

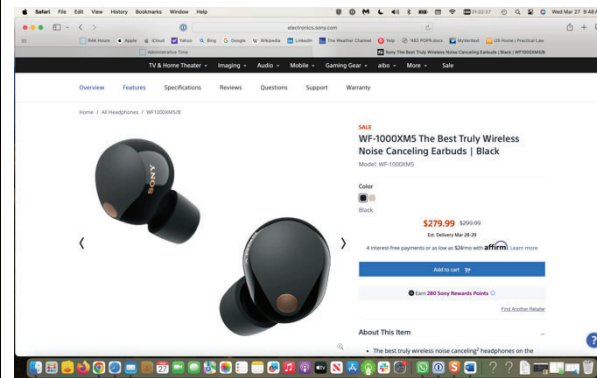
Exhibit 8

8,582,789

1. A hearing enhancement system for a user, comprising:

The Sony WF-1000XM5 together with an audio system, such as a Sony mobile phone, is a hearing enhancement system.

<https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b>



an audio system configured to receive input signals for broadcasting, and configured to up-convert the received input signals into up-converted signals to be wirelessly transmitted;	An audio system, such as in a Sony mobile phone, receives input signals for broadcasting and, on information and belief, up-converts the received input signal into an up-converted signal to be wirelessly transmitted. https://archive.org/details/electroniccommun0000toma/mode/1up (Tomasi, W. (2001). Electronic communications systems: fundamentals through advanced (4th edition). Prentice Hall. P. 4):
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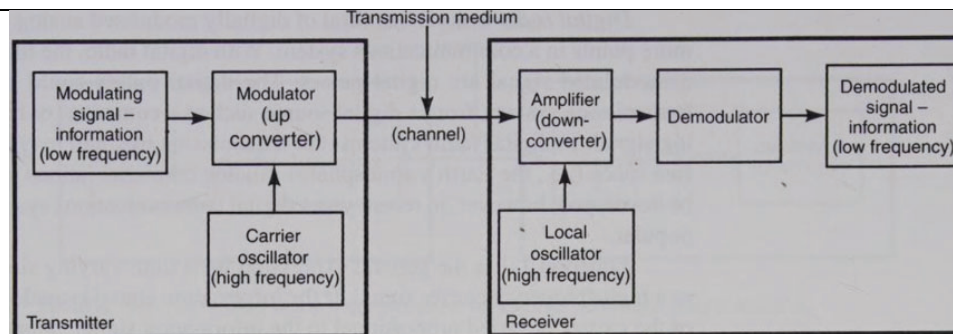


FIGURE 1-2 Communications system block diagram

interfere with each other. For example, all commercial FM stations broadcast voice and music signals that occupy the audio-frequency band from approximately 300 Hz to 15 kHz. To avoid interfering with each other, each station converts its information to a different frequency band or channel. The term *channel* is often used to refer to a specific band of frequencies allocated a particular service. A standard voice-band channel occupies approximately a 3-kHz bandwidth and is used for transmission of voice-quality signals; commercial AM broadcast channels occupy approximately a 10-kHz frequency band, and 30 MHz or more of bandwidth is required for microwave and satellite radio channels.

Figure 1-2 is the simplified block diagram for an electronic communications system showing the relationship among the modulating signal, the high-frequency carrier, and the modulated wave. The information signal (sometimes called the intelligence signal) combines with the carrier in the modulator to produce the modulated wave. The information can be in analog or digital form and the modulator can perform either analog or digital modulation. Information signals are *up-converted* from low frequencies to high frequencies in the transmitter and *down-converted* from high frequencies to low frequencies in the receiver. The process of converting a frequency or band of frequencies to another location in the total frequency spectrum is called *frequency translation*. Frequency translation is an intricate part of electronic communications because information signals may be up- and down-converted many times as they are transported through the system called a channel. The modulated signal is transported to the receiver over a transmission system. In the receiver the modulated signal is amplified, down-converted in frequency, then demodulated to reproduce the original source information.

[https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b:](https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b)



Enjoy High-Resolution Audio

The WF-1000XM5 supports High-Resolution Audio Wireless, thanks to LDAC, over industry-adopted audio coding technology. LDAC transmits approximately three times more data than conventional Bluetooth audio for exceptional High-Resolution Audio quality that is closer than ever to studio recording.^{6,7}

[Learn more](#)

a wireless receiver configured to wirelessly receive the up-converted signals;

The Sony WF-1000XM5 includes a wireless receiver to wirelessly receive the up-converted signals.

[https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b:](https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b)

Sony's best ever call quality²

Noise reduction algorithms developed with AI machine learning suppress ambient noise and ensure the person on the other end of the phone can hear your voice clearly even in noisy situations.

About This Item

- The best truly wireless noise canceling² headphones on the market.
- Astonishing sound quality with High-Resolution Audio.
- Sony's best ever call quality³ with AI based noise reduction algorithm and bone conduction sensor.
- Small, light and beautifully designed.
- Smooth switching and a clear Bluetooth signal with a powerful new Integrated Processor V2.³
- Adjusts to the world around you with adaptive sound control, using AI to offer the ideal listening experience.
- Talk and only hear ambient sound using Speak-to-Chat which pauses the music when you start talking.
- Water resistant for everyday use so splashes and sweat won't stop you⁴.
- Designed with the environment in mind with construction from recycled plastic materials and 100% paper packaging.
- Battery life up to 8 hours (24-hours with case). Quick charging - 3 min. for up to 1 hour of listening.⁵
- Quick Access feature allows you to configure your wireless headphones to Spotify, Amazon or Endel without using your phone,^{5,10} with just 2-3 taps.

	Enjoy High-Resolution Audio The WF-1000XM5 supports High-Resolution Audio Wireless, thanks to LDAC, over industry-adopted audio coding technology. LDAC transmits approximately three times more data than conventional Bluetooth audio for exceptional High-Resolution Audio quality that is closer than ever to studio recording.^{6,7} Learn more
a down-converter configured to down-convert the received up-converted signals into down-converted signals;	On information and belief, the Sony WF-1000XM5 includes a down-converter that converts the received up-converted signals into down converted signals. https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b: Enjoy High-Resolution Audio The WF-1000XM5 supports High-Resolution Audio Wireless, thanks to LDAC, over industry-adopted audio coding technology. LDAC transmits approximately three times more data than conventional Bluetooth audio for exceptional High-Resolution Audio quality that is closer than ever to studio recording.^{6,7} Learn more

a modifier configured to modify the down-converted signals into modified signals based on at least one hearing characteristic of the user to enhance the hearing of the user; and

The Sony WF-1000XM5 includes a modifier that modifies the down-converted signals into modified signals based on at least one hearing characteristic of the user to enhance the hearing of the user.

[https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b:](https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b)

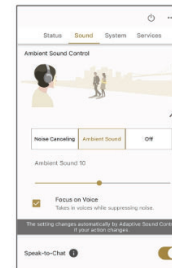
How do you like to listen?

With the Sony | Headphones Connect app, Ambient Sound Control lets you adjust the volume of background sound and gives you the option to allow focusing on voices. Thanks to the new Equalizer setting, you can adjust the sound to your preference by listening to and comparing your preferred sound quality within the app.¹⁵

<https://electronics.sony.com/audio-accessibility#HearingAssist>

Hear more of the world around you

With Ambient Sound Mode³, you'll still hear the world around you, even as you enjoy your music. The Sony | Headphones Connect app allows you to adjust the ambient sound in 20 different levels or use the Focus on Voice setting to chat without removing your headphones.



“Adaptive Sound Control automatically adjusts to whatever you do Adaptive Sound Control is a smart function that senses where you are and what you’re doing, then adjusts ambient sound settings for the ideal listening experience. It even recognises locations that you frequently visit, such as your workplace, the gym, or a favourite café, and switches the sound modes to suit the situation.”

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a speaker configured to generate audio output signals from the modified signals for the user.

The Sony WF-1000XM5 includes a speaker to generate audio output signals from the modified signals for the user.

<https://electronics.sony.com/audio/headphones/truly-wireless-earbuds/p/wf1000xm5-b:>

Astonishing sound quality

The specially designed driver unit, Dynamic Driver X, provides wide frequency reproduction, so you can enjoy richer, more detailed vocals.



Enjoy brilliant, more detailed vocals

Thanks to a specially designed driver unit Dynamic Driver X for wide frequency reproduction, you will experience richer vocals and enhanced fine details. The diaphragm structure combines several different materials for the dome and the edge, achieving low distortion and a clear sound quality.



