official complaint to the relevant Service Provider via their official channels as per the table below:

No.	Service Provider	Official channel
i)	MAXIS	Call: 1-800-82-1123 (Personal) or dial 123 from mobile, 1-800-82-1919 (Business); or email: customercare@maxis.com.my
ii)	DIGI	Call: 016-221 1800 or email: help@digicom.my
iii)	CELCOM	Call: 1111 (from Celcom line) or 019-601 1111 (from Celcom numbers, fixed lines and mobile operators)
iv)	U MOBILE	Call: 018-388 1318 or email: customer.service@u.com.my
v)	WEBE	Email: mobilecare@unifi.com.my or mobilesupport@unifi.com.my
vi)	YES 4G	Call: 018-333 0000 or email: yescare@yes.my
vii)	REDtone	Call: 1800-87-7790 or email: support@redtone.com

viii)	Pavo Communications Sdn Bhd	call: 011-3112 2233 or email: enquiry@mcalls.asia
ix)	Tune Talk	Call: 13100 or 03-2771 7000 Email: customer.care@tunetalk.com
x)	Altel	Call: 13388 (From Altel line) or +603-2613 3888 Email: custcare@cc.altel.my
xi)	XOX	Call: 12273 (From XOX line) or 1300-888-010
xii)	redONE	Call: 1909 (careline) or 1300-11-0088 Email: careline@redone.com.my
xiii)	Yoodo	Live chat via Yoodo App and Live chat via Web https://support.yoodo.com.my/hc/en-us Email : support@yoodo.com.my

Table 3: Service Provider official channels

11. In the event the Service Providers do not respond or provide satisfied resolution to the complaint lodged by a member of the public after fifteen (15) business days, the affected individual may escalate the said complaint to the CFM (Refer to Complaint Handling Process Figure 1).
12. An official complaint can be lodged to the CFM at the following details:
 - Website : <http://complaint.cfm.my/>
 - Email : aduan@cfm.org.my
 - Telephone : 1800-18-2222

13. In the event that the member of the public is not satisfied with the complaint resolution from CFM, member of the public may escalate the said complaint to MCMC Aduan Bureau at the following channels:

- Website : <https://aduan.skmm.gov.my/>
- Email : aduanskmm@mcmc.gov.my
- Telephone : 1800-188-030



Figure 1: Complaint Handling Process

E. GUIDELINES FOR THE SERVICE PROVIDERS

14. A Service Provider shall not provide or make available a non-standard Cellular Booster or Repeater to the public.

15. In the event the installation of a Cellular Booster or Repeater is technically and commercially feasible to address indoor coverage, the Service Provider shall ensure no interference is caused to the existing cellular and wireless broadband networks. This can be achieved by using a standard Cellular Booster or Repeater that is certified by the Commission or its registered certifying agency.
16. If the installation of a Cellular Booster or Repeater is carried out by the Service Provider, the Service Provider shall notify their relevant NFP to register the usage of the Cellular Booster or Repeater under the Guideline for Deployment and Use of Lower Power Transmitter (SKMM/G/01/12) issued on 13 June 2012, including any revision(s) thereafter.

F. USE OF COMMUNICATIONS EQUIPMENT

17. All communications equipment including the Cellular Booster or Repeater must be certified by the Commission or its registered certifying agency and must bear a proper certification mark or label in accordance with the TSR 2000.
18. The purchase, usage, and possession of a Cellular Booster or Repeater is limited to the relevant Service Provider being the licensed NSP, other companies or appointed third party with an authorisation letter from the relevant NFP.

G. PROHIBITION

17. The purchase, usage and possession of a non-standard Cellular Booster or Repeater is totally prohibited. Any purchase, usage or possession of a Cellular Booster or Repeater by the public and/or the Service Provider must be fully compliant with the requirements under the CMA 1998 and the relevant subsidiary legislations, including the TSR 2000.

H. REVISION

18. The Commission may from time to time modify, vary or revoke these Guidelines without notice.

I. EFFECTIVE DATE

19. These Guidelines shall come into effect on 1st of January 2021 and shall continue to be effective until modified, varied or revoked by the Commission.

J. ENQUIRY

20. For any enquiry and further information about these Guidelines, please contact the Spectrum Monitoring and Interference Resolution Department at spectrum.monitoring@mcmc.gov.my.