



Update on Hearing Aid Compatibility Guidance

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Presentation Outline

- **Review §20.19 hearing aid-compatible mobile handsets rules for manufactures.**
 - The rules are applicable to both service providers and manufactures.
 - This presentation will only review rules pertaining to manufactures.

- **Review inquiry questions over the past year.**



Review Rules

§ 20.19

- **§20.19 Conditions:**
 - A. Mobile handsets used for digital CMRS**
 - B. Interconnected with the public switched network
&**
 - C. Work in the 800–950 MHz or 1.6–2.5 GHz bands**
 - D. With air interface stated in C63.19–2007***
 - TIA/EIA/IS 2000 CDMA
 - TIA/EIA-136 TDMA (50 Hz)
 - J-STD-007 GSM (217)
 - T1/T1P1/3GPP a UMTS (WCDMA)
 - IDEN TDMA (22 Hz and 11 Hz)
 - For UMTS refer to 3GPP TS26.131 and TS26.132
- =
- **Manufactures must make available a specified amount (20.19(c) and (d)) of HAC compliant handset models to carriers.**



Review Rules

Equipment Certification

- For HAC rated handsets, test reports are required in the application for certification for all air interfaces and frequency bands defined in §20.19 demonstrating compliance to C63.19.
- Any other air interface/ frequency band other than what is defined in § 20.19, the handset can not be considered as compliant or non compliant for HAC compliance reporting except for:
 - Wi-Fi
 - no test data is to be submitted.
 - disclosure provided to user is required.
- HAC certification testing must be in accordance with:
 - C63.19–2006 or ANSI C63.19–2007 for this year only,
 - After 1/1/2010 C63.19–2007 is only to be used.



Review Rules

HAC and Models Reported

- **Manufactures of handsets defined in § 20.19 offered to carriers must report to the Wireless Bureau (under § 20.19 (i) reporting requirements) HAC compliant and non HAC compliant models per air interface.**
- **For example: Model handset XYZ is capable of:**
 - **GSM/GPRS /EDGE and CDMA2000 / 1xRTT /1xEV-DO**
- **This model is counted in separate air interface sets:**
 - **As One Model offered in the TIA/EIA/IS 2000 CDMA set**
 - **As One Model offered in the J-STD-007 GSM (217) set**



Review Rules

Phase-in of Compliant Handsets for Manufacturers For Each Air Interface

Models	1-2	3	4-6	> 6
M Rating	0	1 ²	2 ³	(1/3) ^{1,3}
T Rating	de minimis exception		2 or % of Models ^{1,4} which ever is greater	

1. Round Down.
2. Refresh a new model every other year if 3 models offered.
3. Refresh 50% (rounded up) of required HAC models every year if 4 or more models offered.
4. After 2/15/2009 %=20% only one model may be C63-19-2006 tested.
After 2/15/2010 %=25% all models must be C63-19-2007 tested
After 2/15/2011 %=1/3 all models must be C63-19-2007 tested.



Review Rules

Models Counted For Each Air Interface

Example

Models	M	T-2009	T-2010	T-2011	M Refresh Rate
1	0	0	0	0	0
2	0	0	0	0	0
3	1	1	1	1	Every other Yr
4	2	2	2	2	1 Every Yr
5	2	2	2	2	1 Every Yr
8	2	2	2	2	1 Every Yr
9	3	2	2	3	2 Every Yr
12	4	2	3	4	2 Every Yr
15	5	3	3	5	3 Every Yr

Only distinct models are counted. Models that are marketed under different names but do not differ in form, function, or capabilities, such as functionally identical models labeled differently for sale to different carriers, are counted as a single model.



Review Rules Models Counted

Example:

Manufacture ABC has 25 Models with Multiple Air interfaces

Model Type	Models #	CDMA 2000	J-STD-007 GSM (217	WCDMA	IDEN TDMA
A	3	3			
B	2	2	2		
C	7		7		
D	2		2	2	
E	2			2	
F	9				9
	25	5	11	4	9

TI/VEIA/VIS 2000 CDMA	M	T-2009	T-2010	T-2011	M Refresh Rate
5	2	2	2	2	1 Every Yr

J-STD-007 GSM (217	M	T-2009	T-2010	T-2011	M Refresh Rate
11	3	2	2	3	2 Every Yr

WCDMA	M	T-2009	T-2010	T-2011	M Refresh Rate
4	2	2	2	2	1 Every Yr

IDEN TDMA	M	T-2009	T-2010	T-2011	M Refresh Rate
9	3	2	2	3	2 Every Yr



Review Rules

Models and labeling and Information

● Models Counted

- Only distinct models are counted. Models that are marketed under different names but do not differ in form, function, or capabilities, such as functionally identical models labeled differently for sale to different carriers, are counted as a single model.
- physical changes to a handset that result in a change in the HAC rating - the handset must be given a new model designation.

● Labelling

- Display the rating, on the packaging material of the handset. (printed form on packaging).
- HAC rated phones with Wi-Fi air interface * Disclose phone not tested in this mode (call-out cards, other media, revisions to packaging materials, supplying of information on Web sites).
- Beginning January 15, 2009, each manufacturer subject to §20.19 that operates a publicly-accessible website must make available on its website a list of all hearing aid-compatible models currently offered, the ratings of those models, and an explanation of the rating system. See § 20.19(h).



Update Past Years Questions

● **Confusion with Figure A.2.of C63.19-2007**

- The distance is 15mm from center point of the probe measurement element to the WD reference plane. A request has been made to C63.19 to clarify the Illustration in A2 .

● **Hand held or wrist worn phones, speaker phones- not intended to be held to ear.**

- Devices that do not have a built-in speaker are not subject to HAC requirements, and do not count toward either total non compliant handsets or compliant handsets offered.
- Status of devices that have a built-in speaker but are not intended to be held to the ear is pending. Consult with the FCC or provide a PBA on an case by case bases.
- Note: Publication 285076 - Equipment Authorization Guidance for Hearing Aid Compatibility –has been updated to include this issue.



Publication 285076 - Equipment Authorization Guidance for Hearing Aid Compatibility has been changed

- **Only held to ear modes need to be tested.**
Changed to
- **Devices that do not have a built-in speaker are not subject to HAC requirements, and do not count toward either total non compliant handsets or compliant handsets offered. For devices that have a built-in speaker but are not intended to be held to the ear is pending. Consult with the FCC or provide a PBA on a case by case base. The Commission currently has an open proceeding on hand held devices regarding whether the Commission's HAC rules are applicable to such devices.**
 - **The Public Notice is**
http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-07-103A1.pdf



Update Past Years Questions

- **Models not sold to Carriers:**
 - Only handsets offered to service providers need to meet the number of HAC handsets required for each air interface.
- **HAC rating added but no change to handset:**
 - Since there have been no physical changes to the handset Section 20.19(g) does not apply.
- **Permissive change to add new test data under a new year version of standard:**
 - Yes, A permissive change is permitted. The application would need to submit new test report's and change the grant comment associated with the permissive change to indicate "HAC Rating: M#T#-2007".
- **Model designation in the EAS vs. FCC Hearing Aid Compatibility Reports**
 - There is no requirement to indicate the model in the Equipment Authorization database for HAC. There is no dedicated field for this entry. However, stating model in test reports and manuals for HAC and other requirements for clarification is standard practice.
 - The new wireless data base for reporting HAC phones does contain the model associated with the FCC ID-see <http://wireless.fcc.gov/hac>



Update Past Years Questions

● **Maximum Antenna efficiency**

- **If a phone can only be rated and meet the C63.19 standard (M and T) in the slider open position, it is acceptable to test the phone in the slider open position and rate it as long as this is the position for maximum antenna efficiency.**
- **This means there is no degradation of functionality, performance or features associated with opening the slider and no other unusual or special orientation of the device from an ordinary held to face position.**
- **The user must have clear information in the user manual about the specific HAC position.**
- **The partially extended configuration does not need to be tested if it is not the intended HAC user configuration.**



Update Past Years Questions

● Part 25 Handheld Phone

- Only if the handset's uses air interfaces and frequency bands defined in § 20.19 then consult with the FCC under the PBA procedures or inquiry system with details.

● Short-term Confidentiality for Feature

- Yes. This can be uploaded and follow the standard 731 filing procedures.

● M2 Rating Test Report

- Test reports for M2 Rating are not accepted in an application
- Only M3, M4 test reports are accepted. Models rated less than M3 are non-component HAC phones.

● Replaceable modular transmitters in handheld phones

- Modules can not be certified for HAC.
- Consult with the FCC or provide a PBA on an case by case bases.



Update Past Years Questions

- **Extended or multiple batteries fit phone. What needs to be tested**
 - **OET will accept HAC certification of a model as hearing aid-compatible based on tests performed with the standard battery offered with the phone as included equipment.**
 - **These handsets should include on the packaging material, but if this is not feasible, in the user's manual or packaging insert that the phone does not meet hearing aid compatibility requirements when operated with the extended life or other than the standard included battery.**
 - **However, we cannot guarantee that the Commission would reach the same conclusion if this certification were to be challenged.**