

*Bose Corporation, Petitioner*

v.

*Koss Corporation, Patent Owner*

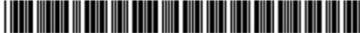


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Patent 10,368,155

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(12) **United States Patent**  
Koss et al.

(10) **Patent No.:** US 10,368,155 B2  
(45) **Date of Patent:** \*Jul. 30, 2019

(54) **SYSTEM WITH WIRELESS EARPHONES**

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(73) Assignee: **Koss Corporation**, Milwaukee, WI (US)

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.  
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/182,927**

(22) Filed: **Nov. 7, 2018**

(65) **Prior Publication Data**  
US 2019/0075390 A1 Mar. 7, 2019

**Related U.S. Application Data**

(63) Continuation of application No. 15/962,305, filed on Apr. 25, 2018, now Pat. No. 10,206,025, which is a (Continued)

(51) **Int. Cl.**  
**H04R 3/00** (2006.01)  
**H04R 1/10** (2006.01)  
(Continued)

(52) **U.S. CL.**  
CPC ..... **H04R 1/1041** (2013.01); **H03G 3/02** (2013.01); **H03K 17/9622** (2013.01);  
(Continued)

(58) **Field of Classification Search**  
CPC ..... H04R 1/1016; H04R 1/1008  
(Continued)

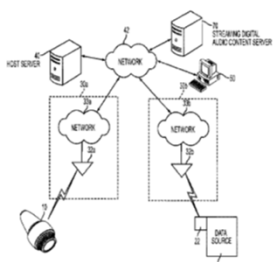
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(57) **ABSTRACT**  
Apparatus comprises adapter and speaker system. Adapter is configured to plug into port of personal digital audio player. Speaker system is in communication with adapter, and comprises multiple acoustic transducers, programmable processor circuit, and wireless communication circuit. In first operational mode, processor circuit receives, via adapter, and processes digital audio content from personal digital audio player into which adapter is plugged, and the multiple acoustic transducers output the received audio content from the personal digital audio player. In second operational mode, wireless communication circuit receives digital audio content from a remote digital audio source over a wireless network, processor circuit processes the digital audio content received from remote digital audio source, and the (Continued)





Ground	Reference(s)	Claim(s)	Basis
1	Pelland	1-14	102
2A	Rezvani, Skulley	1-4, 6-8, 14	103
2B	Rezvani, Skulley, Feder	11-12	
2C	Rezvani, Skulley, Hind	13	
2D	Rezvani, Skulley, Rosener	5, 9	
2E	Rezvani, Skulley, Wilson	10	
3A	Nakagawa, Wilson	1-3, 6-8, 10, 14	
3B	Nakagawa, Rosener	1, 4-5, 9	
3C	Nakagawa, Wilson, Hind	13	
3D	Nakagawa, Rosener, Hind	13	

Pet., 4

# Ground 1



## Challenged Claims - Independent Claim 1

1. A wireless headphone assembly comprising:  
first and second earphones, wherein each of the first and second earphones comprises an acoustic transducer;  
an antenna for receiving wireless signals;  
a wireless communication circuit connected to the antenna, wherein the wireless communication circuit is for receiving and transmitting wireless signals to and from the wireless headphone assembly;  
a processor in communication with the wireless communication circuit; and  
a rechargeable battery for powering the wireless headphone assembly,  
wherein the headphone assembly is configured, with the processor, to transition automatically from playing digital audio content received wirelessly by the headphone assembly via a first wireless network to playing digital audio content received wirelessly by the headphone assembly via a second wireless network.

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