Denon DN-200BR

Professional Bluetooth stereo audio receiver

Author and photos: Peter Kaminski

Sometimes you have to deal with nonstandard interfaces in a recording studio. For example, what if the producer wants to play sample songs from their mobile phone, or if you want to implement audio playback from a Bluetooth device in a fixed installation. There are solutions to these problems; however, as so often, the devil is in the details, especially regarding the transmission protocols. We would like to present a professional solution here with the Denon DN-200BR and also discuss the problems associated with Bluetooth.

Technology

Bluetooth was launched as early as 1990. Of course, a lot has changed technologically over the many years and the Bluetooth standard has been adapted and expanded many times. The transmission takes place in the 2.4 GHz band, which is used by various services. This requires high tolerance for interference from transmissions using other protocols and coordination of other Bluetooth transmissions. Bluetooth is a radio transmission for relatively short distances, and in

the professional audio and event sector it is generally used more for control tasks rather than for audio transmission.

In particular, audio transmission via Bluetooth has evolved in various ways in recent years, especially with regard to special audio profiles and codecs, both of which determine the quality of Bluetooth audio transmission. The Advanced Audio Distribution Profile (A2DP) is available for high audio quality, but other profiles, such as the Headset Profile (HSP), can also be used for audio transmission. There are three audio codecs with different quality levels. In the A2DP profile, only the lossy “Low Complexity Subband Codec” (abbr.: SBC) is defined as the standard codec.

All other codecs are optional. The name SBC makes it clear that the quality of the audio offered is limited. Other codecs used in conjunction with the A2DP profile are the good old MP3 codec and the improved AAC codec. For several years, the codecs AptX and AptX-HD have also been developed. They promise very good quality, but as for mobile phones, only a few of them support AptX. For example, Apple's iPhone is not among them. In terms of high-quality audio, AAC is the most common denominator. You should never buy a Bluetooth converter without AAC for professional applications.

Now back to the Denon DN-200BR. With all the confusion about profiles and possible audio codecs, you always want to know that a device providing Bluetooth audio supports the best and also as many profiles as possible. And that's exactly what the DN-200BR does, supporting various protocols such as AVDTP, A2DP 1.2, HSP, and other audio profiles. It is also one of the few Bluetooth adapters to support the AptX codec, as well as MP3 and AAC.

Scope of delivery

The base unit is delivered in the form of a housing with flanges and mounting holes for fixed installation. The system also includes a corresponding plug-in power supply (100 to 240 V, 50/60 Hz, 2 A DC) and a remote antenna. In some offers, instead of the patch antenna that we received, a 2.4-GHz dipole antenna without a cable, which is common for WLAN devices, is shown. Of course, this can also be used, but

the antenna with the cable can be positioned where it makes the most sense, i.e., away from the base unit.

Connections and operation

We now come to another advantage of the DN-200BR: it offers two (stereo) unbalanced 6.3-mm jack outputs and two balanced XLR outputs. This also allows professional connections under studio conditions.

The output level is -2dBu for the unbalanced output and +4dBu for the balanced output. According to the manufacturer, the signal-to-noise ratio is >75dB, and the transmission range is 20 Hz to 20kHz. The THD is specified as > 0.01%.

The power connector, BNC antenna connection, and a pairing button are located on the front panel. Interestingly, there is also a socket for the pairing button so that an external switch can be used. The audio output level can still be adjusted using the LEVEL control. A status LED indicates whether the device is switched on (flashing) and whether a Bluetooth connection has been established (steady light).

Practice

After connecting the device for the first time, the LED flashes and the device waits for a Bluetooth connection. We used an iPhone 15 Pro Max with iOS 18.2, selected the DN-200BR in the Bluetooth dialog, and the connection was established immediately.

The range is in the medium range. In our test, we also had an error-free Bluetooth connection in the neighboring room even though there were various Wi-Fi networks and other parallel Bluetooth connections in the room. Thanks to the remote antenna, the range can be increased slightly more if necessary by placing the device accordingly.

During our test, coding was performed using AAC. The audio quality is very good for a Bluetooth transmission and can also be used in a professional recording studio to play reference music or similar. The signal-to-noise ratio can also be described as very good for Bluetooth.

AptX: We were unable to test AptX due to the lack of a device that supports this standard. Meanwhile, there are quite a number of phones that also support the standard, but unfortunately no devices from Apple or Samsung that do so. Licensing

costs of the AptX codec are likely to be a reason.

Conclusion

The price is about 130 euros. The audio quality is excellent for a Bluetooth transmission, and with the Denon DN-200BR, you are prepared for the present and the future thanks to AAC and AptX codec support.

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