

## **KDB353028 D01 II A (2) (c) - Antenna Requirements {15.203}**

The applicant should address the following items when justifying professional installation:

(1) Explain why the hardware is not readily available to average consumer.

The A20-Nexus is a multi-channel wireless microphone receiver marketed and sold only to commercial sound companies and installed by professional sound engineers. There are several factors which support this:

- Selling price of A20-Nexus plus transmitting equipment is approximately \$32,000 per system. Only top tier companies who use these products professionally purchase a system of this type. For comparison, a typical consumer-type wireless microphone system would cost less than \$1,000.
- The A20-Nexus is not in any way marketed to the average consumer.
- The A20-Nexus is not sold via general consumer stores or websites.

(2) Confirm the device cannot be sold via retail to the general public or by mail order; it must be sold to authorized dealers or installers only.

- The A20-Nexus is sold only to authorized dealers and is not available via mail-order or to the general public.

(3) Explain that intended use is not for consumers and general public; rather device is generally for industrial/commercial use.

- The A20-Nexus is used by professional sound engineers. Examples include recording sound for major motion pictures, major concerts/events, and large broadcast television productions like the Olympics. This is squarely outside of the realm of consumers and consumer audio products.

(4) Explain what is unique, sophisticated, complex, or specialized about the equipment that REQUIRES it to be installed by a professional installer?

- Deploying an A20-Nexus system requires an installation by a professional sound engineer who is well-versed in RF theory and practical use of professional wireless audio systems. Installers will generally have Part 74 licenses. System commissioning requires finding clear spectrum and performing frequency coordination to avoid intermodulation from multiple transmitters. A20-Nexus installers must be familiar with these practices – this is far outside the understanding of a typical consumer.

iv) Other professional installation requirements.

(1) Installation must be controlled – explain how.

- The installation of the A20-Nexus is generally done by the same professional sound engineer who operates the system.

(2) Installed by licensed professionals (e.g., device sold to dealer who hire installers) – confirm details.

- The professional sound engineer who installs this system will generally have a Part 74 license

(3) Installation requires special training (e.g., special programming, access to keypad, field strength measurements made). Confirm details.

- In addition to a Part 74 license, the professional sound engineer who installs this system will generally have received specialized training in spectrum management and frequency coordination.