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## Hearing Aid Compatibility (HAC) Testing for Digital Wireless Devices

TÜV Product Service is able to provide manufacturers, network operators, and regulators with Hearing Aid Compatibility (HAC) testing services covering RF Emissions testing and Telecoil / Magnetic Coupling testing in accordance to the ANSI C63.19 standard using the IndexSAR HAC Test System.

The development of hearing aid technology has progressed significantly over recent year, so that there is now an increasing availability of wireless devices which are categorised by the Federal Communications Commission (FCC) as hearing aid compatible. This is paving the way for users of wireless devices that use hearing aids or cochlear implants.

To ensure that hearing aid users are provided with compatible wireless devices the FCC requires that digital wireless phones which are manufactured or imported for use in the United States be capable of being effectively used with hearing aids and meet the requirements of the current ANSI C63.19 standard. There are current requirements in place for manufacturers and digital wireless service providers to provide a certain amount of HAC wireless devices (see table on the reverse for details).

Wireless devices are tested for RF Emissions and Telecoil signal. Then device ratings of M1 to M4 are established with respect to RF interference between the hearing aid and handset, and the devices rated T1 through T4 for Telecoil coupling capability.



A wireless device with a rating of M3 or M4 usually provides reduced RF interference for hearing aids designed for compatibility. A rating of T3 or T4 usually indicates better performance for use with Telecoil hearing aids designed for compatibility. A combined rating of M3T3, M3T4 (2007), M4T3 (2007) or M4T4 establishes that the wireless device has good to excellent hearing aid compatibility.

Hearing aids are also tested under the current C63.19 standard for RF immunity to radiated electromagnetic fields originating from a wireless device.

TÜV Product Service is a leading total compliance solutions organisation, providing testing, training, certification and consulting services for wireless devices.

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[www.tuvps.co.uk](http://www.tuvps.co.uk)

### HAC HANDSET DEPLOYMENT SCHEDULE:

(Requirements apply per interface)

**Manufacturers of digital wireless handsets** for use or imported for use in the United States must offer:

- at least **one-third of models** (rounded down) rated **M3** or higher  
(at least half of required models rated M3 or higher must be new models)
- **the greater of:** (1) at least **2 models** or (2) **twenty percent / twenty-five percent / one-third of models** rated **T3** or higher beginning February 15, 2009 / 2010 / 2011 respectively

**Note:** There are different rules for manufacturers offering few models in an air interface

**Tier I digital wireless service providers** must make available to consumers:

- either **50% of models** or **9 models** rated **M3** or higher
- **the lesser of:** (1) **one-third of models** (rounded up) rated **T3** or higher or:
  - Before February 15, 2010: five T3-rated (or higher) models
  - Beginning February 15, 2010: seven T3-rated (or higher) models
  - Beginning February 15, 2011: ten T3-rated (or higher) models
- models with differing levels of functionality

**Note:** There are exceptions if 3 or fewer models are available in an air interface

Other digital wireless service providers must meet the same benchmarks as Tier I providers from May 15, 2009.

#### Useful Links

##### Hearing Health Organisations & Associations:

Academy of Dispensing Audiologists

[www.audiologist.org](http://www.audiologist.org)

Audiology Online

[www.healthyhearing.com](http://www.healthyhearing.com)

Hearing Industries Association

[www.hearingindustries.org](http://www.hearingindustries.org)

#### References

Federal Communications Commission (FCC)

[www.fcc.gov/cgb/consumerfacts/hac.html](http://www.fcc.gov/cgb/consumerfacts/hac.html)

U.S. Food and Drug Administration (FDA)

[www.fda.gov/cellphones/hearingaids.html#2](http://www.fda.gov/cellphones/hearingaids.html#2)

TÜV Product Service Ltd • TÜV SÜD Group

Octagon House • Concorde Way • Segensworth North • Fareham

Hampshire • PO15 5RL • United Kingdom

Tel: +44 (0)1489 558100 • Fax: +44 (0)1489 558101 • Email: [info@tuvps.co.uk](mailto:info@tuvps.co.uk)