

Apple Inc., Petitioner
v.
Koss Corporation, Patent Owner



IPR2021-00381
Patent 10,491,982

April 5, 2022

IPR2021-00381
KOSS-2048

Background of the Technology and the Challenged Claims



<p>(12) United States Patent Koss et al.</p> <p>(54) SYSTEM WITH WIRELESS EARPHONES</p> <p>(71) Applicant: Koss Corporation, Milwaukee, WI (US)</p> <p>(72) Inventors: Michael J. Koss, Milwaukee, WI (US); Michael J. Pelland, Princeton, WI (US); Michael Sagan, Fairfield, CA (US); Steven R. Reckamp, Crystal Lake, IL (US); Gregory J. Hallingstad, Deforest, WI (US); Jeffery K. Bovee, Sterling, IL (US); Morgan J. Lowery, Deforest, WI (US)</p> <p>(73) Assignee: KOSS CORPORATION, Milwaukee, WI (US)</p> <p>(*) 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.</p> <p>(21) Appl. No.: 16/528,701</p> <p>(22) Filed: Aug. 1, 2019</p> <p style="text-align: center;">Related U.S. Application Data</p> <p>(63) Continuation of application No. 16/375,879, filed on Apr. 5, 2019, which is a continuation of application (Continued)</p> <p>(51) Int. Cl. H04R 3/00 (2006.01) H04R 1/10 (2006.01) (Continued)</p> <p>(52) U.S. CL CPC H04R 1/1041 (2013.01); H03G 3/02 (2013.01); H03K 17/9622 (2013.01); (Continued)</p> <p>(58) Field of Classification Search CPC ... H04R 1/1016; H04R 25/554; H04R 1/1008 (Continued)</p>	<p>(10) Patent No.: US 10,491,982 B1</p> <p>(45) Date of Patent: *Nov. 26, 2019</p> <p>(56) References Cited</p> <p style="text-align: center;">U.S. PATENT DOCUMENTS</p> <p>5,784,685 A 7/1998 Stanford et al. 6,006,115 A 12/1999 Wingate (Continued)</p> <p style="text-align: center;">FOREIGN PATENT DOCUMENTS</p> <p>JP 2004-320597 11/2004 JP 2008-67258 A 3/2008 (Continued)</p> <p style="text-align: center;">OTHER PUBLICATIONS</p> <p>Supplementary European Search Report for European Application No. 09731146.8 dated Jun. 10, 2011, 7 pages. (Continued)</p> <p><i>Primary Examiner</i> — Kiet M Doan (74) <i>Attorney, Agent, or Firm</i> — K&L Gates LLP</p> <p>(57) ABSTRACT</p> <p>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 multiple acoustic transducers output the audio content received from the remote digital audio source.</p> <p style="text-align: center;">20 Claims, 16 Drawing Sheets</p> <div style="text-align: center;"> </div>
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Ex. 1001

KOSS[®]

'982 Patent

True Wireless Earphones

- Body portion
- Ear canal portion
- Elongated portion

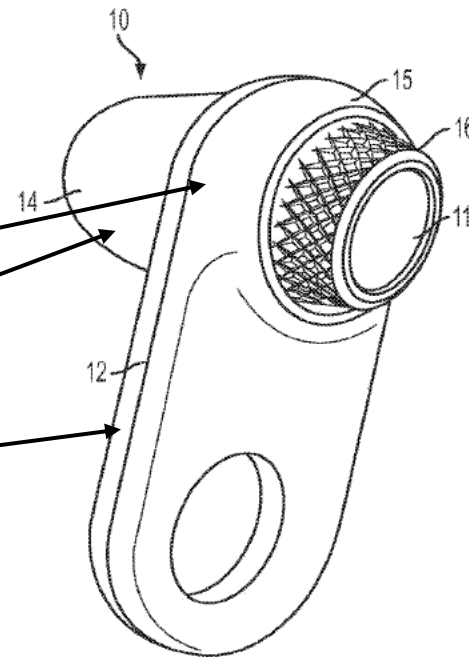


FIG. 1B

'982 Patent

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Wireless earphones include:

- Wireless communication circuit
- Processor
- Speaker/transducer
- Microphone
- Antenna
- Rechargeable power source

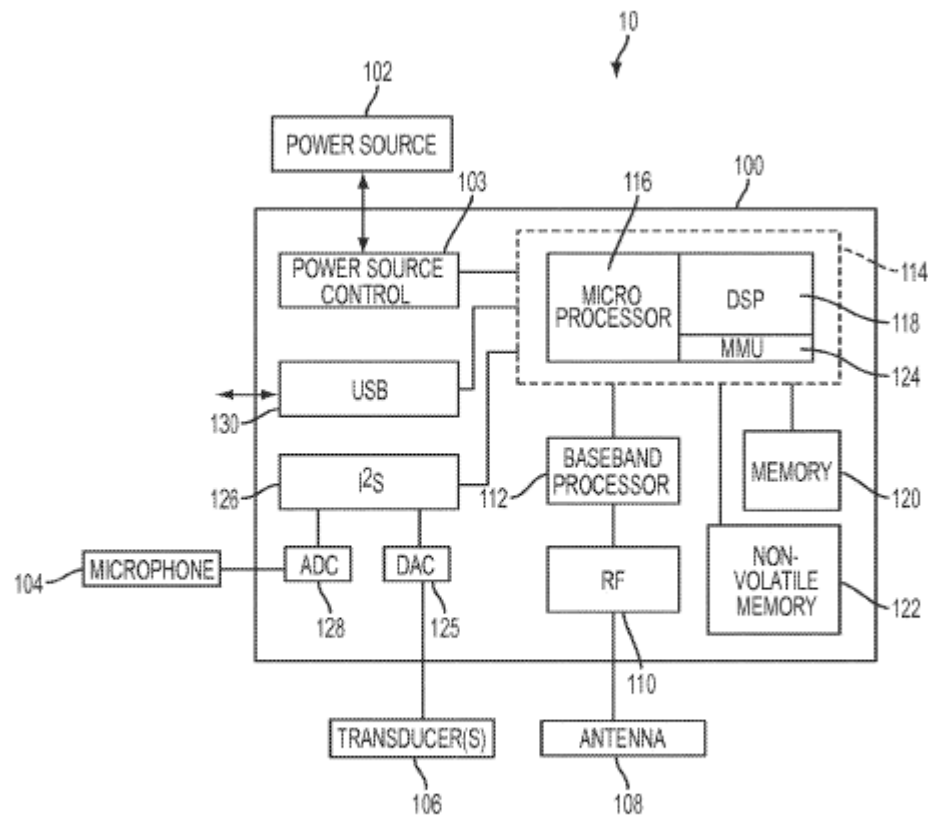


FIG. 3

Ex. 1001, 11

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