

FCC Test Observations

<i>Proponent</i>	<i>Comments/Test Observations</i>
Microsoft	<ul style="list-style-type: none"> • Device does not reliably detect microphones (both fails to detect and indicates microphones present when they are not) especially when adjacent channel TV signal present. • With antenna connected, device reports all channels occupied in FCC Lab area. • Device reports all but two channels occupied in FCC's sealed anechoic chamber. • Individual external filter needed for transmitting on each channel.
Philips	<ul style="list-style-type: none"> • Device does not have transmit capability. • Device does not reliably detect microphones (both fails to detect and indicates microphones present when they are not) especially when adjacent channel TV signal present. • With antenna connected, device reports all channels, including radio astronomy channel 37, occupied in FCC Lab area and in area outside laboratory. • With antenna connected, reports almost all channels occupied in FCC's sealed anechoic chamber. • In adjacent channel tests, device reports channel occupied with DTV test signal turned off.
Adaptrum	<ul style="list-style-type: none"> • Device does not detect wireless microphones. Digital and analog signals must be manually scanned separately. • With antenna, device reported digital TV signals on 14 channels and analog television signals on 7 channels.* • Falsely reported signals on some channels such as 28 and 37 that do not have TV signals (channel 37, for example, is reserved for radio astronomy). • Failed to detect on others such as DTV channel 35 or NTSC channel 20 that were clearly observable on the spectrum analyzer being used to monitor the test. • Device's sensing capability becomes erratic under strong first adjacent signals. • Sensing capability degrades significantly under weak and moderate 1st adjacent signals and strong 2nd adjacent signals (e.g., sensing level was -105 dBm with a strong DTV signal on the 2nd lower adjacent channel).
Motorola	<ul style="list-style-type: none"> • Device does not have transmit capability and does not detect analog TV signals or wireless microphones. • Reported 14 channels occupied in the FCC Laboratory area, including two channels with no DTV signals. • The device also reported two channels occupied when placed in the FCC's sealed anechoic chamber. • In adjacent channel tests, device's sensing capability completely degrades in presence of strong adjacent signals and degrades significantly with moderate and weak adjacent DTV signals. (Sensing level was -49 dBm with a strong 1st adjacent DTV channel.)

General Note: According to the proponents, none of devices can tolerate the presence of DTV signals above -28 dBm. In contrast, NTIA converter boxes must work with a signal that is at -5 dBm or 200 times stronger than -28 dBm. Levels of -28 dBm and above can occur within about 10 km from a typical TV station's transmitting facility.

* Both the Adaptrum and Motorola devices reported 14 DTV channels occupied. However, several of the reported channels were different.