Ali S. Razai (SBN 246922)
ali.razai@knobbe.com
Mark Lezama (SBN 253479)
mark.lezama@knobbe.com
Justin J. Gillett (SBN 298150)
justin.gillett@knobbe.com
Brandon G. Smith (SBN 307676)
brandon.smith@knobbe.com
KNOBBE, MARTENS, OLSON & BEAR, LLP
2040 Main Street, Fourteenth Floor
Irvine, CA 92614
Telephone: 949-760-0404
Facsimile: 949-760-9502

Attorneys for Defendants
LUXOTTICA GROUP S.P.A. and
LUXOTTICA OF AMERICA INC.

IN THE UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

E-VISION OPTICS, LLC, and E-VISION SMART OPTICS, INC., Plaintiffs, v. LUXOTTICA GROUP S.P.A. and LUXOTTICA OF AMERICA INC., Defendants.	Case No. 8:23-cv-02013 AB (SHKx) **DEFENDANTS' INVALIDITY CONTENTIONS** Honorable André Birotte Jr.

Defendants Luxottica Group S.p.A. and Luxottica of America Inc. hereby provide their invalidity contentions under Standing Patent Rule 2.5 with respect to the asserted claims of U.S. Patent No. 8,708,483 ("the '483 patent"), U.S. Patent No. 8,801,174 ("the '174 patent"), U.S. Patent No. 8,905,541 ("the '541 patent"), U.S. Patent No. 10,598,960 ("the '960 patent"), and U.S. Patent No. 10,613,355 ("the '355 patent") (collectively, "the Asserted Patents").

I. PRELIMINARY STATEMENTS

A. Deficient Infringement Contentions

As Defendants have set forth in correspondence with Plaintiffs, Plaintiffs' infringement contentions are deficient for many reasons, including that they fail to articulate coherent, consistent theories of infringement. (*See* Dkt. 69-3, 69-5, 69-6.) Those numerous deficiencies have interfered with Defendants' ability to prepare these invalidity contentions, especially contentions responsive to infringement theories.

B. Plaintiffs' Identification of Asserted Claims

In their infringement contentions, Plaintiffs assert that the Ray-Ban Meta Wayfarer, Ray-Ban Meta Skyler, and Ray-Ban Meta Low Bridge Fit Headliner products infringe the following claims of the '483, '174, '541, '960, and '355 patents:

Patent	Asserted Claims
'483 patent	1-2, 6-8, 10, 13, 17, 19-20, 24-26, 31, and 36
'174 patent	1-2, 5-6, 12-13, 15-16, and 18
'541 patent	1-6, 12, and 16-17
'960 patent	1-2, 6-8, and 10
'355 patent	1-3, 5-8, and 13

Defendants have relied on this identification of asserted claims in preparing these contentions.

C. Construction

The Court has not yet construed the asserted claims of the asserted patents. Defendants deny infringement. To the extent these invalidity contentions may be consistent with Plaintiffs' infringement contentions or any construction implicit therein, that does not mean Defendants agree that Plaintiffs have stated a valid theory of infringement or that Plaintiffs' claim constructions are correct. Defendants take no position on any matter of claim construction in these invalidity contentions.

D. Ongoing Discovery and Disclosures

Discovery in this case is not yet complete, and Defendants' investigation, including Defendants' search for prior art, is ongoing.

II. IDENTIFICATION OF PRIOR ART

Defendants incorporate in their entirety the proceedings in IPR2024-01030, 01069, -01070, -01071, and -01072 ("PTAB proceedings"), including the petitions, expert declarations, and all other evidence and arguments submitted in each case. In greater detail than what S.P.R. 2.5 requires, those proceedings set forth invalidity grounds that Defendants will pursue in this case if the PTAB does not institute *inter partes* review. Regardless of institution, Defendants will also rely on the prior art's disclosure as discussed in the PTAB proceedings for grounds it could not have reasonably brought in the PTAB proceedings. Although in this document Defendants repeat and refer to information and disclosures appearing in the PTAB proceedings for convenience, those references do not supplant the PTAB proceedings, and the PTAB proceedings remain a source of Defendants' invalidity contentions in this case.

Supplementing their disclosures in the PTAB proceedings, Defendants identify the following prior art now known to Defendants that anticipates at least one of the Asserted Claims under pre-AIA 35 U.S.C. §§ 102(a), (b), (e), and/or (g) and/or renders obvious at least one of the Asserted Claims under 35 U.S.C. § 103. The following patents, publications, and systems are prior art under at least pre-AIA 35

U.S.C. §§ 102(a), (b), (e), and/or (g). Defendants identify these references in addition to all the prior-art references appearing on the face of the Asserted Patents or in their file histories. Defendants may also rely on any of the identified references below to establish the state of the art and/or what was within the knowledge of a person of ordinary skill in the art.

A. Prior Art Patents and Published Patent Applications

Patent/Publication No.	Country / Jurisdiction	Issue / Publication Date
U.S. Patent No. 2,207,705 ("Cox")	US	July 16, 1940
G.B. Patent No. 799,294 ("Carling)	UK	Aug. 6, 1958
U.S. Patent No. 2,915,598 ("Brunton")	US	Dec. 1, 1959
U.S. Patent No. 2,930,857 ("Hollingsworth")	US	Mar. 29, 1960
U.S. Patent 3,612,744 ("Thomas")	US	Oct. 12, 1971
U.S. Patent No. 3,883,701 ("Delorenzo")	US	May 13, 1975
U.S. Patent 4,053,789 ("Schultz")	US	Oct. 11, 1977
U.S. Patent 4,290,052 ("Eichelberger")	US	Sep. 15, 1981
Japanese Unexamined Patent Application Publication JPS58-113912 ("Hattori-912")	Japan	July 7, 1983
Japanese Patent Application Publication No. S58-113913 ("Hattori-913")	Japan	July 7, 1983
U.S. Patent No. 4,598,960 to DiSanto et al. ("DiSanto")	US	Jul. 8, 1986
U.S. Patent 4,601,206	US	Jul. 22, 1986
U.S. Patent No. 5,049,090 ("Johnson")	US	Sep. 17, 1991
U.S. Patent 5,373,109 ("Argyrakis")	US	Dec. 13, 1994
U.S. Patent 5,606,743 ("Vogt")	US	Feb. 25, 1997
U.S. Patent No. 5,760,868 ("Jannard-868")	US	June 2, 1998
U.S. Patent 5,796,183	US	Aug. 18, 1998
U.S. Patent 5,916,181	US	Jun. 29, 1999

Patent/Publication No.	Country / Jurisdiction	Issue / Publication Date
Int'l Patent App. Publ. No. 99/53612 ("Blum-612")	WIPO	Oct. 21, 1999
U.S. Patent No. 5,980,037 ("Conway")	US	Nov. 9, 1999
U.S. Patent No. 6,091,546 ("Spitzer")	US	July 18, 2000
U.S. Patent No. 6,185,537 ("Oh")	US	Feb. 6, 2001
U.S. Patent No. 6,325,507 ("Jannard-507")	US	Dec. 4, 2001
Int'l Patent App. Publ. No. 01/95625 ("Calderone")	WIPO	Dec. 13, 2001
IT UD20010094 ("Della")	Italy	Nov. 22, 2002
U.S. Patent Pub. 2003/0076306	US	Apr. 24, 2003
U.S. Patent No. 6,665,842 to Nielsen ("Nielsen")	US	Dec. 16, 2003
U.S. Patent No. 6,719,425 ("Conner")	US	Apr. 13, 2004
U.S. Patent 6,733,130 ("Blum-130")	US	May 11, 2004
U.S. Provisional Patent Application No. 60/583,169 ("Howell-169")	US	June, 26, 2004 (date of provisional filing)
U.S. Patent No. 6,857,741 ("Blum-741")	US	Feb. 22, 2005
U.S. Patent Pub. 2005/0154330 ("Loree")	US	Jul. 14, 2005
U.S. Patent No. 6,929,365 ("Swab")	US	Aug. 16, 2005
WO 2005/093550 ("Wehrenberg")	WIPO	Oct. 6, 2005
U.S. Patent Publication No. 2005/0230596 ("Howell-596")	US	Oct. 20, 2005
WO 2005/103863 ("Marvit")	WIPO	Nov. 3, 2005
U.S. Patent Publication No. 2005/0248719 ("Howell-719")	US	Nov. 10, 2005
WO2005/119344 ("Ogren")	WIPO	Dec. 15, 2005
U.S. Patent Publication No. 2006/0001827 ("Howell-827")	US	Jan. 5, 2006

Patent/Publication No.	Country / Jurisdiction	Issue / Publication Date
U.S. Patent Pub. 2006/0023158 ("Howell-158")	US	Feb. 2, 2006
U.S. Patent App. Publ. No. 2006/0132382 ("Jannard-382")	US	Jun. 22, 2006
U.S. Patent Pub. 2006/0238513 ("Philipp")	US	Oct. 26, 2006
U.S. Publication No. 2007/0030254 ("Robrecht")	US	Feb. 8, 2007
EP 1785763 ("Dudli")	EPO	May 16, 2007
U.S. Patent No. 7,306,332 ("Chen")	US	Dec. 11, 2007
U.S. Publication No. 2008/0012832 ("GuangHai")	US	Jan. 17, 2008
U.S. Publication No. 2008/0088596 ("Prest")	US	Apr. 17, 2008
U.S. Publication No. 2008/0136788 ("Nishikawa")	US	Jun. 12, 2008
U.S. Patent Pub. 2008/0273166 ("Kokonaski-166")	US	Nov. 6, 2008
U.S. Patent App. Publ. No. 2009/0006846 ("Rosenblatt")	US	Jan. 1, 2009
U.S. Provisional Application 61/157,579 ("Kokonaski-579")	US	Mar. 5, 2009 (date of provisional filing)
U.S. Patent No. 7,581,833 ("Howell-833")	US	Sept. 1, 2009
PCT Publication No. WO 2010/080999 ("Kokonaski-999")	WIPO	July 15, 2010
U.S. Patent App. Publ. No. 2010/0238034 ("Gunaratne")	US	Sep. 23, 2010
U.S. Patent App. Publ. No. 2011/0014932 ("Estevez")	US	Jan. 20, 2011
EP 1575250	EPO	Aug. 17, 2011

Patent/Publication No.	Country / Jurisdiction	Issue / Publication Date
U.S. Patent App. Publ. No. 2011/0214082 ("Osterhout")	US	Sep. 1, 2011
U.S. Patent App. Publ. No. 2012/0105740 ("Jannard-740")	US	May 3, 2012

B. Prior Art Publications

Title	Publication Date	Author / Editor	Publisher
Harper, Charles, ed., *Handbook of Materials and Processes for Electronics* (McGraw-Hill, 1970) ("Harper")	1970	Charles Harper	McGraw-Hill
Walter Sikonowiz, *Designing and Creating Printed Circuits* (1981) ("Sikonowiz")	1981	Walter Sikonowiz	Hayden Book Company, Inc.
McGraw-Hill Concise Encyclopedia of Science & Technology (1994)	1994	Sybil P. Parker	McGraw-Hill
Gian Carlo Corazza, *Marconi's History*, 86 Proceedings of the IEEE 1307-11 (1998) ("Corazza")	1998	Gian Carlo Corazza	IEEE
Sandra Corns Pickel, *The Evolution of the Modern Spectacle Frame*, 136 Review of Optometry 9 (1999) ("Pickel")	1999	Sandra Corns Pickel	Review of Optometry

Title	Publication Date	Author / Editor	Publisher
Injection Molding Handbook, Ch. 17 (3d ed. 2000)	2000	Dominick V. Rosato, Donald V. Rosato, Marlene G. Rosato	Kluwer Academic Publishers
Dana Myers, *Developing Speech Applications for Personal Handheld Devices on TI's OMAP™ Platform, Texas Instruments* (Oct. 2002)	Oct. 2002	Dana Myers	Texas Instruments
Generic Standard on Printed Board Design IPC-2221A, IPC Association Connecting Electronics Industries (May 2003) ("IPC-2221A")	2003	IPC-2221 Task Group	IPC
Reflow Soldering and Processes and Troubleshooting: SMT, BGA, CSP and Flip Chip Technologies	2002	Ning-Cheng Lee	Newnes
Secrets of a Successful QTouch™ Design	2005	No identified author	Quantum Research Group
Application Note AN2394 CapSense Best Practices	Jan. 5, 2007	Mark Lee	Cypress Perform
Application Note AN2277 Capacitive Front Panel Display Demonstration	Sep. 20, 2005	Louis Bokma, Ryan Seguine, Mohana Koteeswaran	Cypress Perform
Chemtronics Conformal Coatings Guide	Feb. 7, 2013	No identified author	Chemtronics

Title	Publication Date	Author / Editor	Publisher
IPC-HDBK-830 Guidelines for Design, Selection and Application of Conformal Coatings	Oct. 2002	Conformal Coating Handbook Task Group of the Cleaning and Coating Committee of IPC	IPC
Application Note AN2292 Layout Guidelines for PSoC™ CapSense™	Oct. 31, 2005	Ryan Seguine, Mark Lee	Cypress Perform
QT1100A-ISG 10 Key QTouch™ Sensor IC	2005	No identified author	Quantum Research Group

Defendants additionally identify and rely on each of the additional patent or publication references that describe or are otherwise related to the prior art systems identified below.

C. Prior Art Systems

Prior Art System	Date of Offer for Sale / Information Became Known	Entities
Oakley Thump	Announced and/or offered for sale to the public at least as early as November 2004	Oakley, Inc.
Oakley Thump 2	Announced and/or offered for sale to the public at least as early as November 2005	Oakley, Inc.
Oakley Thump Pro	Announced and/or offered for sale to the public at least as early as November 2006	Oakley, Inc.

Prior Art System	Date of Offer for Sale / Information Became Known	Entities
Oakley RAZRWire	Announced and/or offered for sale to the public at least as early as July 2005	Oakley, Inc.
Oakley Split Thump	Announced and/or offered for sale to the public at least as early as November 2007	Oakley, Inc.
Apple iPhone 4S	Announced to the public on October 4, 2011, and offered for sale to the public on October 7, 2011	Apple Inc.
Beltone "Invisible" Eyeglass Hearing Aid	Known to the public at least as early as 1958	Beltone Electronics Corporation
Beltone "Slimette" Eyeglass Hearing Aid	Known to the public at least as early as 1958	Beltone Electronics Corporation
Acousticon A-230 Eyeglass Hearing Aid	Known to the public at least as early as 1956	Acousticon; Dictograph Products, Inc.
Acousticon A-905 "Stylear" Eyeglass Hearing Aid	Known to the public at least as early as 1963	Acousticon; Dictograph Products, Inc.
Radioear Model 840 "Lady America" Eyeglass Hearing Aid	Known to the public at least as early as 1956	Radioear Corporation
Fortiphone Model 51 "Spectette" Eyeglass Hearing Aid	Known to the public at least as early as 1957	Fortiphone Ltd
Audiotone Model B-237-1 Transistor Eyeglass Hearing Aid	Known to the public at least as early as 1981	Audiotone, Inc.
Bosch Model 55F Transistor Eyeglass Hearing Aid	Known to the public at least as early as 1982	Robert Bosch Elektronik GmbH

Prior Art System	Date of Offer for Sale / Information Became Known	Entities
Chemtronics Konform Conformal Coatings	Known and/or sold to the public at least as early as 1980	Chemtronics
QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG	Known and/or sold to the public at least as early as 2005	Quantum Research Group
PSoC CapSense	Known and/or sold to the public at least as early as 2005	Cypress Perform

III. INVALIDITY OF THE '483 PATENT

A. Invalidity Under 35 U.S.C. § 102 and § 103

Pursuant to S.P.R. 2.5.2, Defendants identify the following grounds of anticipation and/or obviousness of the asserted claims of the '483 patent. Defendants further incorporate by reference the IPR2024-01030 IPR petition. Claim charts pursuant to S.P.R. 2.5.3 are attached as Exhibits A1–A3 and identified below.

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Howell-596	102	1, 10	A1
Howell-596	103	1-2, 6-8, 10, 13	A1
Howell-596 + Howell-833	103	19-20, 24-26, 31	A1
Howell-596 + Hearing Aid Glasses References[2]	103	19-20, 24-26, 31	A1
Howell-596 + Howell-833 + Blum-741	103	7, 17, 25, 36	A1

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Blum-741 + Hattori-912	103	1-2, 6-8, 10, 13, 17, 19-20, 24-26, 31, 36	A1
Oakley Thump Pro[1]	102 and/or 103	1, 2, 6, 7, 8, 10, 13, 17, 19, 20, 24, 25, 26, 31, 36	A2
Oakley Thump Pro[1] + Oakley RAZRwire	103	7	A2
Oakley Thump Pro[1] + Hearing Aid Glasses References[2]	103	19, 20, 24, 25, 26, 31, 36	A2
Oakley RAZRWire	102 and/or 103	1, 2, 6, 7, 8, 10, 13, 17, 19, 20, 24, 25, 26, 31, 36	A3
Oakley RAZRWire + Oakley Thump Pro[1]	103	1, 2, 6, 7, 8, 10, 13, 17, 19, 20, 24, 25, 26, 31, 36	A3
Oakley RAZRWire + Oakley Thump Pro1 + Hearing Aid Glasses References[2]	103	19, 20, 24, 25, 26, 31, 36	A3
Oakley RAZRWire + Hearing Aid Glasses References[2]	103	19, 20, 24, 25, 26, 31, 36	A3

[1] – Luxottica may also rely on the Oakley Thump or Thump 2 in the alternative to the Thump Pro.

[2] – Hearing Aid Glasses References refer to one or more of the following and/or the knowledge of a POSITA based on the following:

- Acousticon A-230 Eyeglass Hearing Aid;
- Acousticon A-905 "Stylear" Eyeglass Hearing Aid;
- Audiotone Model B-237-1 Transistor Eyeglass Hearing Aid;
- Beltone "Invisible" Eyeglass Hearing Aid;
- Beltone "Slimette" Eyeglass Hearing Aid;
- Bosch Model 55F Transistor Eyeglass Hearing Aid;
- Fortiphone Model 51 "Spectette" Eyeglass Hearing Aid; and/or
- Radioear Model 840 "Lady America" Eyeglass Hearing Aid.

B. Invalidity Under 35 U.S.C. § 112

Defendants identify the following grounds of invalidity under § 112.

1. Indefiniteness

Prior art that Defendants rely on, including the references relied on in the PTAB proceedings, disclose a "sealed moisture resistant module." Invalidity under § 102 and § 103 can thus be established without construing "moisture resistant." Nonetheless, at least to the extent that Plaintiffs state an infringement theory for the '483 patent, the intrinsic evidence fails to inform a person of ordinary skill in the art with reasonable certainty where the outer limits of "moisture resistant" lie, rendering all claims indefinite.

2. Lack of Written Description

At least to the extent that Plaintiffs state an infringement theory for the '483 patent, all claims lack adequate written description, including because, based on the specification, one of ordinary skill in the art would not conclude that the inventor had possession of the full scope of the claimed invention.

IV. INVALIDITY OF THE ’174 PATENT

A. Invalidity Under 35 U.S.C. § 102 and § 103

Pursuant to S.P.R. 2.5.2, Defendants identify the following grounds of anticipation and/or obviousness of the asserted claims of the ’174 patent. Defendants further incorporate by reference the IPR2024-01070 IPR petition. Claim charts pursuant to S.P.R. 2.5.3 are attached as Exhibits B1–B3 and identified below.

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Brunton	102	1, 2, 12	B1
Brunton	103	1-2, 12	B1
Brunton + Carling	103	13	B1
Kokonaski-999 + Brunton	103	1, 2, 5-6, 12	B1
Hattori-913	103	1, 2, 5, 6, 12, 13	B1
Delorenzo	102	1, 2, 12, 13	B1
Delorenzo	103	1-2, 12-13	B1
Hollingsworth	102	1, 2, 5, 12, 13	B1
Hollingsworth	103	1, 2, 5, 12, 13	B1
Hollingsworth + Kokonaski-999	103	5, 6	B1
Kokonaski-999 + Kokanski-579 and/or Conformal Coating References[4]	103	15, 16, 18	B1
Howell-596 + Eichelberger + Sikonowiz and/or Conformal Coating References[4]	103	15, 16, 18	B1
Oakley Thump Pro[1]	102 and/or 103	1, 2, 5, 6, 12, 13, 15, 16, 18	B2

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Oakley Thump Pro[1]+ Capacitive Touch Switch References[3]	103	6, 15, 16, 18	B2
Oakley Thump Pro[1]+ Capacitive Touch Switch References[3] + Conformal Coating References[4]	103	18	B2
Acousticon A-230 Eyeglass Hearing Aid	102 and/or 103	1, 2, 5, 6, 12, 13	B3

[1] – Luxottica may also rely on the Oakley Thump or Thump 2 in the alternative to the Thump Pro.

[3] – Capacitive Touch Switch References refer to one or more of the following and/or the knowledge of a POSITA as evidenced by the following:

- Howell-596;
- Eichelberger;
- Kokonaski-999;
- Secrets of a Successful QTouch™ Design, Quantum Research Group (2005);
- QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG;
- Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007);

- Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005);
- Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005);
- PSoC CapSense Products; and/or
- QT1100A-ISG 10 Key QTouch™ Sensor IC.

[4] – Conformal Coating References refer to one or more of the following and/or the knowledge of a POSITA as evidenced by the following:

- Sikonowiz;
- Chemtronics Conformal Coatings Guide;
- Chemtronics Konform Conformal Coatings;
- QT1100A-ISG 10 Key QTouch™ Sensor IC; and/or
- IPC-2221A.

B. Invalidity Under 35 U.S.C. § 112

Defendants identify the following grounds of invalidity under § 112.

1. Lack of Written Description

At least to the extent that Plaintiffs state an infringement theory for the ’174 patent regarding the limitations “first electrical conductor coupled to the first temple” and “second electrical conductor coupled to the first temple,” and “disposing a plurality of electronic components on the capacitive switch,” all claims lack adequate written description, including because, based on the specification, one of ordinary skill in the art would not conclude that the inventor had possession of the full scope of the claimed invention.

V. INVALIDITY OF THE ’541 PATENT

A. Invalidity Under 35 U.S.C. § 101

Pursuant to S.P.R. 2.5.4, Defendants identify the following grounds of invalidity under § 101. The ’541 patent is directed to combining eyewear electronics into modules, which is abstract. The ’541 patent recites no inventive concept because the additional elements of the claims beyond the abstract idea are well-understood, routine, and conventional components (e.g., “power source,” “controller,” “sensing mechanism,” “capacitive switch,” “insulating layer,” “conductive material,” “frame,” “temple,” “structural member,” and “lens”).

B. Invalidity Under 35 U.S.C. § 102 and § 103

Pursuant to S.P.R. 2.5.2, Defendants identify the following grounds of anticipation and/or obviousness of the asserted claims of the ’541 patent. Defendants further incorporate by reference the IPR2024-01071 IPR petition. Claim charts pursuant to S.P.R. 2.5.3 are attached as Exhibits C1–C3 and identified below.

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Howell-596 + Howell-158	103	1-6, 12, 16-17	C1
Howell-596 + Oakley Thump Pro[1]	103	1-6, 12, 16-17	C1
Howell-596 + Oakley RAZRWire	103	1-6, 12, 16-17	C1
Howell-596 + Howell-158 + Hattori-913	103	16-17	C1

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Howell-596 + Howell-158 + Hattori-913 + Oakley Thump Pro[1]	103	16-17	C1
Howell-596 + Howell-158 + Hattori-913 + Oakley RAZRWire	103	16-17	C1
Howell-596	103	1-6, 16-17	C1
Howell-596 + Oakley Thump Pro[1]	103	1-6, 16-17	C1
Howell-596 + Oakley RAZRWire	103	1-6, 16-17	C1
Howell-596 + Hattori-913	103	16-17	C1
Howell-596 + Hattori-913 + Oakley Thump Pro[1]	103	16-17	C1

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Howell-596 + Hattori-913 + Oakley RAZRWire	103	16-17	C1
Kokonaski-166 + Howell-158	103	1-6, 12, 16-17	C1
Kokonaski-166 + Howell-158 + Oakley Thump Pro[1]	103	1-6, 12, 16-17	C1
Kokonaski-166 + Howell-158 + Oakley RAZRWire	103	1-6, 12, 16-17	C1
Kokonaski-999 + Howell-158	103	1-6, 12, 16-17	C1
Kokonaski-999 + Howell-158 + Oakley Thump Pro[1]	103	1-6, 12, 16-17	C1
Kokonaski-999 + Howell-158 + Oakley RAZRWire	103	1-6, 12, 16-17	C1

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Oakley Thump Pro[1]	102 and/or 103	1-6, 12, 16-17	C2
Oakley RAZRWire	102 and/or 103	1-6, 16-17	C3

[1] – Luxottica may also rely on the Oakley Thump or Thump 2 in the alternative to the Thump Pro.

C. Invalidity Under 35 U.S.C. § 112

Defendants identify the following grounds of invalidity under § 112.

1. Lack of Enablement

At least to the extent that Plaintiffs state an infringement theory for the '541 patent, claim 1 and all asserted dependent claims lack enablement, including because a POSITA would not have been able to make and use the full scope of the claimed "electronics module" or "housing module" without undue experimentation.

2. Lack of Written Description

At least to the extent that Plaintiffs state an infringement theory for the '541 patent, all claims lack adequate written description, including because, based on the specification, one of ordinary skill in the art would not conclude that the inventor had possession of the full scope of the claimed invention.

VI. INVALIDITY OF THE '960 PATENT

A. Invalidity Under 35 U.S.C. § 101

Defendants identify the following grounds of invalidity under § 101. The '960 patent is directed to providing electronic eyewear functionality in an "application module," which is abstract, at least to the extent Plaintiffs state an infringement theory for the '960 patent. The '960 patent recites no inventive concept because the

additional elements of the claims beyond the abstract idea are well-understood, routine, conventional electronic components.

B. Invalidity Under 35 U.S.C. § 102 and § 103

Pursuant to S.P.R. 2.5.2, Defendants identify the following grounds of anticipation and/or obviousness of the asserted claims of the ’960 patent. Defendants further incorporate by reference the IPR2024-01072 IPR petition. Claim charts pursuant to S.P.R. 2.5.3 are attached as Exhibits D1–D3 and identified below.

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Jannard-740	103	1-2, 6-8, 10	D1
Jannard-740 + iPhone 4S	103	1-2, 6-8, 10	D1
Osterhout	103	1-2, 6-8, 10	D1
Osterhout + iPhone 4S	103	1-2, 6-8, 10	D1
Jannard-740 + Osterhout	103	1-2, 6-8, 10	D1
Oakley Thump Pro[1] + Oakley RAZRWire	103	1, 2, 6-8, 10	D2
Oakley Thump Pro[1] + Jannard-740 + Oakley RAZRWire	103	1, 2, 6-8, 10	D2
Oakley Thump Pro[1] + Oakley RAZRWire + iPhone 4S	103	1, 2, 6-8, 10	D2
Oakley Thump Pro[1] + Jannard-740 + Oakley RAZRWire + iPhone 4S	103	1, 2, 6-8, 10	D2
Oakley Thump Pro[1] with or without Jannard-740 + Oakley RAZRWire with or without iPhone 4S + Jannard-382	103	10	D2

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Oakley RAZRWire	102 and/or 103	1, 2, 6-8, 10	D3
Oakley RAZRWire + iPhone 4S	103	1, 2, 6-8, 10	D3
Oakley RAZRWire with or without iPhone 4S + Jannard-384	103	10	D3

[1] – Luxottica may also rely on the Oakley Thump or Thump 2 in the alternative to the Thump Pro.

C. Invalidity Under 35 U.S.C. § 112

Defendants identify the following grounds of invalidity under § 112.

1. Indefiniteness

Prior art that Defendants rely on, including the references relied on in the PTAB proceedings, disclose an "application module" as confirmed by at least one example appearing in the intrinsic evidence for the '960 patent. Invalidity under § 102 and § 103 can thus be established without construing "application module." Nonetheless, at least to the extent that Plaintiffs state an infringement theory for the '960 patent, the intrinsic evidence fails to inform a person of ordinary skill in the art with reasonable certainty where the outer limits of "application module" lie, rendering all claims indefinite.

Prior art that Defendants rely on, including the references relied on in the PTAB proceedings, disclose "providing audio power to the at least one external device" consistent with the intrinsic evidence for the '960 patent. Invalidity under § 102 and § 103 can thus be established without construing "audio power." Nonetheless, at least to the extent that Plaintiffs state an infringement theory for the '960 patent, claim 8 is indefinite because the meaning of the term "audio power" is unclear.

2. Lack of Enablement

Claim 8 is not enabled because the ’960 patent fails to teach a POSITA how to make an application module that both wirelessly transmits a verbal query to an external device and provides audio power to the same external device. For the same reason, the full scope of each of claims 1, 6, and 7 is not enabled.

The full scope of claim 1 is not enabled because it encompasses claim 9. Claim 9 is not enabled because the ’960 patent fails to teach a POSITA how to make an application module that both wirelessly transmits a verbal query to an external device and provides electrical power to the same external device.

3. Lack of Written Description

To the extent that Plaintiffs state an infringement theory for “application module,” the claims lack written description support because the specification fails to demonstrate possession of any such module identified in Plaintiffs’ infringement contentions.

Claim 8 lacks written description support because the ’960 patent fails to disclose an application module that both wirelessly transmits a verbal query to an external device and provides audio power to the same external device. For the same reason, the full scope of each of claims 1, 6, and 7 lacks written description.

Claim 9 lacks written description support because the ’960 patent fails to disclose an application module that both wirelessly transmits a verbal query to an external device and provides electrical power to the same external device. For the same reason, the full scope of claim 1 lacks written description.

VII. INVALIDITY OF THE ’355 PATENT

A. Invalidity Under 35 U.S.C. § 101

Defendants identify the following grounds of invalidity under § 101. The ’355 patent is directed either to the abstract idea of putting electronics in eyewear or to the abstract idea of improving moisture resistance in eyewear with electronics. In either case, the ’355 patent recites no inventive concept because the elements of the

claims beyond the abstract idea are well-understood, routine, conventional eyewear components or well-understood, routine, conventional electronic components, and what little relationship between the components appears in the claims is likewise well-understood, routine, and conventional.

B. Invalidity Under 35 U.S.C. § 102 and § 103

Pursuant to S.P.R. 2.5.2, Defendants identify the following grounds of anticipation and/or obviousness of the asserted claims of the ’355 patent. Defendants further incorporate by reference the IPR2024-01069 IPR petition. Claim charts pursuant to S.P.R. 2.5.3 are attached as Exhibits E1–E2 and identified below.

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Howell-719 + Sikonowiz and/or Conformal Coating References[4]	103	1, 3, 5-8, 13	E1
Howell-719 + Sikonowiz and/or Conformal Coating References[4] + Eichelberger	103	13	E1
Blum-130 + Sikonowiz and/or Conformal Coating References[4] + Howell-719 and/or Capacitive Touch Switch References[3]	103	1-3, 5-8, 13	E1
Blum-130 + Sikonowiz and/or Conformal Coating References[4] + Eichelberger	103	13	E1
Oakley Thump Pro[1] + Capacitive Touch Switch References[3] + Conformal Coating References[4]	103	1-3, 5-8, 13	E2

Reference(s)	35 U.S.C. §	Challenged Claims	Chart (Ex.)
Oakley Thump Pro[1] + Capacitive Touch Switch References[3] + Conformal Coating References[4] + Blum-130	103	2	E2

[1] – Luxottica may also rely on the Oakley Thump or Thump 2 in the alternative to the Thump Pro.

[3] – Capacitive Touch Switch References refer to one or more of the following and/or the knowledge of a POSITA as evidenced by the following:

- Howell-719;
- Eichelberger;
- Kokonaski-999;
- Secrets of a Successful QTouch™ Design, Quantum Research Group (2005);
- Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007);
- Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005);
- Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005);
- QT1100A-ISG 10 Key QTouch™ Sensor IC;

- QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG; and/or
- PSoC CapSense Products.

[4] – Conformal Coating References refer to one or more of the following and/or the knowledge of a POSITA as evidenced by the following:

- Sikonowiz;
- Chemtronics Konform Conformal Coatings;
- Chemtronics Conformal Coatings Guide;
- 1100A-ISG 10 Key QTouch™ Sensor IC; and/or
- IPC-2221A.

C. Invalidity Under 35 U.S.C. § 112

Defendants identify the following grounds of invalidity under § 112.

1. Lack of Enablement

Claim 1 and all asserted dependent claims are invalid for lack of enablement. As claim 3 illustrates, claim 1 and all asserted dependent claims encompass an electrical functional member that includes "an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function." The specification fails to provide written description enabling a person of ordinary skill in the art to make and use such embodiments without undue experimentation. The full scope of each of claim 1 and all asserted dependent claims is not enabled.

All asserted claims are invalid for lack of enablement of the full scope of "conformal layer."

2. Lack of Written Description

Claim 1 and all asserted dependent claims are invalid for lack of written description. As claim 3 illustrates, claim 1 and all asserted dependent claims encompass an electrical functional member that includes "an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function." The specification fails to provide written description demonstrating the putative inventors possessed such embodiments.

All asserted claims are invalid for lack of written description because the specification fails to demonstrate the putative inventors possessed the full scope of "conformal layer."

Additionally, to the extent that Plaintiffs state an infringement theory for the "conformal layer" limitations of the asserted claims, the claims lack written description support because the specification fails to demonstrate possession of any such conformal layer identified in Plaintiffs' infringement contentions.

To the extent that Plaintiffs state an infringement theory for the "capacitive touch switch" limitations of the asserted claims, the claims lack written description support because the specification fails to demonstrate possession of any such capacitive touch switch identified in Plaintiffs' infringement contentions.

VIII. DOCUMENT PRODUCTION

A. Documents Required by S.P.R. 2.6.1

The documents required under S.P.R. 2.6.1 have been or are being concurrently produced at the following Bates numbers:

LUX000000001- LUX00010247

B. Documents Required by S.P.R. 2.6.2

The documents required under S.P.R. 2.6.2 have been or are being concurrently produced at the following Bates numbers:

LUX00010248 – LUX00024042

Additionally, physical samples of the following prior art systems are available for inspection at offices of counsel for Luxottica:

Oakley Thump;

Oakley Thump 2;

Oakley Thump Pro;

Oakley Split Thump;

Oakley RAZRWire;

Apple iPhone 4S with Siri

IX. ADDITIONAL INVALIDITY GROUNDS

S.P.R. 2.5 pertains only to invalidity grounds under §§ 101, 102, 103, and 112. Defendants may assert additional invalidity grounds, such as obviousness-type double patenting, whose disclosure S.P.R. 2.5 does not concern.

KNOBBE, MARTENS, OLSON & BEAR, LLP

July 12, 2024

/s/ Justin J. Gillett

Ali S. Razai
Mark Lezama
Justin J. Gillett
Brandon G. Smith

Attorneys for Defendants
LUXOTTICA GROUP S.P.A. and
LUXOTTICA OF AMERICA INC.

CERTIFICATE OF SERVICE

I hereby certify that on July 12, 2024, I served a copy of the foregoing DEFENDANTS' INVALIDITY CONTENTIONS electronically by email to the other parties' attorneys of record at the following addresses:

Cori C. Steinmann
csteinmann@kslaw.com
John David Roehrick
jroehrick@kslaw.com
KING & SPALDING LLP
633 West Fifth Street, Suite 1600
Los Angeles, CA 90071
Telephone: (213) 443-4355
Facsimile: (213) 443-4310

Christopher C. Campbell
ccampbell@kslaw.com
Jeffrey M. Telep
jtelep@kslaw.com
Brian D. Hill
bhill@kslaw.com
KING & SPALDING LLP
1700 Pennsylvania Avenue, NW, Suite 200
Washington, DC 20006-4707
Telephone: (202) 626-5578

Britton F. Davis
bfdavis@kslaw.com
KING & SPALDING LLP
1401 Lawrence Street Suite 1900
Denver, CO 80202
Telephone: (720) 535-2300

Ojeiku C. Aisiku
oaisiku@kslaw.com
KING AND SPALDING LLP
1185 Avenue of the Americas, 34th Floor
New York, NY 10036-2601
212-556-2135
Fax: 212-556-2222

eVision@kslaw.com

The papers served were either (1) attached directly to the service email or (2) were made available for download through a file-sharing service, in which case the service email provided notice of their availability for download.

July 12, 2024

Jeff Roche
Litigation Paralegal

Exhibit A1 - Invalidity of U.S. Patent No. 8,708,483

1. Howell-596

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	See IPR2024-01030 Petition § VI.B. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[1A]	a frame; and	See IPR2024-01030 Petition § VI.B.1. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[1B]	a sealed moisture resistant module attached to the frame,	See IPR2024-01030 Petition § VI.B.2. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[1BI]	wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	See IPR2024-01030 Petition § VI.B.3. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[1C]	wherein the frame comprises a first temple and a second temple, and	See IPR2024-01030 Petition § VI.B.4. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.

[1CI]	wherein the module is disposed within the first temple.	See IPR2024-01030 Petition § VI.B.5. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[2]	The eyewear of claim 1, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	See IPR2024-01030 Petition § VII.B. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VI. and portions of Howell-596 cited therein.
[6]	The eyewear of claim 1, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § VII.C. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VI. and portions of Howell-596 cited therein.
[7]	The eyewear of claim 1, wherein the module includes an antenna and at	See IPR2024-01030 Petition § VII.D. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.

	least one of a transmitter, a receiver or a transceiver.	
[8]	The eyewear of claim 1, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § VII.E. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VI. and portions of Howell-596 cited therein.
[10]	The eyewear of claim 1, wherein the module is affixed directly to the frame.	See IPR2024-01030 Petition § VI.D. and portions of Howell-596 cited therein, § VII.A. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § V. and portions of Howell-596 cited therein, § VI. and portions of Howell-596 cited therein.
[13]	The eyewear of claim 1, wherein the module is hermetically sealed.	See IPR2024-01030 Petition § VII.F. and portions of Howell-596 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VI. and portions of Howell-596 cited therein.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VIII. and portions of Howell-596 cited therein.

[19]	Eyewear comprising: a frame; and a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor, wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	See IPR2024-01030 Petition § VIII.B. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein. Alternatively, Claim 19 also would have been obvious in view of Howell-596 in view of any of the electronic eyewear products identified below to dispose at least part of the module on a portion of the frame configured to be behind the ear of a wearer. For example, it was well known in the art that electrical components, including batteries and audio circuitry, could be positioned in the portion of the temple of an eyewear behind the wearer's ears. Numerous electronic eyewear already positioned electronics in the portion of the temple behind the wearer's ears, as identified below. A POSITA would have been motivated to do so at least because this would have been the combination of known prior art elements according to known methods to yield predictable results, and it would have been a simple substitution of one known element for another to obtain predictable results. Beltone "Invisible" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneinvisible.htm)

		 Beltone “Slimette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneslimette.htm)

Acousticon A-230 Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm)

		 Acousticon A-905 “Stylear” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona905.htm)

		   Radioear Model 840 "Lady America" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/RadioEar/info/radioear840e.htm)

		 Fortiphone Model 51 “Spectette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/

		Transistor%20(Ear)/Eyeglass/Other%20Makes/info/fortiphonespectette51.htm)

		 Audiotone Model B-237-1 Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/audiotoneb2371.htm)

		 Bosch Model 55F Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/boschstar55f.htm)

[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein. Alternatively, claim 20 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [20] as discussed in IPR2024-01030.
[24]	The eyewear of claim 19, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein. Alternatively, claim 24 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [24] as discussed in IPR2024-01030.
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, claim 25 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [25] as discussed in IPR2024-01030.

[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein. Alternatively, claim 26 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [26] as discussed in IPR2024-01030.
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	See IPR2024-01030 Petition § VIII.C. and portions of Howell-596 and Howell-833 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VII. and portions of Howell-596 cited therein. Alternatively, claim 31 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [31] as discussed in IPR2024-01030.
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VI.A. on Howell-596; See IPR-2024-01030 Ex. 1002 § IV.A. on Howell-596, § VIII. and portions of Howell-596 cited therein. Alternatively, claim 36 also would have been obvious over Howell-596 in view of any of the electronic eyewear products identified above in [19]. Howell-596 discloses the limitations of [36] as discussed in IPR2024-01030.

2. Howell-833

Claim Limitation	Claim Language	Prior Art Disclosure
[7]	The eyewear of claim 1, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § IX.D. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VIII. and portions of Howell-833 cited therein.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VIII. and portions of Howell-833 cited therein.
[19]	Eyewear comprising: a frame; and a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor, wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	See IPR2024-01030 Petition § VIII.B. and portions of Howell-596 and Howell-833 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein.
[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver,	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein.

	transceiver, and sensor with an external device.	
[24]	The eyewear of claim 19, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein.
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § IX.D. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein, § VIII. and portions of Howell-833 cited therein.
[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § VIII.D. and portions of Howell-596 and Howell-833 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein.
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	See IPR2024-01030 Petition § VIII.C. and portions of Howell-596 and Howell-833 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VII. and portions of Howell-833 cited therein.
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § VIII.A. on Howell-833; See IPR-2024-01030 Ex. 1002 § IV.B. on Howell-833, § VIII. and portions of Howell-833 cited therein.

3. Blum-741

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	See IPR2024-01030 Petition § XIII.B. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[1A]	a frame; and	See IPR2024-01030 Petition § XIII.B.1. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[1B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	See IPR2024-01030 Petition § XIII.B.2. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[1BI]	wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	See IPR2024-01030 Petition § XIII.B.3. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[1C]	wherein the frame comprises a first temple and a second temple, and	See IPR2024-01030 Petition § XIII.B.4. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[1CI]	wherein the module is disposed within the first temple.	See IPR2024-01030 Petition § XIII.B.5. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[2]	The eyewear of claim 1, wherein the module includes an electrical connector configured to connect the any two of switch, detector,	See IPR2024-01030 Petition § XIII.E. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.

	processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	
[6]	The eyewear of claim 1, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § XIII.H. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[7]	The eyewear of claim 1, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § IX.D. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § XIII.I. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § VIII. and portions of Blum-741 cited therein, § XII. and portions of Blum-741 cited therein.
[8]	The eyewear of claim 1, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § XIII.J. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[10]	The eyewear of claim 1, wherein the module is affixed directly to the frame.	See IPR2024-01030 Petition § XIII.L. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[13]	The eyewear of claim 1, wherein the module is hermetically sealed.	See IPR2024-01030 Petition § XIII.M. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § XIII.O. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § VIII. and portions of Blum-741 cited therein, § XII. and portions of Blum-741 cited therein.

[19]	Eyewear comprising: a frame; and a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor, wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	See IPR2024-01030 Petition § XIII.C. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	See IPR2024-01030 Petition § XIII.E. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[24]	The eyewear of claim 19, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § XIII.H. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § IX.D. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § XIII.I. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § VIII. and portions of Blum-741 cited therein, § XII. and portions of Blum-741 cited therein.

[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § XIII.J. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	See IPR2024-01030 Petition § XIII.D. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § XII. and portions of Blum-741 cited therein.
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § IX.E. and portions of Howell-596, Howell-833, and Blum-741 cited therein, § XIII.O. and portions of Blum-741 and Hattori-912 cited therein, § IX.A. on Blum-741; See IPR-2024-01030 Ex. 1002 § IV.C. on Blum-741, § VIII. and portions of Blum-741 cited therein, § XII. and portions of Blum-741 cited therein.

4. Hattori-912

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	See IPR2024-01030 Petition § XIII.B. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[1A]	a frame; and	See IPR2024-01030 Petition § XIII.B.1. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[1B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	See IPR2024-01030 Petition § XIII.B.2. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[1BI]	wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	See IPR2024-01030 Petition § XIII.B.3. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[1C]	wherein the frame comprises a first temple and a second temple, and	See IPR2024-01030 Petition § XIII.B.4. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[1CI]	wherein the module is disposed within the first temple.	See IPR2024-01030 Petition § XIII.B.5. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[2]	The eyewear of claim 1, wherein the module includes an electrical connector configured to connect the any two of switch, detector,	See IPR2024-01030 Petition § XIII.E. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.

	processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	
[6]	The eyewear of claim 1, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § XIII.H. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[7]	The eyewear of claim 1, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § XIII.I. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[8]	The eyewear of claim 1, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § XIII.J. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[10]	The eyewear of claim 1, wherein the module is affixed directly to the frame.	See IPR2024-01030 Petition § XIII.L. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[13]	The eyewear of claim 1, wherein the module is hermetically sealed.	See IPR2024-01030 Petition § XIII.M. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § XIII.O. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.

[19]	Eyewear comprising: a frame; and a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor, wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	See IPR2024-01030 Petition § XIII.C. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	See IPR2024-01030 Petition § XIII.E. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[24]	The eyewear of claim 19, wherein the module includes each of drive circuit, a sensor, and a power source.	See IPR2024-01030 Petition § XIII.H. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	See IPR2024-01030 Petition § XIII.I. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.

[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	See IPR2024-01030 Petition § XIII.J. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	See IPR2024-01030 Petition § XIII.D. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	See IPR2024-01030 Petition § XIII.O. and portions of Blum-741 and Hattori-912 cited therein, § XIII.A. on Hattori-912; See IPR-2024-01030 Ex. 1002 § IV.D. on Hattori-912, § XII. and portions of Hattori-912 cited therein.

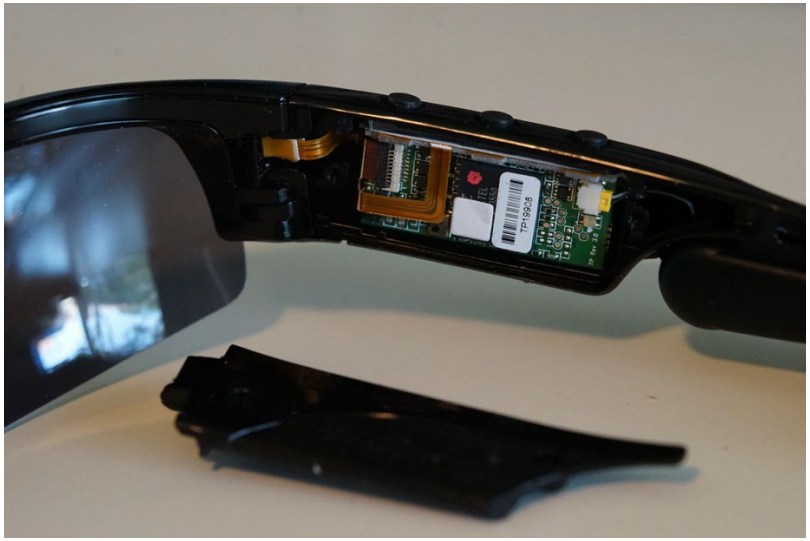
Exhibit A2 - Invalidity of U.S. Patent No. 8,708,483 Based on Oakley Thump Pro

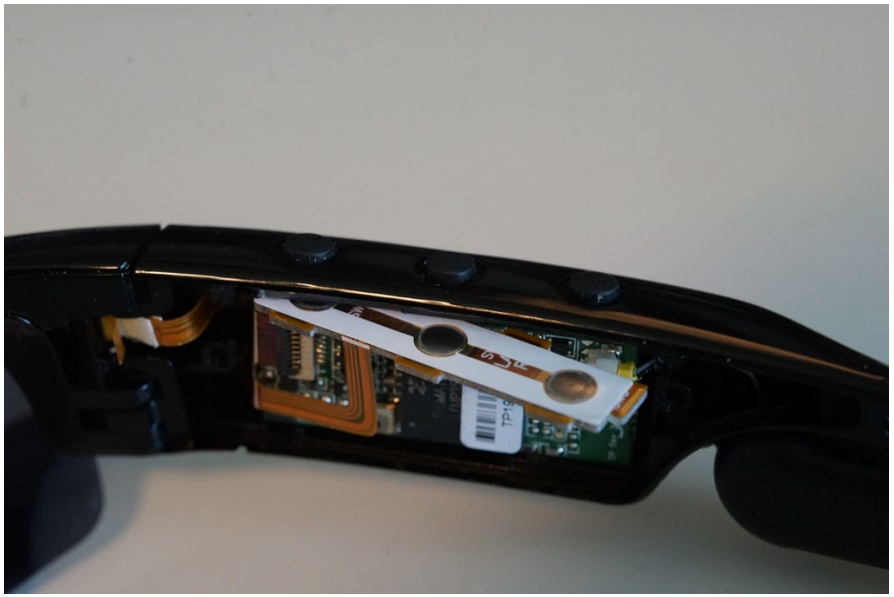
Upon information and belief, the Oakley Thump and Thump 2 had similar structures to the Oakley Thump Pro. Luxottica reserves the right to rely upon the Oakley Thump and/or the Thump 2 in addition to the Thump Pro.

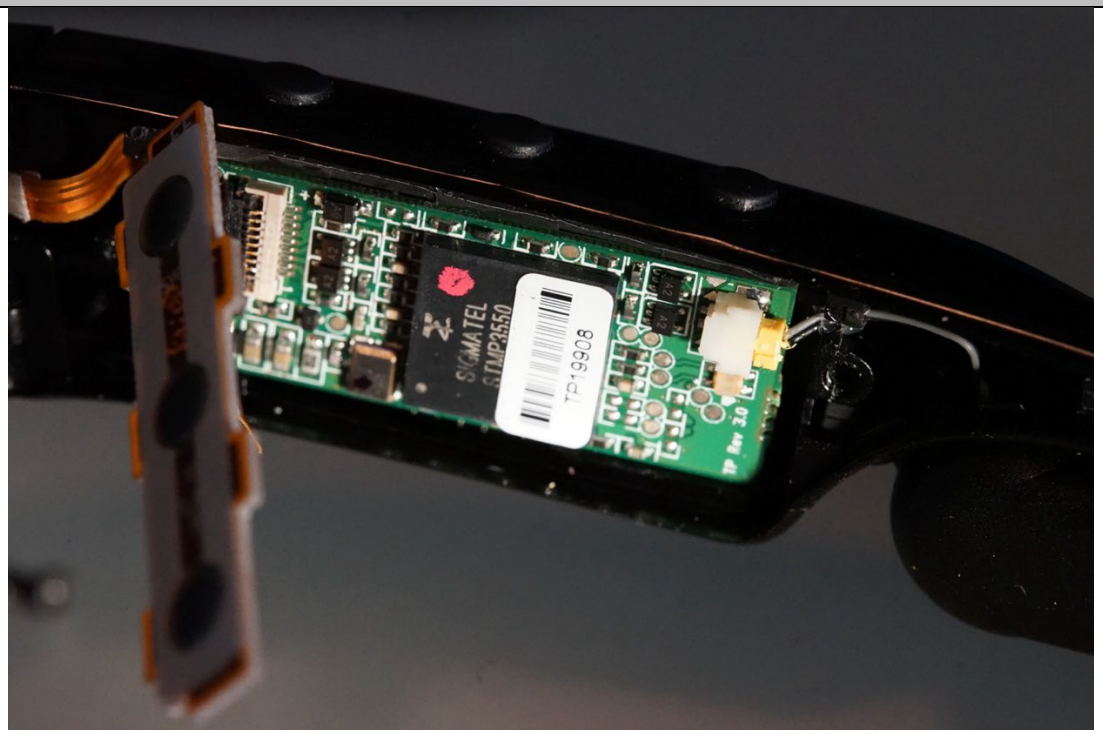
Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	To the extent the preamble is limiting, the Oakley Thump Pro is eyewear.

Claim Limitation	Claim Language	Prior Art Disclosure
[1A]	a frame; and	The Oakley Thump Pro has a frame, as shown below:

Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	At least under Plaintiffs' apparent interpretation of the limitation, the Oakley Thump Pro has a sealed moisture resistant module attached to the frame. The user manual for the Oakley Thump Pro indicates that the Thump Pro is "water resistant." *See* Oakley Thump Pro User Manual (LUX00013972) at 21. As shown below, the Oakley Thump Pro has a sealed moisture resistant module in the right temple attached to the frame:

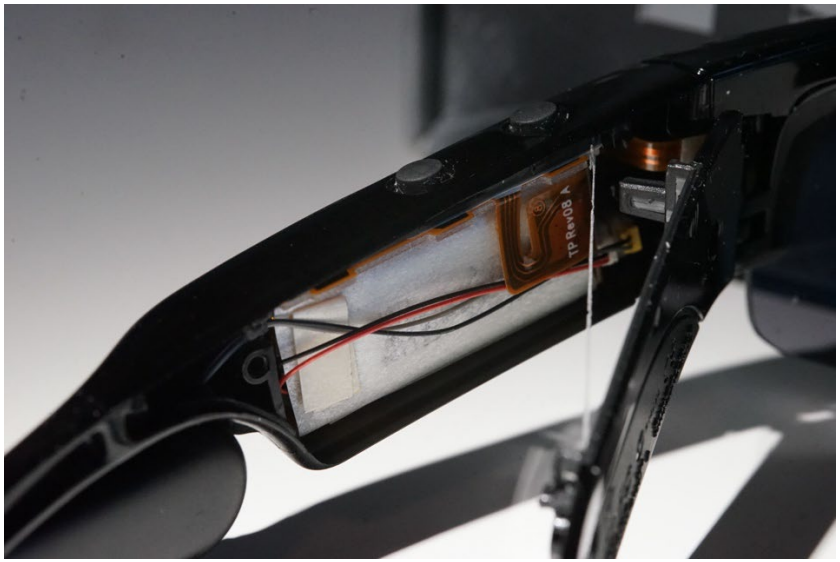
Claim Limitation	Claim Language	Prior Art Disclosure
		  

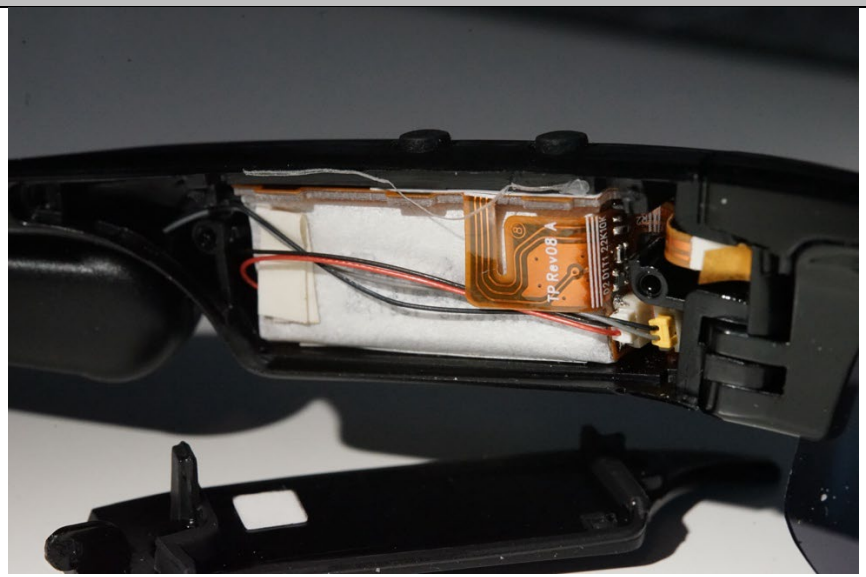
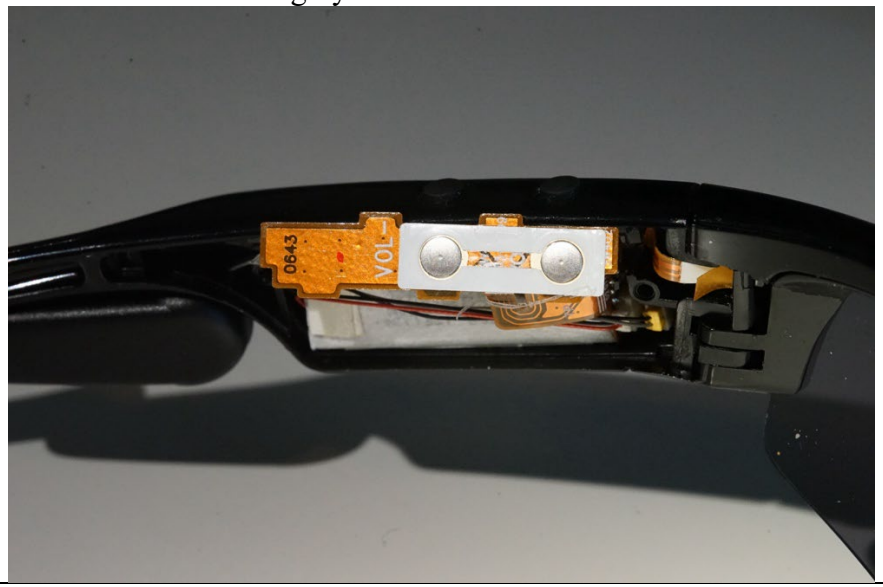
Claim Limitation	Claim Language	Prior Art Disclosure
		The sealed moisture resistant module in the right temple has at least three switches and/or sensors corresponding to the three push buttons (previous track, play/pause, next track) at the top of the right temple, and a processor, and a drive circuit for driving the right earphone.  Above: Three switches and/or sensors corresponding to the three push buttons (previous track, play/pause, next track).

Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Sigmatel STMP3550 processor and drive circuit for audio.

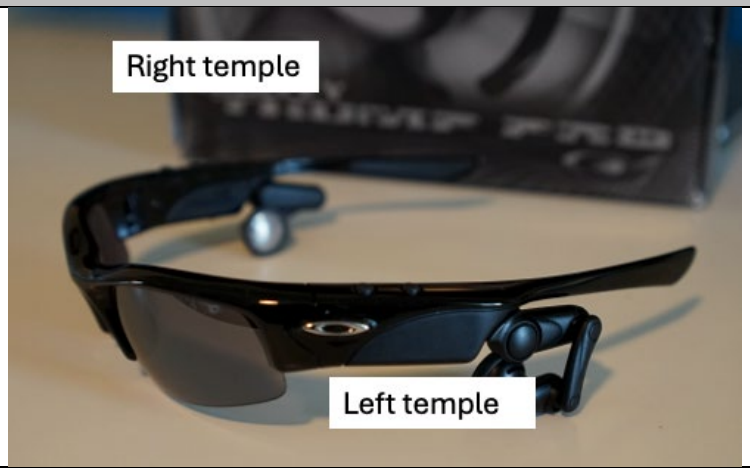
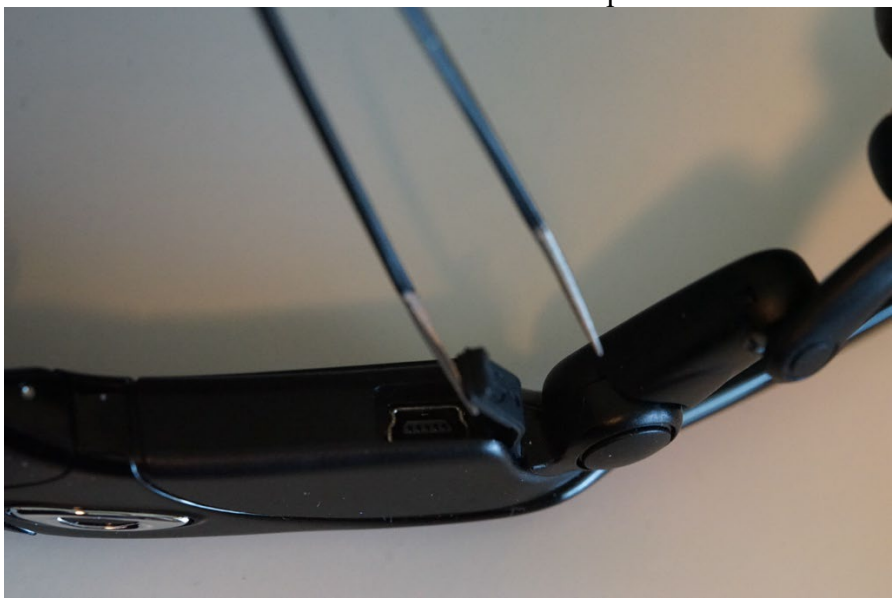
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Module has a drive circuit, e.g., the Sigmatel STMP3550 and associated electronic circuitry connected to the earphone. Alternatively, under Plaintiffs' apparent interpretation of the limitation, the Oakley Thump Pro also has a sealed moisture resistant module on the left temple, as shown below:

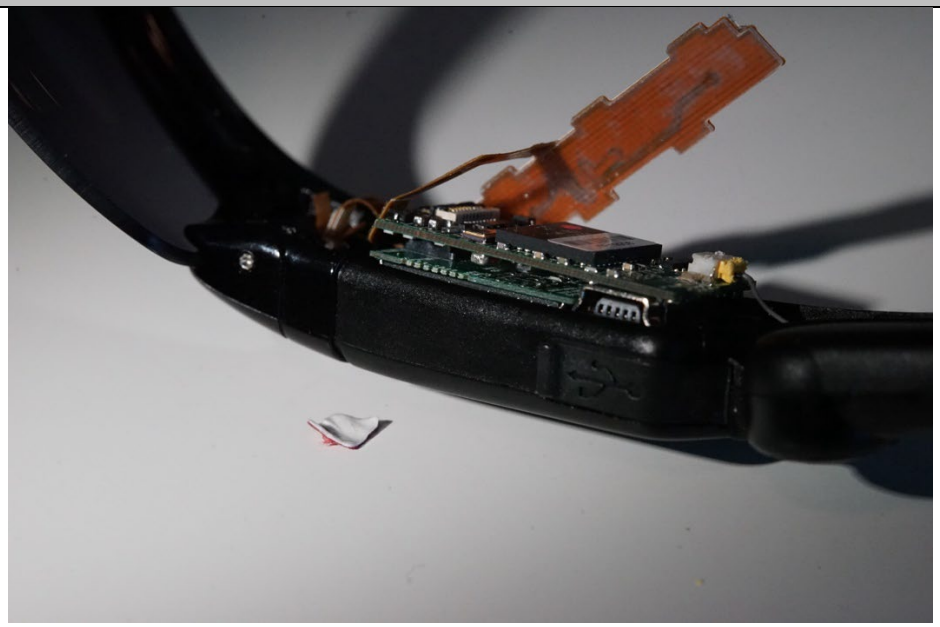
Claim Limitation	Claim Language	Prior Art Disclosure
		  Above: Left temple of Oakley Thump Pro Above: Clear adhesive seal when opening the module on the left temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The module on the left temple includes a battery (power source), two switches and/or buttons corresponding to the two push buttons for controlling volume at the top of the left temple, and a drive circuit for driving the earphone on the left temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Inside of module in left temple. Battery (power source) is wrapped in the white wrapping sitting beneath the red/black/gray cables. 

Claim Limitation	Claim Language	Prior Art Disclosure
		Above: Two switches and/or sensors corresponding to two push buttons (volume controls). Above: Another view of the two switches and/or sensors corresponding to the two push buttons. Also shown: The red/black/gray cables terminating in yellow/white connectors on the flex circuit, which are part of the drive circuit for driving the earphone on the left temple.
[1C]	wherein the frame comprises a first temple and a second temple, and wherein the module is disposed within the first temple.	The Oakley Thump Pro has a first and second temple. When considering the module in the right temple as the sealed moisture resistant module, the module is disposed in the first temple (right temple). Alternatively, when the module in the left temple is considered as the sealed moisture resistant module, the module is disposed in the first temple (left temple).

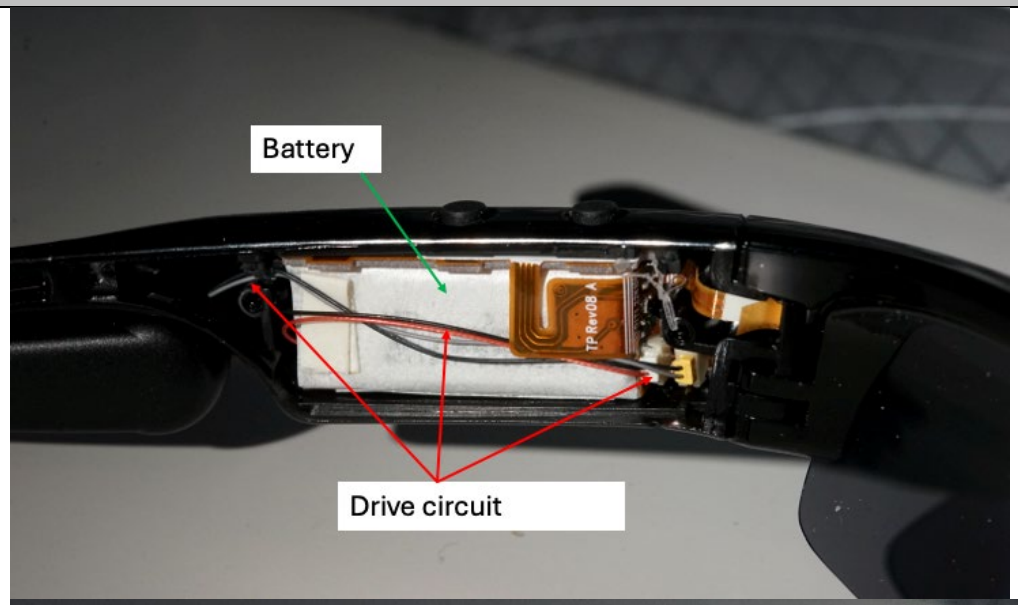
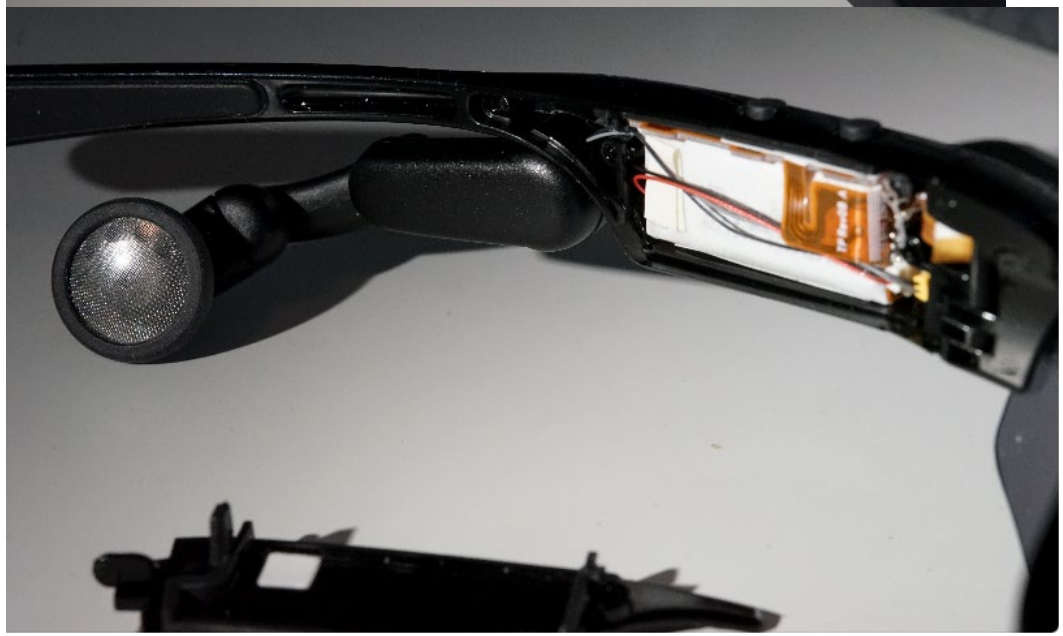
Claim Limitation	Claim Language	Prior Art Disclosure
		
[2]	The eyewear of claim 1, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	The module in the right temple of the Oakley Thump Pro contains an electrical connector (a mini-USB port) which is configured to connect at module, including the processor and/or drive circuit and sensors and/or switches with an external device such as a computer.  Above: Mini-USB port on right temple

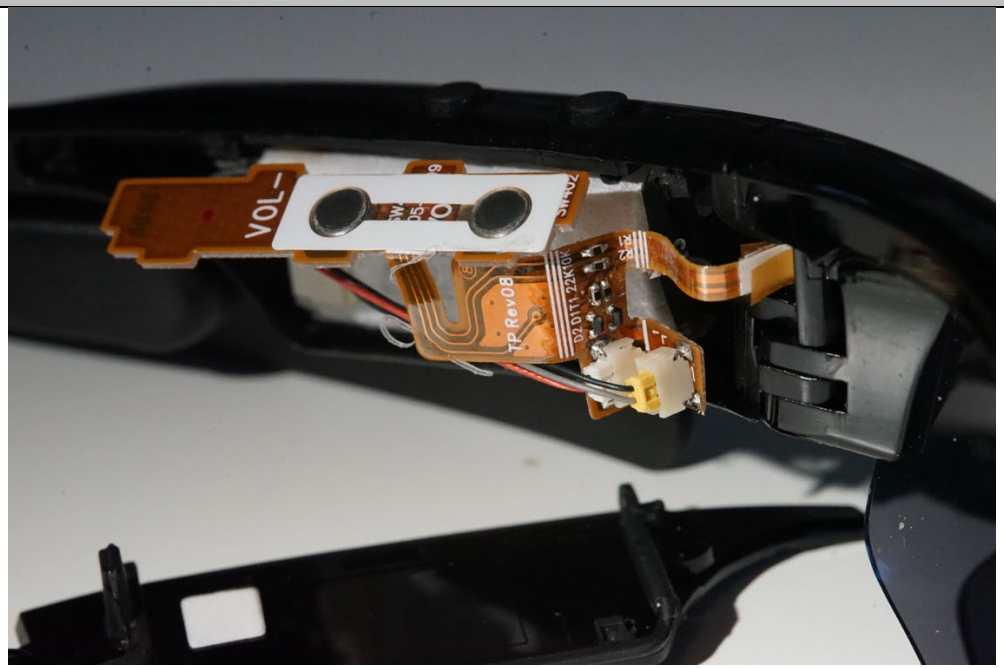
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Module in right temple, showing mini-USB port.

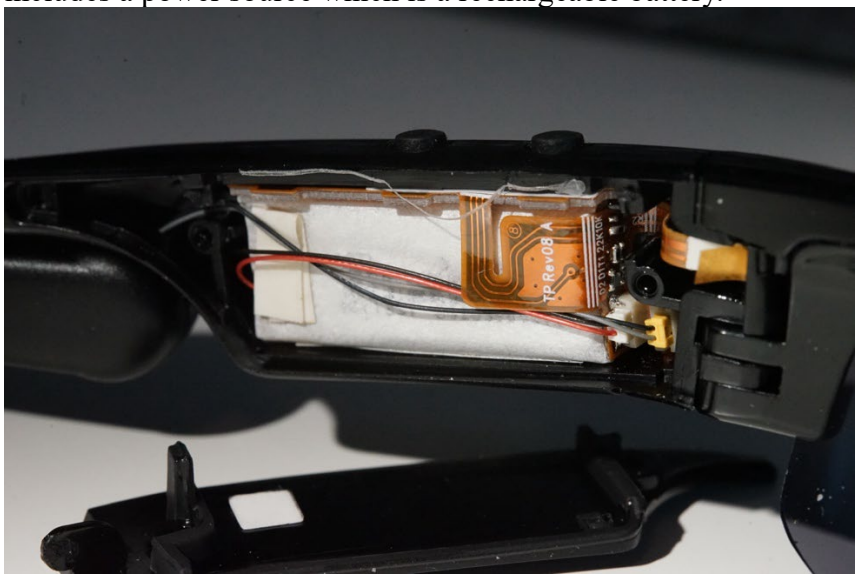
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Module in right temple, showing mini-USB port
[6]	The eyewear of claim 1, wherein the module includes each of drive circuit, a sensor, and a power source.	The module in the right temple of the Oakley Thump Pro contains a drive circuit, namely, the Sigmatel STMP3550 and associated circuitry for driving the earphone, at least three sensors corresponding to the three push buttons, and a ribbon cable (power source) which supplies at least power to the module in the right temple from a battery located in the left temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Module in right temple, showing Sigmatel STMP3550 and associated circuitry for driving the earphone and an orange ribbon cable connected on the left side of the module which supplies at least power to the module.

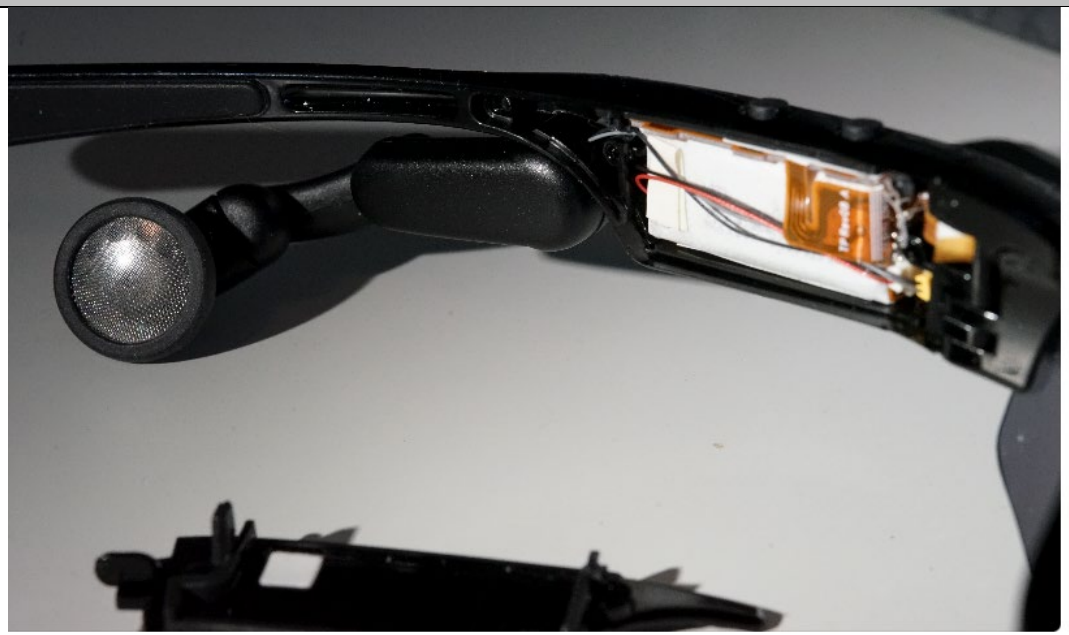
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Module in right temple showing three sensors associated with the three push buttons (previous track, play/pause, next track). Alternatively, the module in the left temple of the Oakley Thump Pro also has a drive circuit for driving the earphone in the left temple, at least two sensors corresponding to the two push button volume controls on the left temple, and a battery (power source).

Claim Limitation	Claim Language	Prior Art Disclosure
		 

Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Two sensors corresponding to the volume controls.
[7]	The eyewear of claim 1, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	Claim 7 would have been obvious in view of the Oakley Thump Pro and the Oakley RAZRWire. The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. A POSITA would have been motivated to combine the Oakley Thump Pro with the Bluetooth antenna and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated and would have reasonably expected success in the combination at least because the combination would entail the use of a known technique, namely, the use of Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way.
[8]	The eyewear of claim 1, wherein the module includes a	As discussed above with respect to limitation [1B], the module in the right temple of the Oakley Thump Pro has at least three sensors corresponding to the push button playback controls, each of which is a manual

Claim Limitation	Claim Language	Prior Art Disclosure
	sensor, and wherein the sensor comprises a manual switch.	switch. Alternatively, the module in the left temple of the Oakley Thump Pro has at least two sensors corresponding to the push button volume controls, each of which is a manual switch.
[10]	The eyewear of claim 1, wherein the module is affixed directly to the frame.	As shown above with respect to limitation [1B], the module in the right temple is affixed directly to the frame of the Oakley Thump Pro. Alternatively, as shown above with respect to limitation [1B], the module in the left temple is affixed directly to the frame of the Oakley Thump Pro.
[13]	The eyewear of claim 1, wherein the module is hermetically sealed.	*See* Limitation [1B]. At least under Plaintiffs' apparent interpretation of this limitation, the modules in the Oakley Thump Pro are both hermetically sealed.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	As discussed above with respect to limitation [1B], the module in the left temple of the Oakley Thump Pro includes a power source which is a rechargeable battery.  The battery in the Oakley Thump Pro is recharged via the mini-USB port on the Oakley Thump Pro. At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024

Claim Limitation	Claim Language	Prior Art Disclosure
		Preliminary Infringement Contentions, Ex. A-01 at 18-20, the Oakley Thump Pro battery comprises an inductively rechargeable battery.
[19P]	Eyewear comprising:	*See* Limitation [1P].
[19A]	a frame; and	*See* Limitation [1A].
[19B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	*See* Limitation [1B].
[19C]	wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, EX. A-01 at 21-25, the modules in the Oakley Thump Pro are disposed, at least partially, on a portion of the frame configured to be behind the ear of a wearer of the eyewear.

Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		  Additionally, it also would have been obvious to a POSITA to modify the Oakley Thump Pro in view of the knowledge of a POSITA or in view of any of the references identified below to dispose at least part of the module on a portion of the frame configured to be behind the ear of a wearer. For example, it was well known in the art that electrical components, including batteries and audio circuitry, could be positioned in the portion of the temple of an eyewear behind the wearer's ears. Numerous electronic eyewear already positioned electronics in the portion of the temple behind the wearer's ears, as identified below: Beltone "Invisible" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneinvisible.htm)

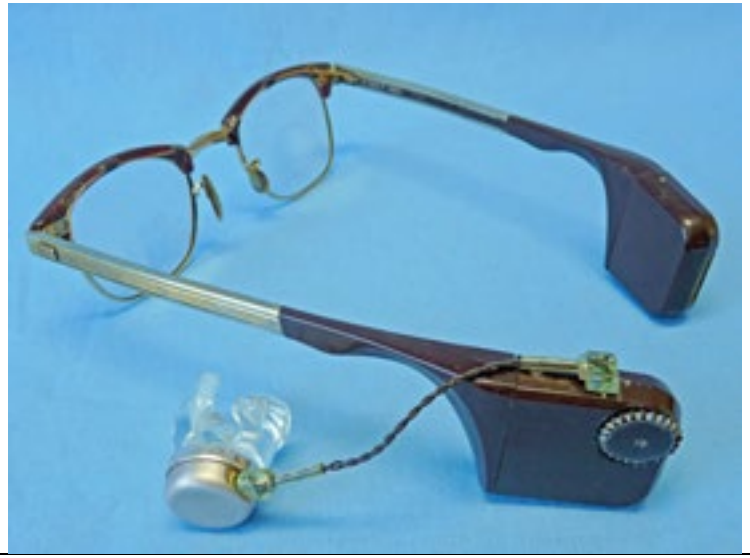
Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		  Beltone “Slimette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneslimette.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		 Acousticon A-230 Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm)

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		 Acousticon A-905 “Stylear” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona905.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		  Radioear Model 840 "Lady America" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/RadioEar/info/radioear840e.htm) 

Claim Limitation	Claim Language	Prior Art Disclosure
		  Fortiphone Model 51 “Spectette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/fortiphonespectette51.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		 Audiotone Model B-237-1 Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/audiotoneb2371.htm)

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		   Bosch Model 55F Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/boschstar55f.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	*See* Limitation [2].
[24]	The eyewear of claim 19, wherein	*See* Limitation [6].

Claim Limitation	Claim Language	Prior Art Disclosure
	the module includes each of drive circuit, a sensor, and a power source.	
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	*See* Limitation [7].
[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	*See* Limitation [8].
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	*See* Limitation [1C].
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an	*See* Limitation [17].

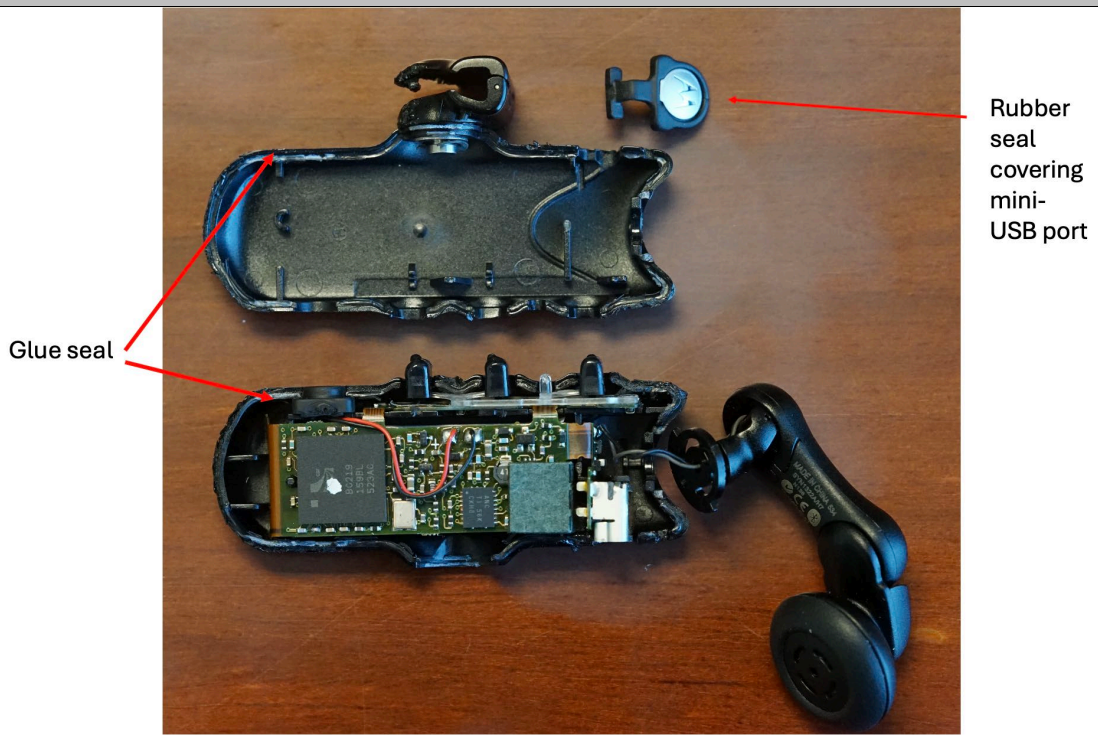
Claim Limitation	Claim Language	Prior Art Disclosure
	inductively rechargeable battery.	

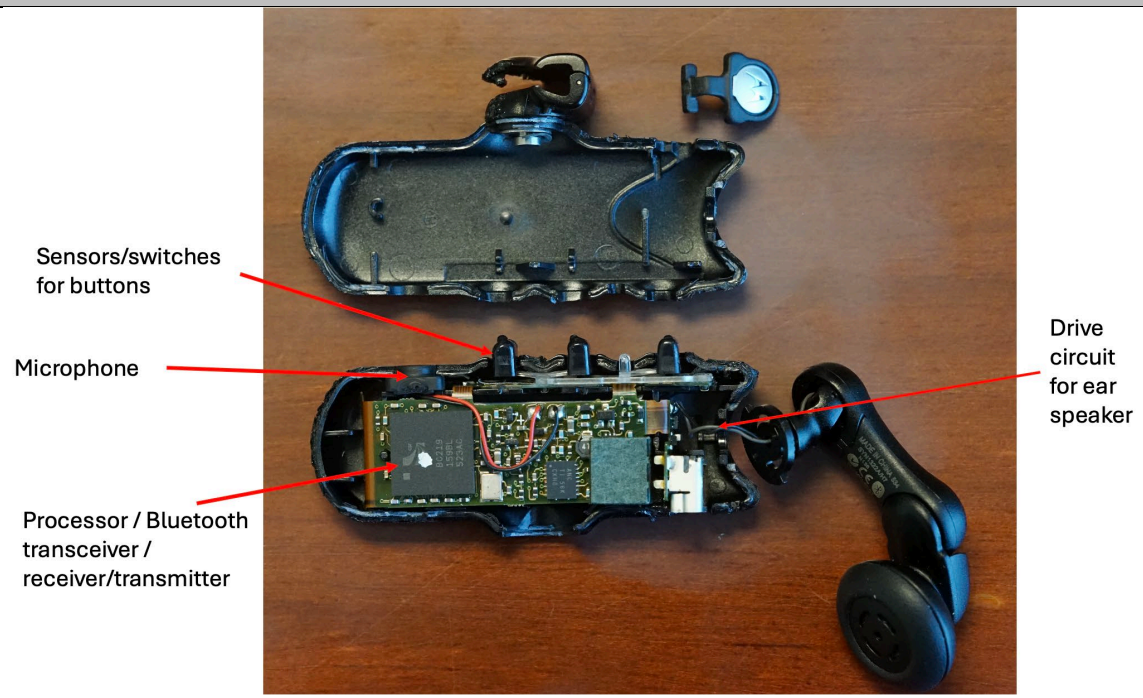
Exhibit A3 - Invalidity of U.S. Patent No. 8,708,483 Based on Oakley RAZRWire

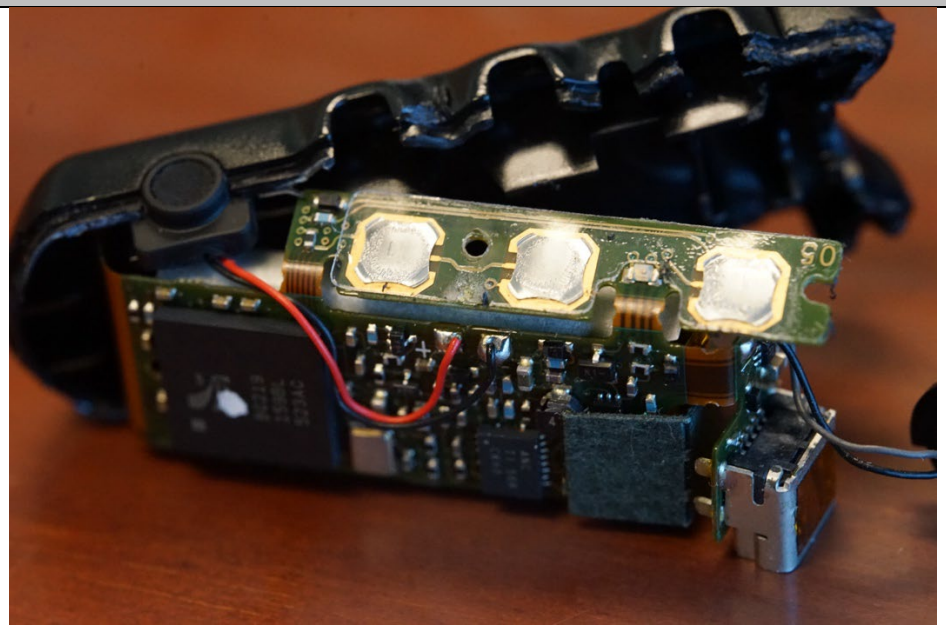
Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	To the extent the preamble is limiting, the Oakley RAZRWire is eyewear.
[1A]	a frame; and	The Oakley RAZRWire has a frame.

Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of: a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	At least under Plaintiffs' apparent interpretation of the limitation, the Oakley RAZRWire has a sealed moisture resistant module attached to the frame.

Claim Limitation	Claim Language	Prior Art Disclosure

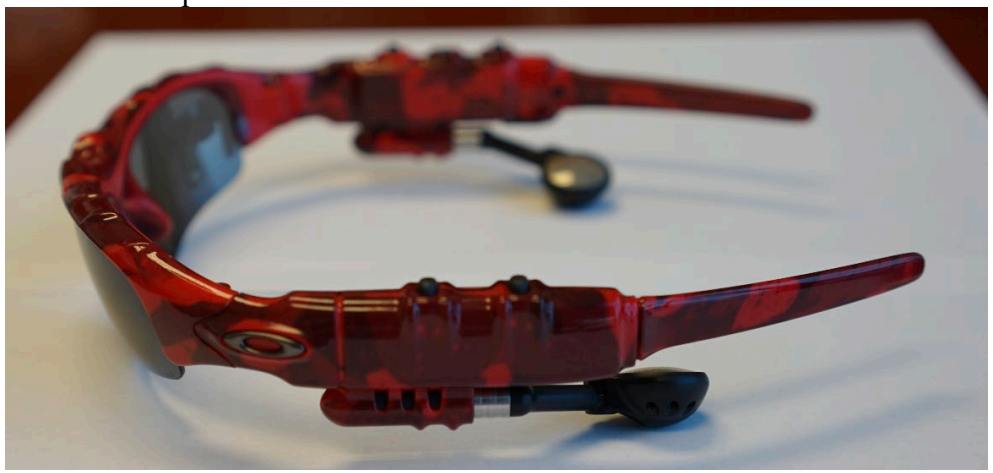
Claim Limitation	Claim Language	Prior Art Disclosure
		 The sealed moisture resistant module in the RAZRWire contains at least three switches/sensors corresponding to the three buttons, a detector (e.g., the microphone), a power source (e.g., battery), a processor, a drive circuit for driving the speaker, and a Bluetooth transmitter/receiver/transceiver.

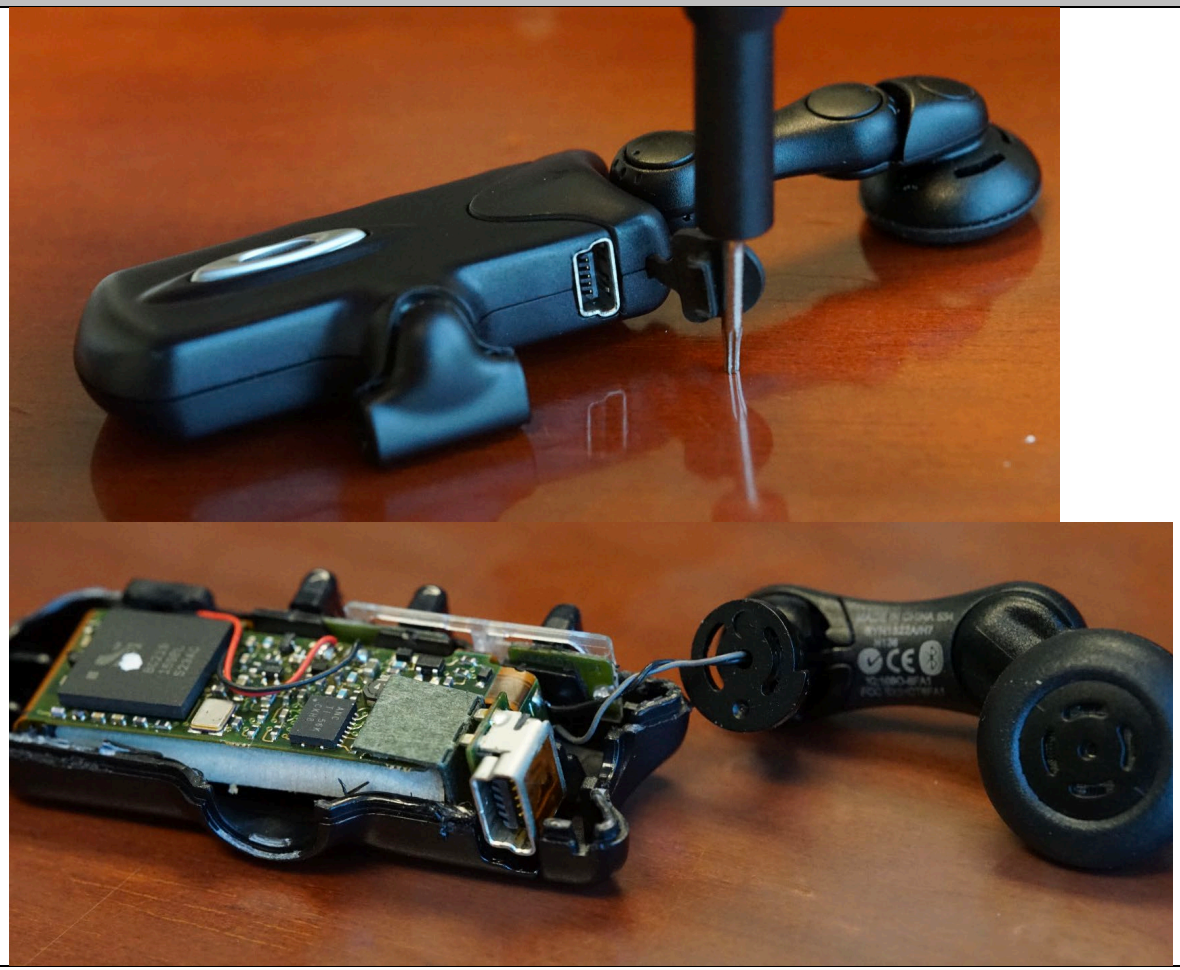
Claim Limitation	Claim Language	Prior Art Disclosure
		

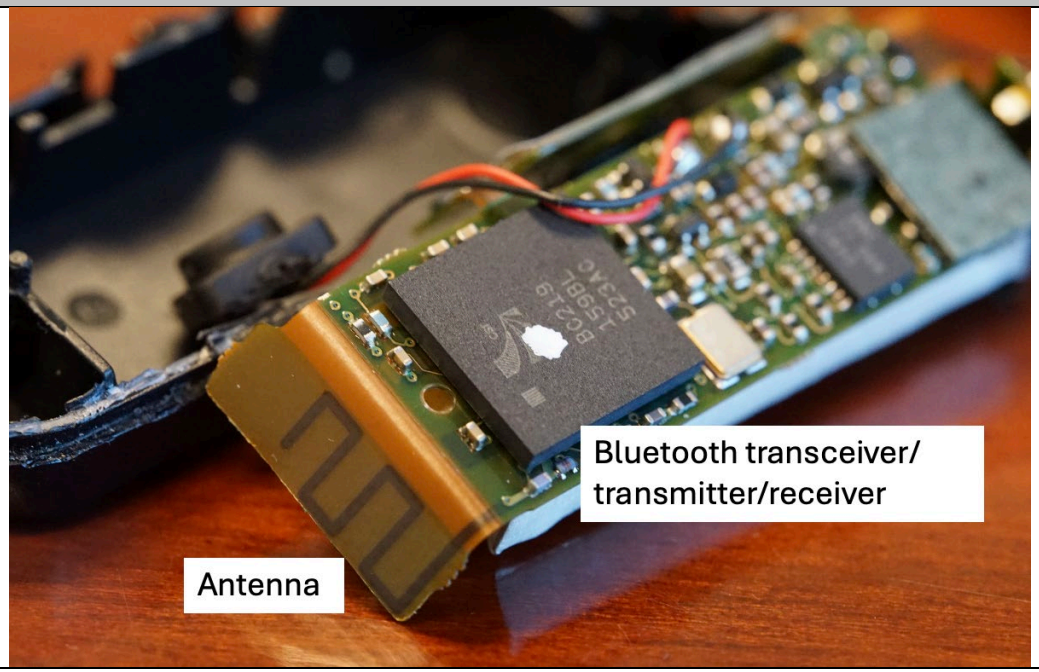
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Three sensors/switches

Claim Limitation	Claim Language	Prior Art Disclosure
		Above: Battery
[1C]	wherein the frame comprises a first temple and a second temple, and wherein the module is disposed within the first temple.	The Oakley RAZRWire frame has a first and second temple, as shown below, and the module is disposed within the first temple:

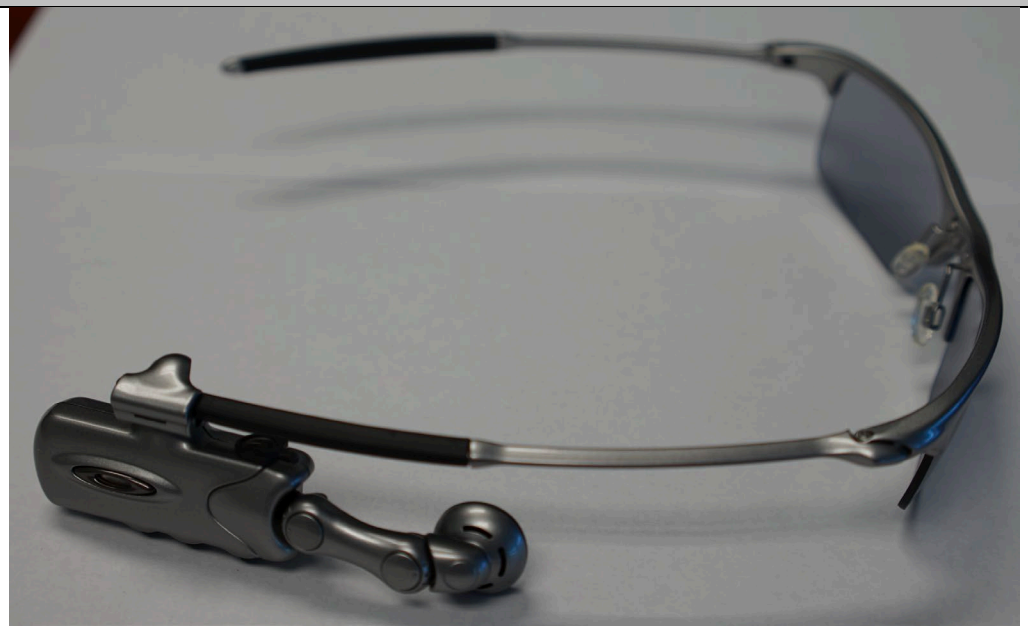
Claim Limitation	Claim Language	Prior Art Disclosure
		Luxottica further notes that the module is swappable between the left and right temples, and thus, this limitation is satisfied regardless of which temple is identified as the first or second temple. Alternatively, Claim 1 also would have been obvious over the Oakley RAZRWire in view of any of the Oakley Thump, Thump 2, or Thump Pro. Indeed, the Oakley Thump is admitted prior art to the '483 Patent. *See* '483 Patent at 1:57-61. The Oakley Thump, Thump 2, and Thump Pro each had sealed moisture resistant modules located in the temples of the eyewear. It would have been obvious to include the module of the Oakley RAZRWire within the temple of an Oakley Thump, Thump 2, or Thump Pro. This would have been a simple substitution of parts between the RAZRWire and Thump eyewear models. It also would have been an obvious design choice because eyewear are fashion accessories and there were many styles of eyewear, including the Thump styles that could incorporate the module of the RAZRWire. A POSITA would have reasonably expected success in the combination at least because this was a simple substitution of parts. Below: Thump Pro Below: Thump 2

Claim Limitation	Claim Language	Prior Art Disclosure
		 Below: Thump 
[2]	The eyewear of claim 1, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter,	The RAZRWire module includes a mini-USB port which is an electrical connector configured to connect at least the battery, processor, drive circuit, switches, and transceiver/transmitter/receiver to an external device such as a computer or charger.

Claim Limitation	Claim Language	Prior Art Disclosure
	receiver, transceiver, and sensor with an external device.	
[6]	The eyewear of claim 1, wherein the module includes each of drive circuit, a sensor, and a power source.	*See* Limitation [1B].
[7]	The eyewear of claim 1, wherein the module includes an antenna and at least one	The Oakley RAZRWire module comprises an antenna and a transmitter/receiver/transceiver:

Claim Limitation	Claim Language	Prior Art Disclosure
	of a transmitter, a receiver or a transceiver.	
[8]	The eyewear of claim 1, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	*See* Limitation [1B].
[10]	The eyewear of claim 1, wherein the module is affixed directly to the frame.	*See* Limitation [1B].
[13]	The eyewear of claim 1, wherein the module is hermetically sealed.	*See* Limitation [1B]. At least under Plaintiffs' apparent interpretation of this limitation, the module in the Oakley RAZRWire is hermetically sealed.
[17]	The eyewear of claim 1, wherein the module includes a power source, and wherein the power source comprises	The battery in the Oakley RAZRWire is recharged via the mini-USB port. At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Ex. A-01 at 18-20, the Oakley RAZRWire battery comprises an inductively rechargeable battery.

Claim Limitation	Claim Language	Prior Art Disclosure
	an inductively rechargeable battery.	
[19P]	Eyewear comprising:	*See* Limitation [1P].
[19A]	a frame; and	*See* Limitation [1A].
[19B]	a sealed moisture resistant module attached to the frame, wherein the module comprises within the seal any two of a switch, a detector, a processor, a power source, a drive circuit, a transmitter, a receiver, a transceiver, and a sensor,	*See* Limitation [1B].
[19C]	wherein the module is disposed, at least partially, on a portion of the frame configured to he behind the ear of a wearer of the eyewear.	At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, EX. A-01 at 21-25, the module in the Oakley RAZRWire is disposed, at least partially, on a portion of the frame configured to be behind the ear of a wearer of the eyewear. Additionally, it also would have been obvious to dispose the module on a portion of the frame configured to be behind the ear of a wearer. For example, the module in the RAZRWire is modular and may be placed in various positions on the temples. It would have been obvious, for example, to position the module behind the ear of the wearer as a design choice. A POSITA would have had a reasonable expectation of success in doing so, as this would have been a mere design choice that could be accomplished by adjusting the mounting mechanism to accommodate the portion of the temple behind the ear, as shown below.

Claim Limitation	Claim Language	Prior Art Disclosure
		 It also would have been obvious to dispose at least a portion of the module in a portion of the frame behind the ear, wherein the module is within the temple, such as within the temple of the Oakley Thump, Thump 2, or Thump Pro, as explained above with respect to Limitation [1C]. This would have been obvious as a mere design choice and a POSITA would have had a reasonable expectation of success as this would have merely entailed relocating the module further down the temple of the eyewear. Alternatively, this also would have been obvious in view of the knowledge of a POSITA and/or any of the references identified below, wherein an electronics module is positioned at least partially in a portion of the frame behind the wearer's ear: Beltone "Invisible" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneinvisible.htm)

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		 Beltone “Slimette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Beltone/info/beltoneslimette.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		Acousticon A-230 Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm)

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		 Acousticon A-905 “Stylear” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona905.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		  Radioear Model 840 "Lady America" Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/RadioEar/info/radioear840e.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		  Fortiphone Model 51 “Spectette” Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/fortiphonespectette51.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
		 Audiotone Model B-237-1 Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/audiotoneb2371.htm)

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
		   Bosch Model 55F Transistor Eyeglass Hearing Aid (see https://hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Other%20Makes/info/boschstar55f.htm)

Claim Limitation	Claim Language	Prior Art Disclosure
[20]	The eyewear of claim 19, wherein the module includes an electrical connector configured to connect the any two of switch, detector, processor, power source, drive circuit, transmitter, receiver, transceiver, and sensor with an external device.	*See* Limitation [2].
[24]	The eyewear of claim 19, wherein the module includes each of drive circuit, a sensor, and a power source.	*See* Limitation [6].

Claim Limitation	Claim Language	Prior Art Disclosure
[25]	The eyewear of claim 19, wherein the module includes an antenna and at least one of a transmitter, a receiver or a transceiver.	*See* Limitation [7].
[26]	The eyewear of claim 19, wherein the module includes a sensor, and wherein the sensor comprises a manual switch.	*See* Limitation [8].
[31]	The eyewear of claim 19, wherein the module is disposed, at least partially, on a temple portion of the frame.	*See* Limitation [1C].
[36]	The eyewear of claim 19, wherein the module includes a power source, and wherein the power source comprises an inductively rechargeable battery.	*See* Limitation [17].

Exhibit B1 - Invalidity of U.S. Patent No. '174

1. Brunton

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01070 Petition § VII.A. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a first device (i.e., eyeglasses). See Hollingsworth at, e.g., 5:7-60, Figs. 1-2, 7.
[1A]	a lens housing adapted to support a first lens and a second lens;	See IPR2024-01070 Petition § VII.A.1. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.1. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.1. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a lens housing adapted to support a first lens and a second lens. See Hollingsworth at, e.g., 5:7-60, Figs. 1-2, 7.
[1B]	a first temple movably coupled to the lens housing;	See IPR2024-01070 Petition § VII.A.1. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.1. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.1. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a first temple movably coupled to the lens housing. See Hollingsworth at, e.g., 2:35-56, 5:7-60, Figs. 1-2, 7, 18.
[1C]	a second temple movably coupled to the lens housing;	See IPR2024-01070 Petition § VII.A.1. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.1. and portions of

		Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.1. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a second temple movably coupled to the lens housing. See Hollingsworth at, e.g., 2:35-56, 5:7-60, Figs. 1-2, 7, 18.
[1D]	an electronics module disposed at least partially within the first temple;	See IPR2024-01070 Petition § VII.A.2. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.2. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.2. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses an electronics module disposed at least partially within the first temple. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14.
[1E]	a first electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § VII.A.3. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.3. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.3. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a first electrical conductor coupled to the first temple. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14, 15.
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	See IPR2024-01070 Petition § VII.A.4. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.4. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.4. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor. See Hollingsworth at, e.g., 5:60-6:8, 6:25-36, Figs. 3, 7, 8, 14, 15.
[1G]	a second electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § VII.A.3. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.3. and portions of

		Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.3. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses a second electrical conductor coupled to the first temple. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14, 15.
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	See IPR2024-01070 Petition § VII.A.4. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.4. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.4. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor. See Hollingsworth at, e.g., 5:60-6:8, 6:25-36, Figs. 3, 7, 8, 14, 15.
[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.	See IPR2024-01070 Petition § VII.A.5. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.A.5. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.A.5. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14, 15.
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	See IPR2024-01070 Petition § VII.B. and portions of Brunton cited therein, § VIII. and portions of Brunton cited therein, § X.B. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.B. and portions of Brunton cited therein, § V. and portions of Brunton cited therein, § VII.B. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein the first electrical conductor is integrally coupled to the first temple. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14, 15.

[5]	The first device of claim 1, wherein the electronics module comprises any two of: a power source, a controller, and a sensor.	See IPR2024-01070 Petition § X.D. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § VII.D. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein the electronics module comprises any two of: a power source, a controller, and a sensor. See Hollingsworth at, e.g., 5:60-6:24, 8:21-33.
[6]	The first device of claim 5, wherein the sensor comprises a touch switch.	See IPR2024-01070 Petition § X.D. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § VII.D. and portions of Brunton cited therein.
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	See IPR2024-01070 Petition § VII.E. and portions of Brunton cited therein, §§ VIII. and VIII.B. and portions of Brunton cited therein, § X.F. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.C., § IV.E. and portions of Brunton cited therein, § V.–B. and portions of Brunton cited therein, § VII.F. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein the first electrical conductor comprises a single structural element. See Hollingsworth at, e.g., 5:60-6:8, Figs. 3, 14, 15.
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.	See IPR2024-01070 Petition §§ IX. and IX.B. and portions of Brunton and Carling cited therein; See IPR2024-01070 Ex. 1002 § II.C., § VI. and portions of Brunton cited therein. Additionally, Hollingsworth also discloses wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing. See Hollingsworth at, e.g., 2:35-56, 5:7-60, Figs. 1-2, 7, 18.

2. Carling

Claim Limitation	Claim Language	Prior Art Disclosure
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.	See IPR2024-01070 Petition §§ IX. and IX.B. and portions of Brunton and Carling cited therein, § IX.A. on Carling; See IPR2024-01070 Ex. 1002 § II.D., § VI. and portions of Carling cited therein.

3. Kokonaski-999

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01070 Petition § X.A. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A. and portions of Kokonaski-999 cited therein.
[1A]	a lens housing adapted to support a first lens and a second lens;	See IPR2024-01070 Petition § X.A.1. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.1. and portions of Kokonaski-999 cited therein.
[1B]	a first temple movably coupled to the lens housing;	See IPR2024-01070 Petition § X.A.1. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.1. and portions of Kokonaski-999 cited therein.
[1C]	a second temple movably coupled to the lens housing;	See IPR2024-01070 Petition § X.A.1. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.1. and portions of Kokonaski-999 cited therein
[1D]	an electronics module disposed at least partially within the first temple;	See IPR2024-01070 Petition § X.A.2. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.2. and portions of Kokonaski-999 cited therein.
[1E]	a first electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § X.A.3. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.3., and portions of Kokonaski-999 cited therein.
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	See IPR2024-01070 Petition § X.A.4. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.A.4. and portions of Kokonaski-999 cited therein.
[1G]	a second electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § X.A.3. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.3. and portions of Kokonaski-999 cited therein.
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	See IPR2024-01070 Petition § X.A.4. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.4. and portions of Kokonaski-999 cited therein.

[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.	See IPR2024-01070 Petition § X.A.5. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.5. and portions of Kokonaski-999 cited therein.
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	See IPR2024-01070 Petition § X.B. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.B. and portions of Kokonaski-999 cited therein.
[5]	The first device of claim 1, wherein the electronics module comprises any two of: a power source, a controller, and a sensor.	See IPR2024-01070 Petition § X.D. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.D. and portions of Kokonaski-999 cited therein.
[6]	The first device of claim 5, wherein the sensor comprises a touch switch.	See IPR2024-01070 Petition § X.D. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.D. and portions of Kokonaski-999 cited therein.
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	See IPR2024-01070 Petition § X.F. and portions of Kokonaski-999 and Brunton cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § VII.F. and portions of Kokonaski-999 cited therein.
[15P]	A first method, comprising:	See IPR2024-01070 Petition §§ XIV. and XIV.B. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.A. and portions of Kokonaski-999 cited therein.
[15A]	providing a capacitive touch switch;	See IPR2024-01070 Petition §§ XIV. and XIV.B.1. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.A.1. and portions of Kokonaski-999 cited therein.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	See IPR2024-01070 Petition §§ XIV. and XIV.B.2. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.A.2. and portions of Kokonaski-999 cited therein.
[15C]	coupling the capacitive touch switch to a partial enclosure to	See IPR2024-01070 Petition §§ XIV. and XIV.B.3. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.A.3. and portions of Kokonaski-999 cited therein.

	constrain the capacitive touch switch.	
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	See IPR2024-01070 Petition §§ XIV. and XIV.C. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.B. and portions of Kokonaski-999 cited therein.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	See IPR2024-01070 Petition §§ XIV. and XIV.E. and portions of Kokonaski-999 and Kokonaski-579 cited therein; See IPR2024-01070 Ex. 1002 § II.J. and portions of Kokonaski-999 cited therein, § XI.D. and portions of Kokonaski-999 cited therein.

4. Hattori-913

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01070 Petition § XI.A. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A. and portions of Hattori-913 cited therein.
[1A]	a lens housing adapted to support a first lens and a second lens;	See IPR2024-01070 Petition § XI.A.1. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.1. and portions of Hattori-913 cited therein.
[1B]	a first temple movably coupled to the lens housing;	See IPR2024-01070 Petition § XI.A.1. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.1. and portions of Hattori-913 cited therein.
[1C]	a second temple movably coupled to the lens housing;	See IPR2024-01070 Petition § XI.A.1. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.1. and portions of Hattori-913 cited therein.
[1D]	an electronics module disposed at least partially within the first temple;	See IPR2024-01070 Petition § XI.A.2. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.2. and portions of Hattori-913 cited therein.
[1E]	a first electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § XI.A.3. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.3. and portions of Hattori-913 cited therein.
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	See IPR2024-01070 Petition § XI.A.4. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.4. and portions of Hattori-913 cited therein.
[1G]	a second electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § XI.A.3. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.3. and portions of Hattori-913 cited therein.
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	See IPR2024-01070 Petition § XI.A.4. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.4. and portions of Hattori-913 cited therein.

[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.	See IPR2024-01070 Petition § XI.A.5. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.A.5. and portions of Hattori-913 cited therein.
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	See IPR2024-01070 Petition § XI.B. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.B. and portions of Hattori-913 cited therein.
[5]	The first device of claim 1, wherein the electronics module comprises any two of: a power source, a controller, and a sensor.	See IPR2024-01070 Petition § XI.C. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.C. and portions of Hattori-913 cited therein.
[6]	The first device of claim 5, wherein the sensor comprises a touch switch.	See IPR2024-01070 Petition § XI.C. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.C. and portions of Hattori-913 cited therein.
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	See IPR2024-01070 Petition § XI.D. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.D. and portions of Hattori-913 cited therein.
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.	See IPR2024-01070 Petition § XI.E. and portions of Hattori-913 cited therein; See IPR2024-01070 Ex. 1002 § II.G. and portions of Hattori-913 cited therein, § VIII.E. and portions of Hattori-913 cited therein.

5. Delorenzo

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01070 Petition § XII.A. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1A]	a lens housing adapted to support a first lens and a second lens;	See IPR2024-01070 Petition § XII.A.1. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.1. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1B]	a first temple movably coupled to the lens housing;	See IPR2024-01070 Petition § XII.A.1. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.1. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1C]	a second temple movably coupled to the lens housing;	See IPR2024-01070 Petition § XII.A.1. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.1. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1D]	an electronics module disposed at least partially within the first temple;	See IPR2024-01070 Petition § XII.A.2. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.2. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1E]	a first electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § XII.A.3. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.3. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	See IPR2024-01070 Petition § XII.A.4. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.4. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1G]	a second electrical conductor coupled to the first temple,	See IPR2024-01070 Petition § XII.A.3. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E.

		and portions of Delorenzo cited therein, § IX.A.3. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	See IPR2024-01070 Petition § XII.A.4. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.4. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.	See IPR2024-01070 Petition § XII.A.5. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.A.5. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	See IPR2024-01070 Petition § XII.B. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.B. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	See IPR2024-01070 Petition § XII.E. and portions of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.E. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.	See IPR2024-01070 Petition § XII.F. and portions; of Delorenzo cited therein, § XIII. and portions of Delorenzo cited therein; See IPR2024-01070 Ex. 1002 § II.E. and portions of Delorenzo cited therein, § IX.F. and portions of Delorenzo cited therein, § X. and portions of Delorenzo cited therein.

6. Kokonaski-579

Claim Limitation	Claim Language	Prior Art Disclosure
[15P]	A first method, comprising:	See IPR2024-01070 Petition §§ XIV. and XIV.B. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.A. and portions of Kokonaski-579 cited therein.
[15A]	providing a capacitive touch switch;	See IPR2024-01070 Petition §§ XIV. and XIV.B.1. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.A.1. and portions of Kokonaski-579 cited therein.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	See IPR2024-01070 Petition §§ XIV. and XIV.B.2. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.A.2. and portions of Kokonaski-579 cited therein.
[15C]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.	See IPR2024-01070 Petition §§ XIV. and XIV.B.3. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.A.3. and portions of Kokonaski-579 cited therein.
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	See IPR2024-01070 Petition §§ XIV. and XIV.C. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.B. and portions of Kokonaski-579 cited therein.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	See IPR2024-01070 Petition §§ XIV. and XIV.E. and portions of Kokonaski-999 and Kokonaski-579 cited therein, § XIV.A. on Kokonaski-579; See IPR2024-01070 Ex. 1002 § II.K. and portions of Kokonaski-579 cited therein, § XI.D. and portions of Kokonaski-579 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components. For example, it would have been obvious to coat the electronics assembly with a conformal coating as described in Sikonowiz. Designing and Creating Printed Circuits, published in 1981 and authored by Walter

		Sikonowiz, devotes an entire section to the step of "Conformal Coating." Sikonowiz at 135. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." *Id.* at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. Conformal coatings were also well-known in the industry and widely available. For example, Chemtronics sold conformal coatings under the brand Konform since at least as early as 1980. *See also* Chemtronics Conformal Coatings Guide. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. This principle known to a POSITA would have provided further motivation to apply a conformal coating as disclosed in Sikonowiz or as sold by Chemtronics to the electronic components in Kokonaski-999. Because conformal coatings were commonplace with printed circuit boards as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying a conformal coating to Kokonaski-999. Applying a conformal coating as Sikonowiz teaches would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly would accomplish its intended function with the added benefit of keeping moisture and contaminants from interfering with the electronics. Additionally, Quantum Research Group sold QTouch microchips including QT110, QT160, QT240, QT1080, and QT1100A-ISG which, on information and belief, were integrated circuits used for capacitive touch sensors. *See, e.g.*, "Secrets of a Successful QTouch™ Design"; QT1100A-ISG 10 Key QTouch™ Sensor IC. The product literature for the QT1100A-ISG QTouch microchip explains, "All capacitive

		sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also been motivated to add a conformal coating to the electronic components disposed on a capacitive touch sensor as recommended in the product literature.

7. Eichelberger

Claim Limitation	Claim Language	Prior Art Disclosure
[15P]	A first method, comprising:	See IPR2024-01070 Petition §§ XV. and XV.A. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.A.
[15A]	providing a capacitive touch switch;	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.A.1.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.A.1.
[15C]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.	See IPR2024-01070 Petition §§ XV. and XV.A.2. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.A.2.
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	See IPR2024-01070 Petition §§ XV. and XV.B. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.B.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	See IPR2024-01070 Petition §§ XV. and XV.C. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.F., § XII.C.

8. Sikonowiz

Claim Limitation	Claim Language	Prior Art Disclosure
[15P]	A first method, comprising:	See IPR2024-01070 Petition §§ XV. and XV.A. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.A.
[15A]	providing a capacitive touch switch;	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.A.1.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.A.1.
[15C]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.	See IPR2024-01070 Petition §§ XV. and XV.A.2. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.A.2.
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	See IPR2024-01070 Petition §§ XV. and XV.B. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.B.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	See IPR2024-01070 Petition §§ XV. and XV.C. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § II.H., § XII.C.

9. Howell-596

Claim Limitation	Claim Language	Prior Art Disclosure
[15P]	A first method, comprising:	See IPR2024-01070 Petition §§ XV. and XV.A. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.A.
[15A]	providing a capacitive touch switch;	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.A.1.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	See IPR2024-01070 Petition §§ XV. and XV.A.1. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.A.1.
[15C]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.	See IPR2024-01070 Petition §§ XV. and XV.A.2. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.A.2.
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	See IPR2024-01070 Petition §§ XV. and XV.B. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.B.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	See IPR2024-01070 Petition §§ XV. and XV.C. and portions of Howell-596, Eichelberger, and Sikonowiz cited therein; See IPR2024-01070 Ex. 1002 § XII.C. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-596. For example, it would have been obvious to coat the electronics assembly with a conformal coating as described in Sikonowiz. Designing and Creating Printed Circuits, published in 1981 and authored by Walter Sikonowiz, devotes an entire section to the step of "Conformal Coating." Sikonowiz at 135. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." *Id.* at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136.

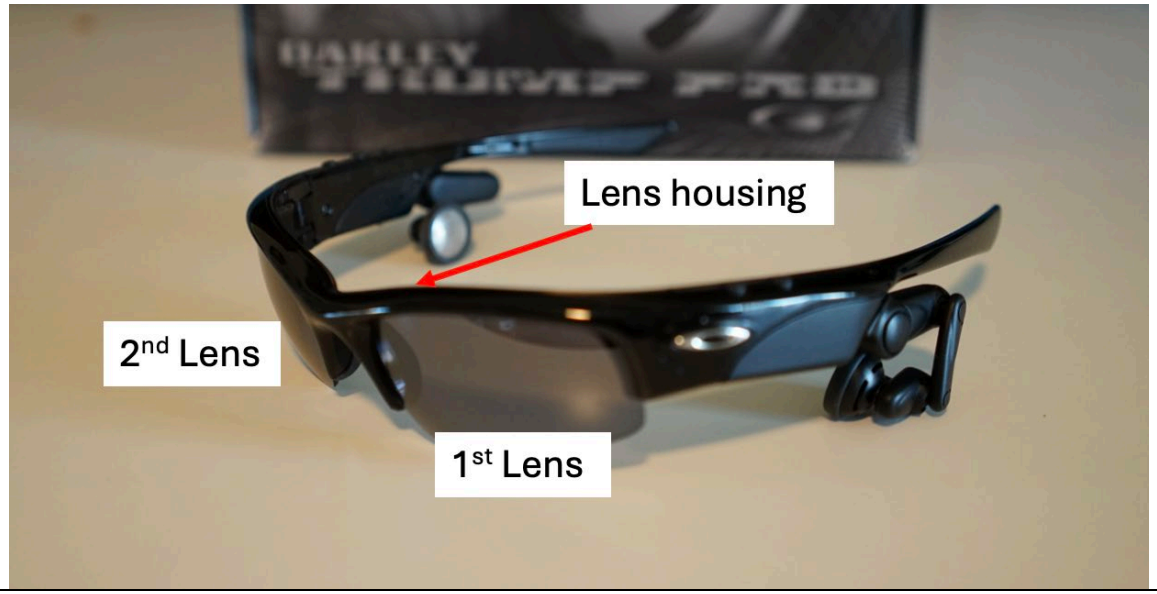
		Conformal coatings were also well-known in the industry and widely available. For example, Chemtronics sold conformal coatings under the brand Konform since at least as early as 1980. *See also* Chemtronics Conformal Coatings Guide. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. This principle known to a POSITA would have provided further motivation to apply a conformal coating as disclosed in Sikonowiz or as sold by Chemtronics to the electronic components in Howell-596. Because conformal coatings were commonplace with printed circuit boards as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying a conformal coating to the electronic components in Howell-596. Applying a conformal coating as Sikonowiz teaches would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly would accomplish its intended function with the added benefit of keeping moisture and contaminants from interfering with the electronics. Additionally, Quantum Research Group sold QTouch microchips including QT110, QT160, QT240, QT1080, and QT1100A-ISG which, on information and belief, were integrated circuits used for capacitive touch sensors. *See, e.g.*, "Secrets of a Successful QTouch™ Design"; QT1100A-ISG 10 Key QTouch™ Sensor IC. The product literature for the QT1100A-ISG QTouch microchip explains, "All capacitive sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also

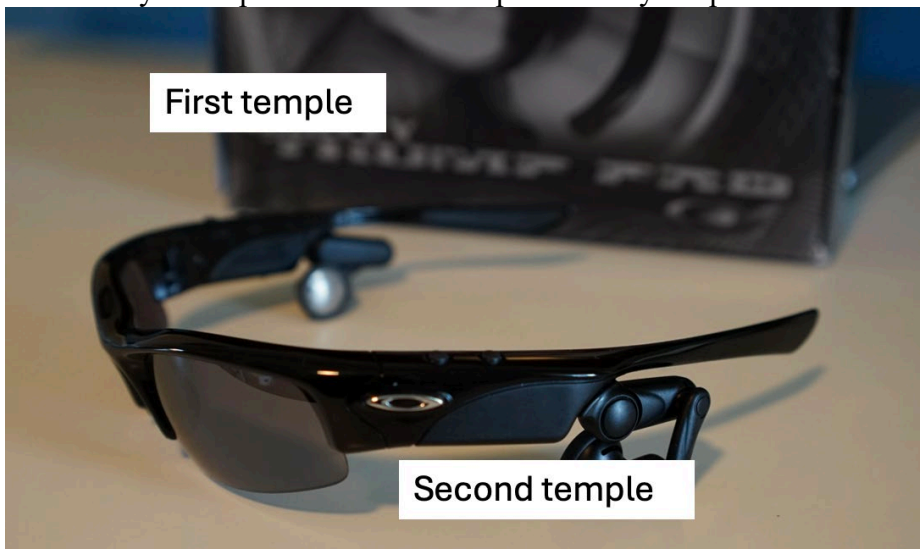
		been motivated to add a conformal coating to the electronic components disposed on a capacitive touch sensor as recommended in the product literature.

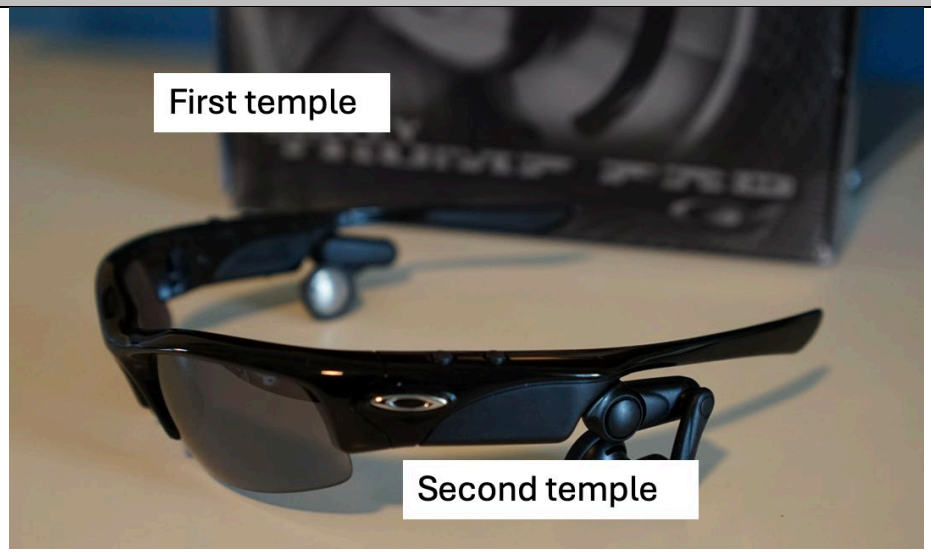
Exhibit B2 - Invalidity of U.S. Patent No. 8,801,174 Based on Oakley Thump Pro

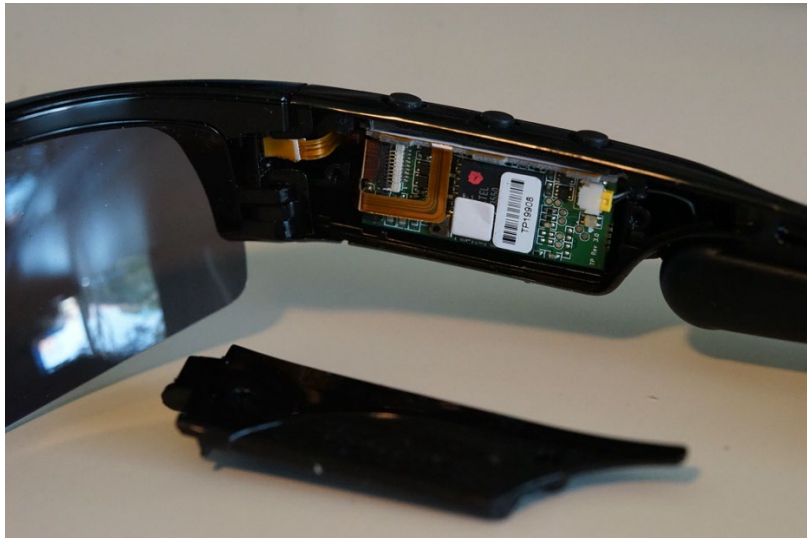
Upon information and belief, the Oakley Thump and Thump 2 had similar structures to the Oakley Thump Pro. Luxottica reserves the right to rely upon the Oakley Thump and/or the Thump 2 in addition to the Thump Pro.

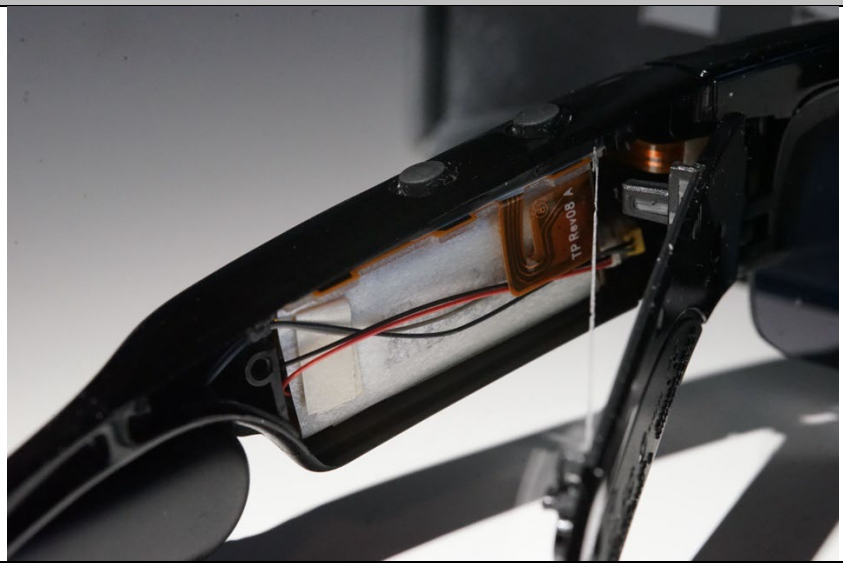
Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	The Oakley Thump Pro is a first device.

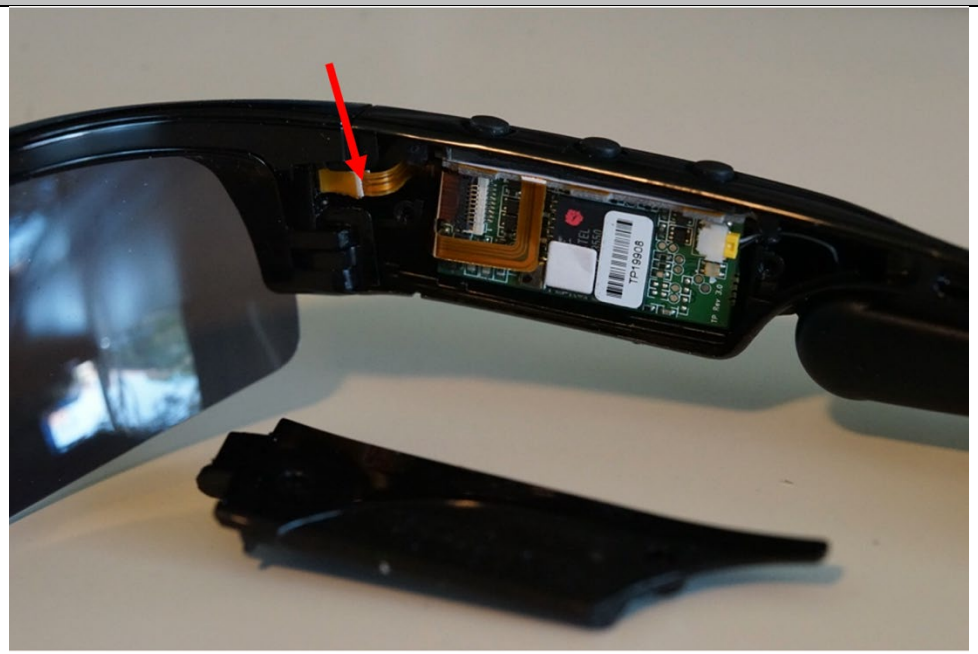
Claim Limitation	Claim Language	Prior Art Disclosure
[1A]	a lens housing adapted to support a first lens and a second lens;	The Oakley Thump Pro has a lens housing adapted to support a first lens and a second lens, as shown below: 

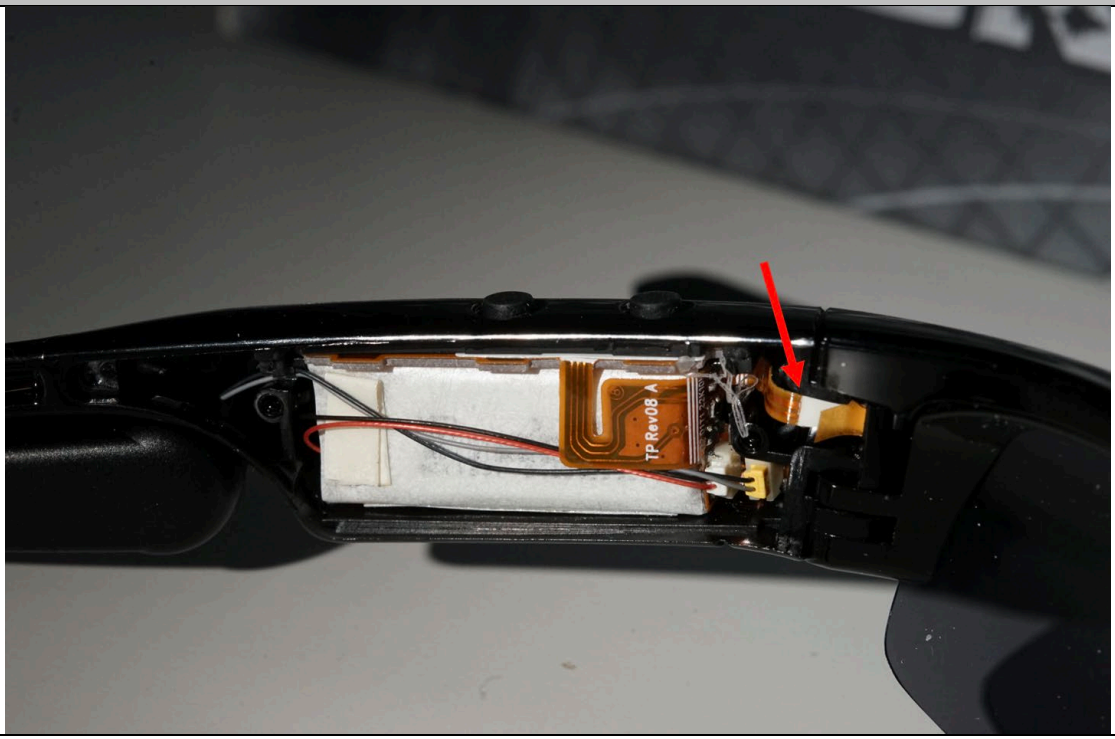
Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a first temple movably coupled to the lens housing;	The Oakley Thump Pro has a first temple movably coupled to the lens housing:  Luxottica notes that the identification of the right and left temples as the first and second temples, respectively, is arbitrary, and Luxottica reserves all rights to rely on the left and right temples, as the first and second temples, respectively.
[1C]	a second temple movably coupled to the lens housing;	The Oakley Thump Pro has a second temple movably coupled to the lens housing:

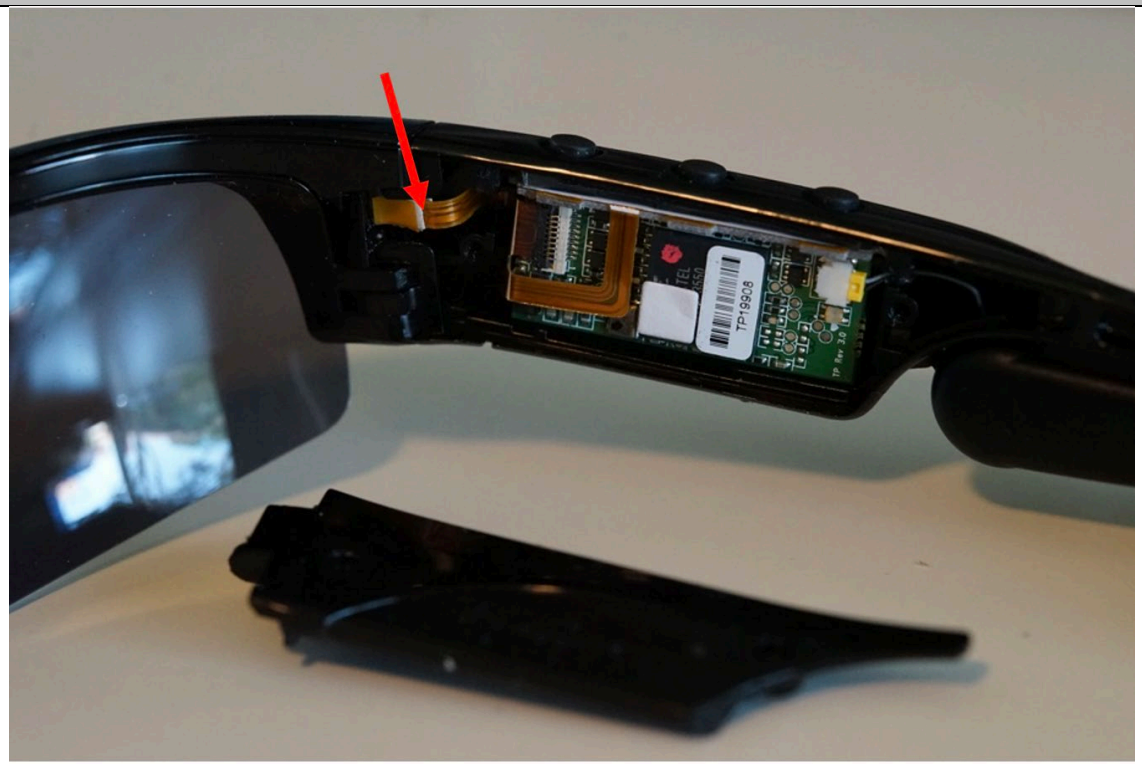
Claim Limitation	Claim Language	Prior Art Disclosure
		 Luxottica notes that the identification of the right and left temples as the first and second temples, respectively, is arbitrary, and Luxottica reserves all rights to rely on the left and right temples, as the first and second temples, respectively.
[1D]	an electronics module disposed at least partially within the first temple;	The Oakley Thump Pro has an electronics module disposed at least partially within the right (first) temple, as shown below:

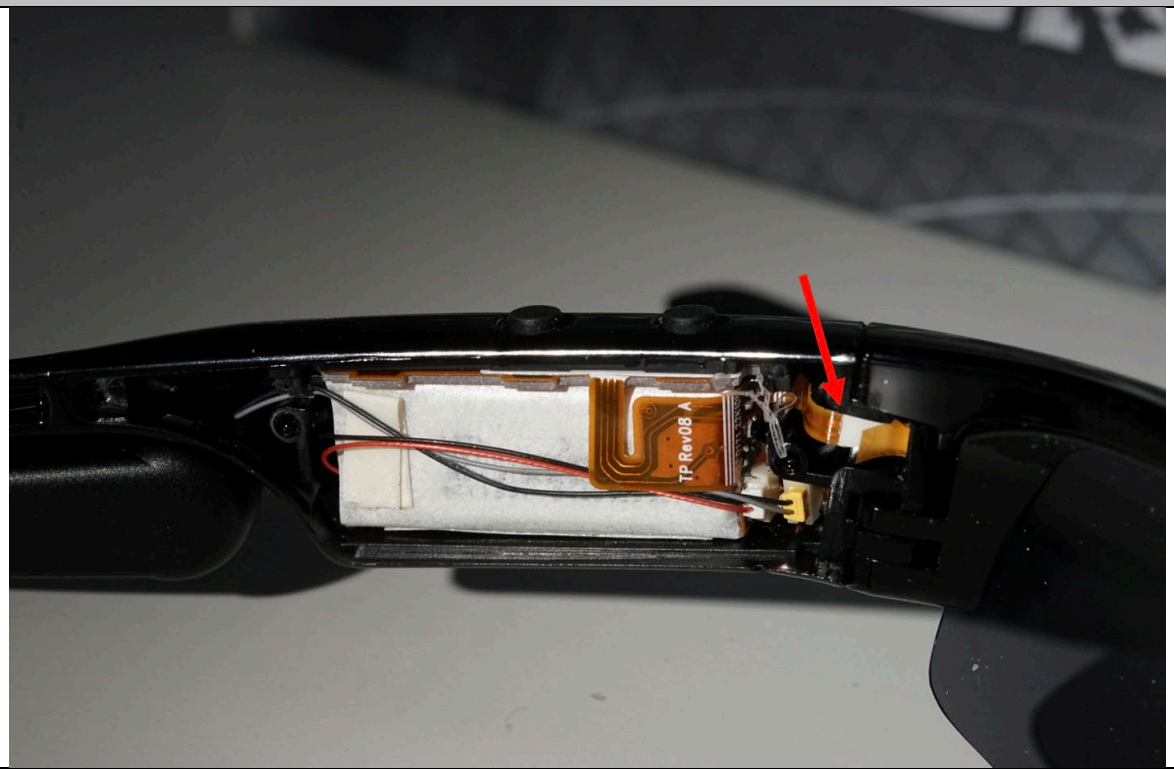
Claim Limitation	Claim Language	Prior Art Disclosure
		   Alternatively, the Oakley Thump Pro also has an electronics module disposed at least partially within the left temple.

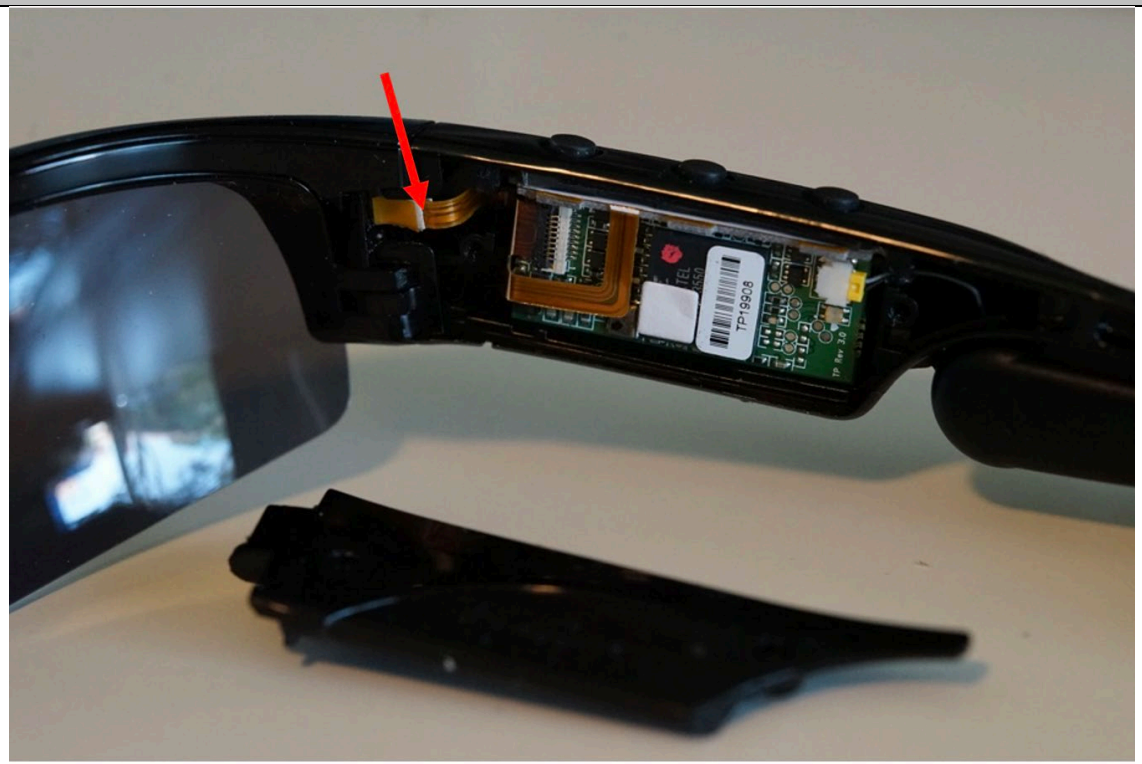
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1E]	a first electrical conductor coupled to the first temple,	The Oakley Thump Pro has a first electrical conductor coupled to the first temple, namely, the ribbon cable in the right temple identified below:

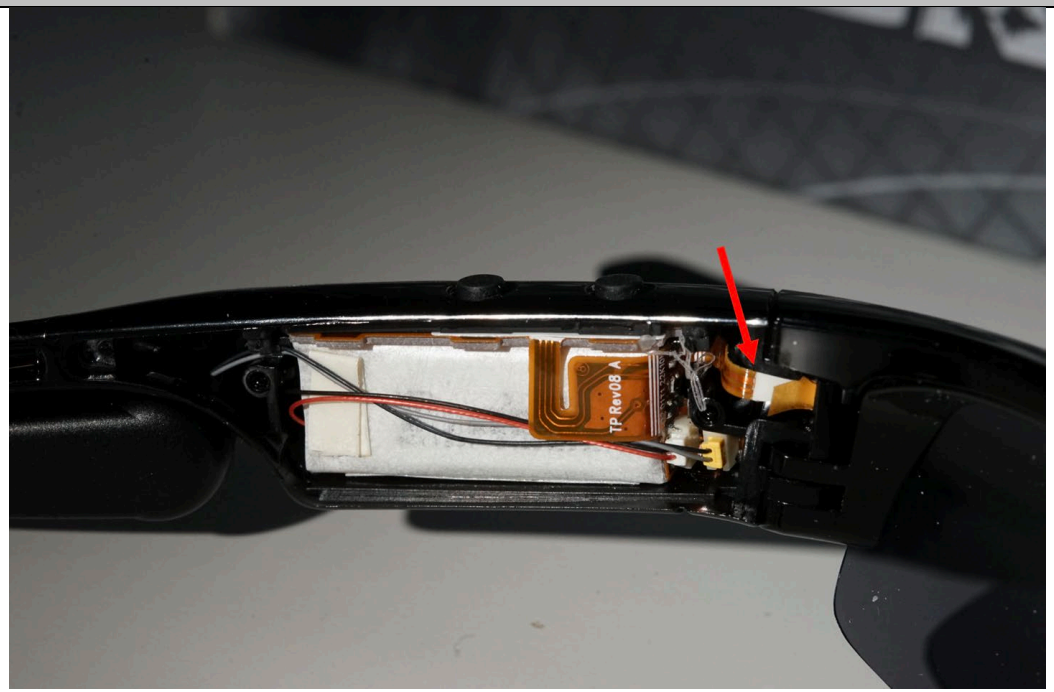
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, the Oakley Thump Pro also has a ribbon cable in the left temple:

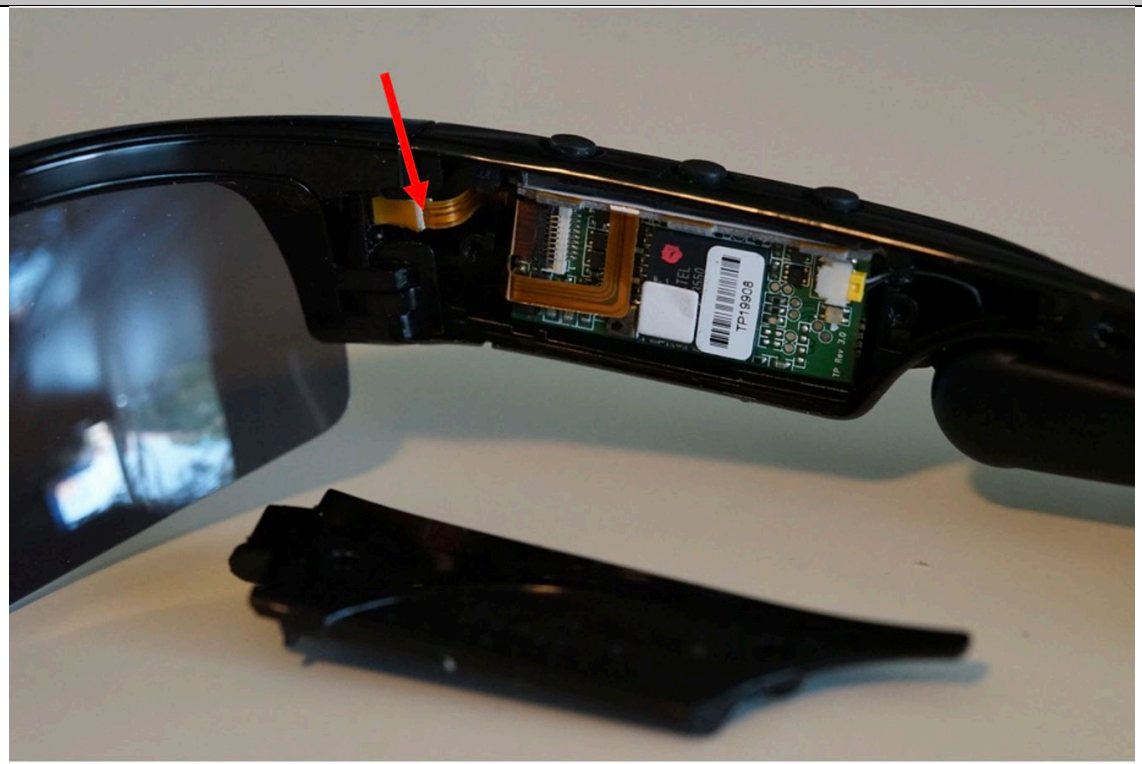
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	As shown below, a first conductive path is provided from the right (first) temple to the lens housing by the ribbon cable (first electrical conductor).

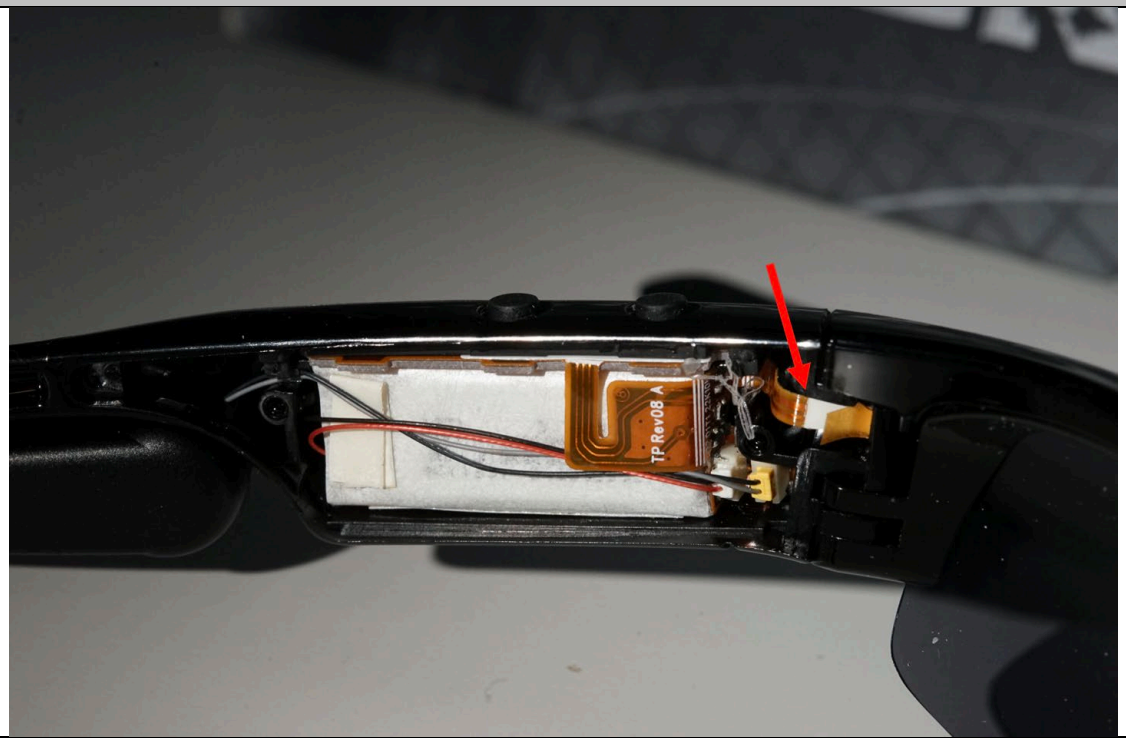
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, a first conductive path is provided from the left temple to the lens housing by the ribbon cable in the left temple:

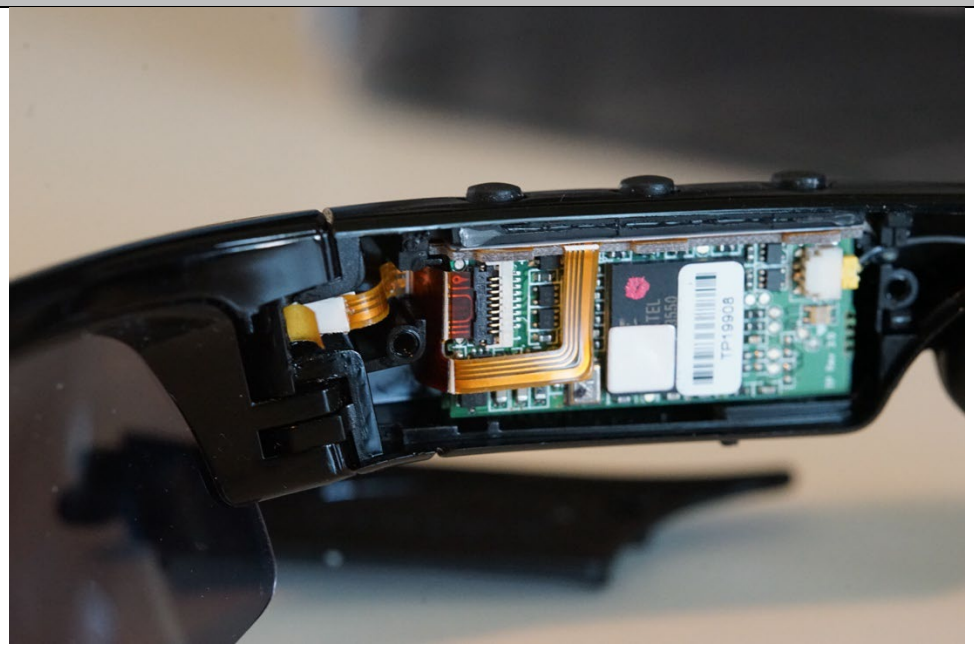
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1G]	a second electrical conductor coupled to the first temple,	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs identified "a ribbon cable extending from each temple in their lens housing" as both the first and second electrical conductors of limitations [1E] and [1G] of claim 1. At least under Plaintiffs' apparent interpretation of limitation [1G], the Oakley Thump Pro contains a second electrical conductor coupled to the right (first) temple.

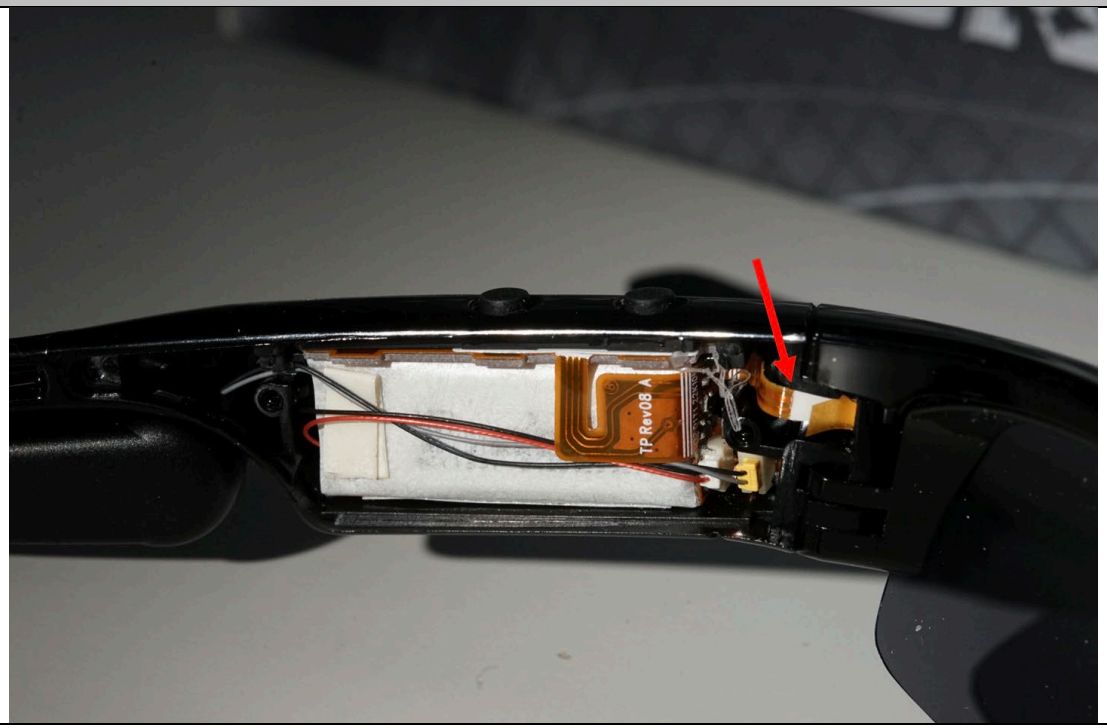
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, at least under Plaintiffs' apparent interpretation of limitation [1G], the ribbon cable in the left temple is also a second electrical conductor coupled to the left temple:

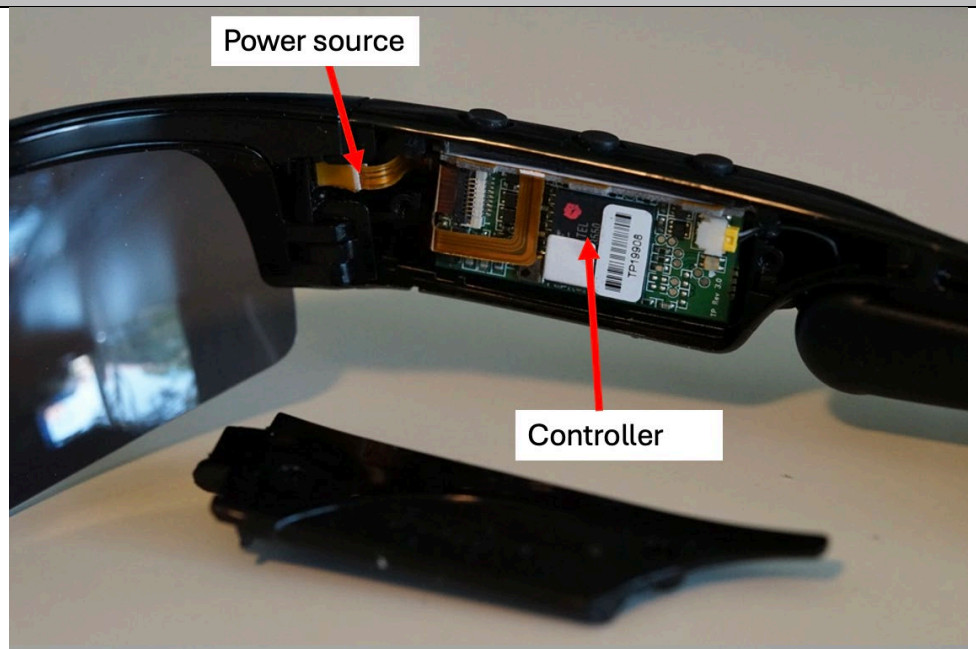
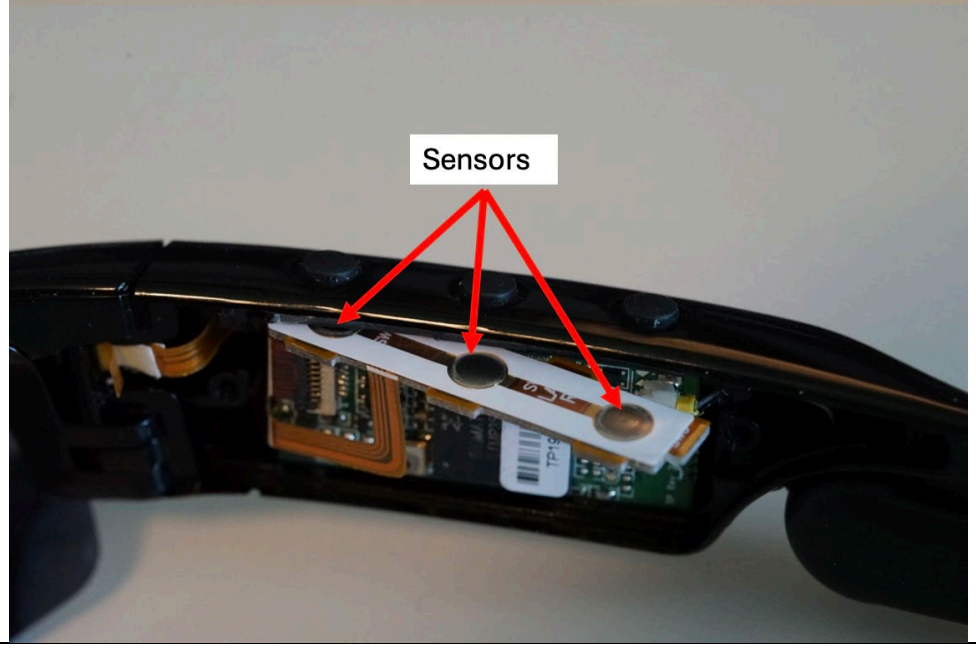
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs identified "a ribbon cable extending from each temple in their lens housings" as both the first and second electrical conductors of limitations [1E] and [1G], and also as satisfying both limitations [1F] and [1H]. At least under Plaintiffs' apparent interpretation of limitation [1H], the Oakley Thump Pro contains a second conductive path provided from the first temple to the lens housing by the ribbon cable (second electrical conductor).

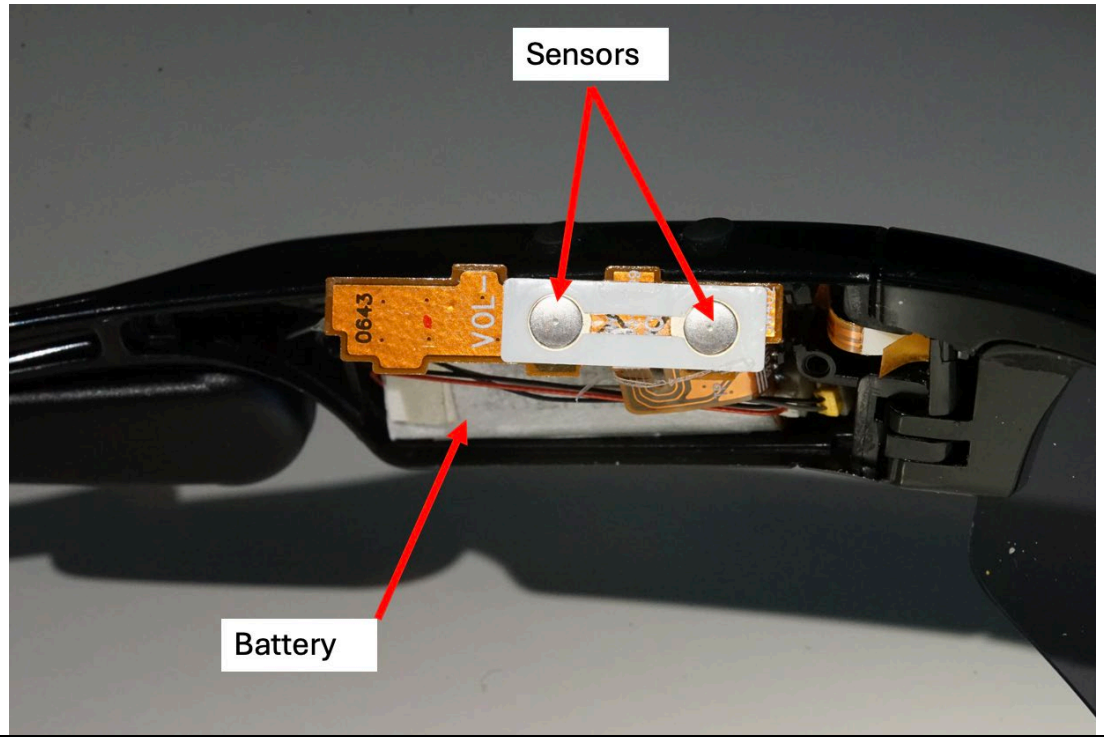
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, at least under Plaintiffs' apparent interpretation of limitation [1H], the ribbon cable in the left temple provides a second conductive path from the left temple to the lens housing:

Claim Limitation	Claim Language	Prior Art Disclosure
		
[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module.	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs stated that "[t]he manner in which the ribbon cables connect with the electrical components constrains those electrical components within the temples." *See* May 17, 2024 Preliminary Infringement Contentions, Ex. A-02 at 16. At least under Plaintiffs' apparent interpretation of limitation [1I], the Oakley Thump Pro satisfies "wherein the first and second electrical conductors are configured to couple the electronics module to the first temple to constrain the electronics module." As shown below, the ribbon cable in the right temple is coupled to the electronics module in the right temple.

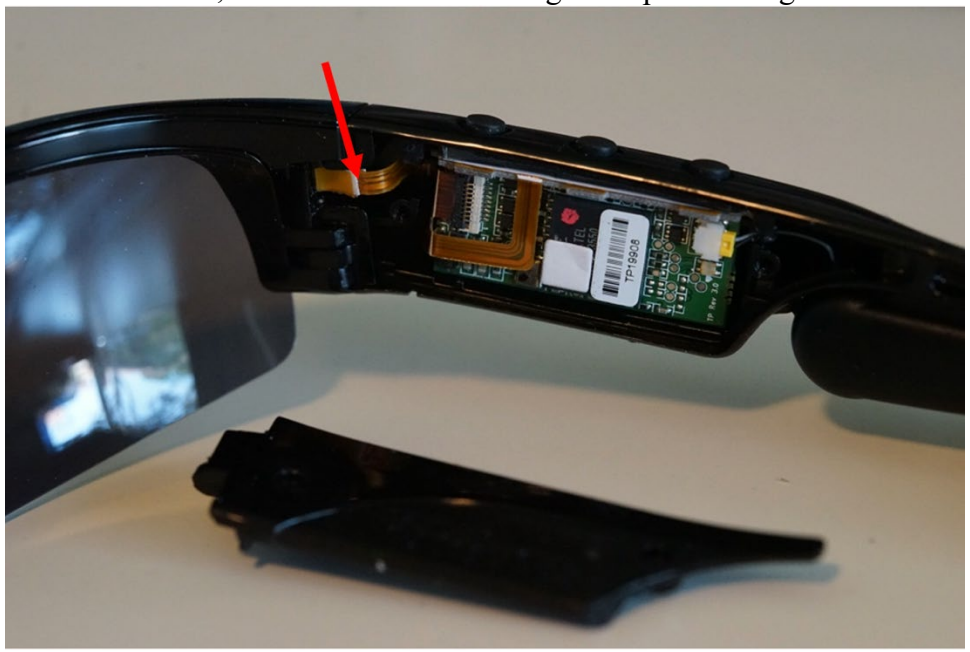
Claim Limitation	Claim Language	Prior Art Disclosure
		 The ribbon cable in the Oakley Thump Pro connects to the electronics module in the right temple in substantially the same way that the ribbon cable connects to electronics in the Ray-Ban Stories products. Thus, under Plaintiffs' apparent interpretation of this claim limitation, the manner in which the ribbon cable connects with the electrical components in the Oakley Thump Pro couples the electronics module to the right temple and constrains the electronics module. Alternatively, the ribbon cable in the left temple similarly is configured to couple the electronics module in the left temple and to constrain the electronics module in the left temple, as shown below:

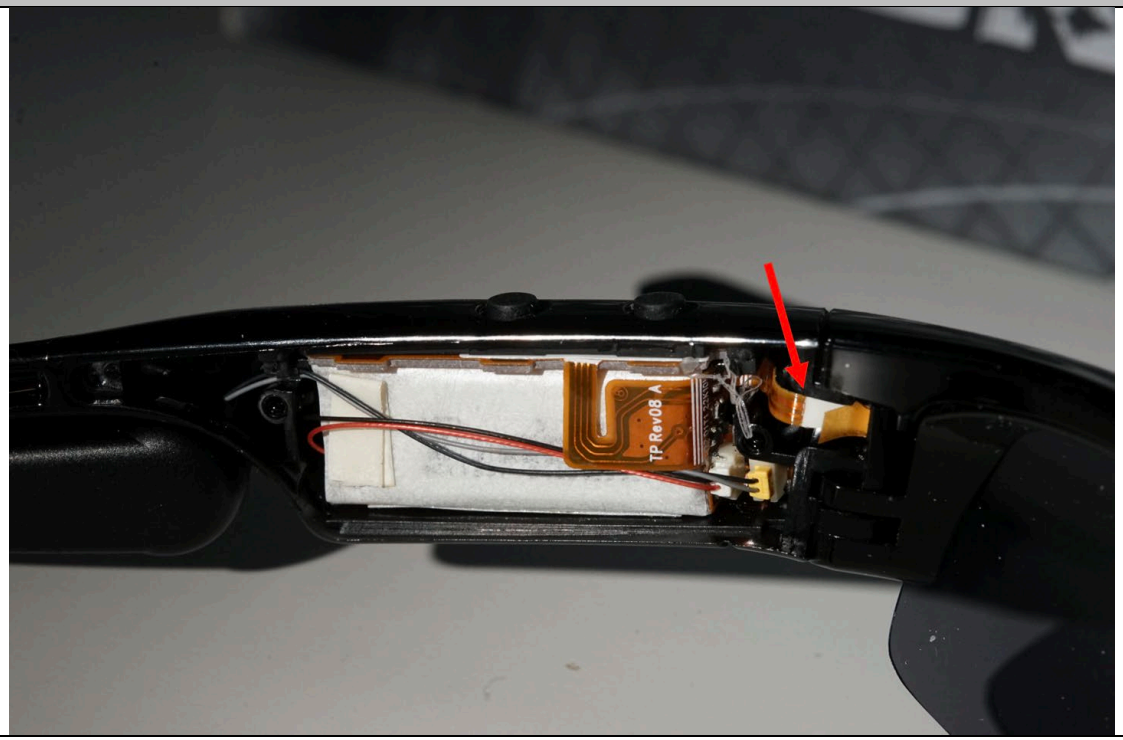
Claim Limitation	Claim Language	Prior Art Disclosure
		
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs accused the ribbon cable in the Ray-Ban Stories products as satisfying this limitation without any explanation. *See* May 17, 2024 Preliminary Infringement Contentions, Ex. A-02 at 16-18. The ribbon cables in the Oakley Thump Pro are arranged in substantially the same way as the ribbon cables in the Ray-Ban Stories products. Thus, at least under Plaintiffs' apparent interpretation of claim [2], the ribbon cables in the Oakley Thump Pro are integrally coupled to their respective temples.
[5]	The first device of claim 1, wherein the electronics module comprises any two of: a power source, a controller, and a sensor.	The electronics module in the right temple of the Oakley Thump Pro contains a power source, namely, the ribbon cable which supplies at least power from the battery located in the left temple, a controller, namely, the Sigmatel STMP3550, and at least three sensors corresponding to the three playback control buttons.

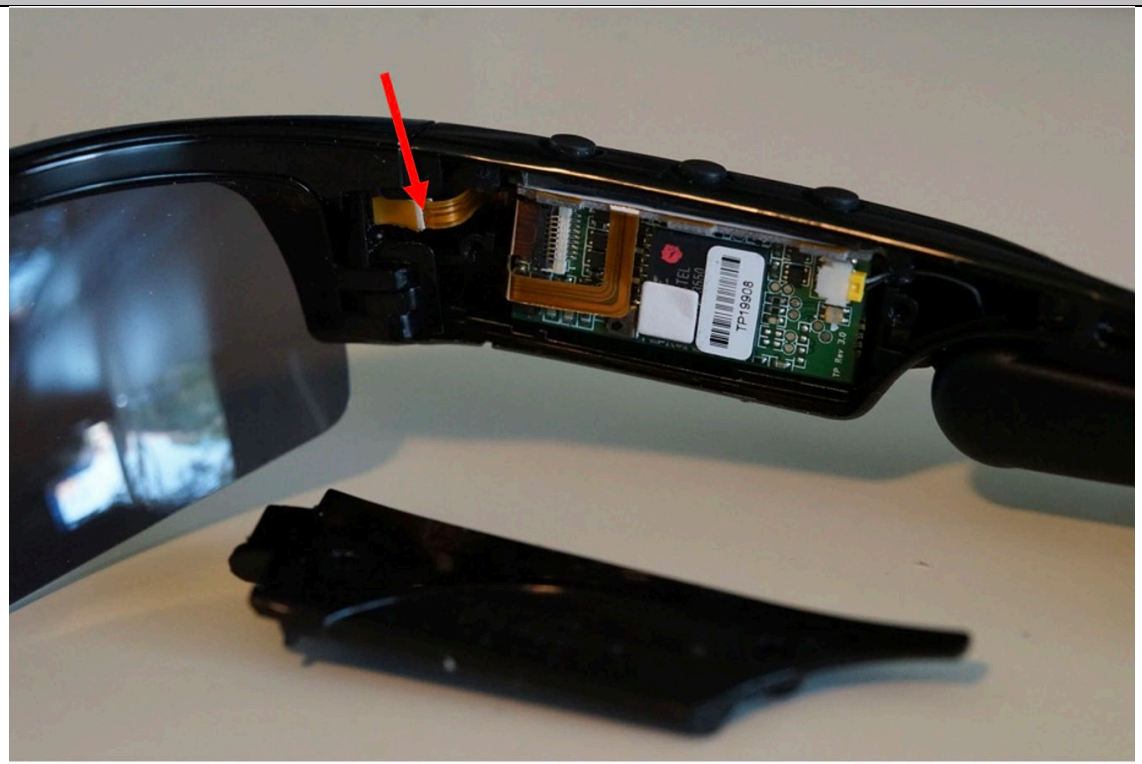
Claim Limitation	Claim Language	Prior Art Disclosure
		 

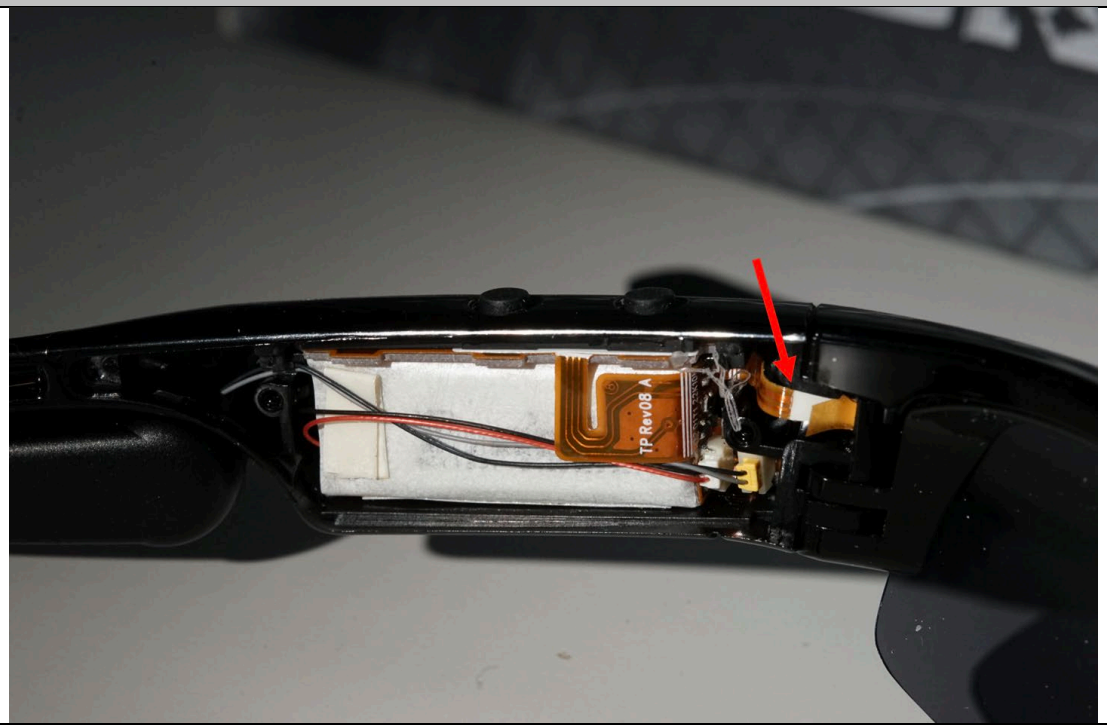
Claim Limitation	Claim Language	Prior Art Disclosure
		Alternatively, the electronics module in the left temple contains a power source, namely the battery, and at least two sensors corresponding to the volume controls. 
[6]	The first device of claim 5, wherein the sensor comprises a touch switch.	As discussed with respect to Claim 5, the Oakley Thump Pro has sensors in each of the temples for playback and volume controls. The sensors are touch switches. Alternatively, Claim 6 also would have been obvious over the Oakley Thump Pro in view of the knowledge of a POSITA and/or the references discussed below. Capacitive touch switches were well known in the art by the time of the ’174 Patent and it would have been obvious to a POSITA to substitute any of the sensors in the Oakley Thump Pro with a capacitive touch sensor. A POSITA would have been motivated to do so because this would have been the simple substitution of one known element for another to obtain predictable results. A POSITA would also have been motivated to do so because this would have been the use of a known technique to improve similar devices in the same way. For example, the substitution of a push

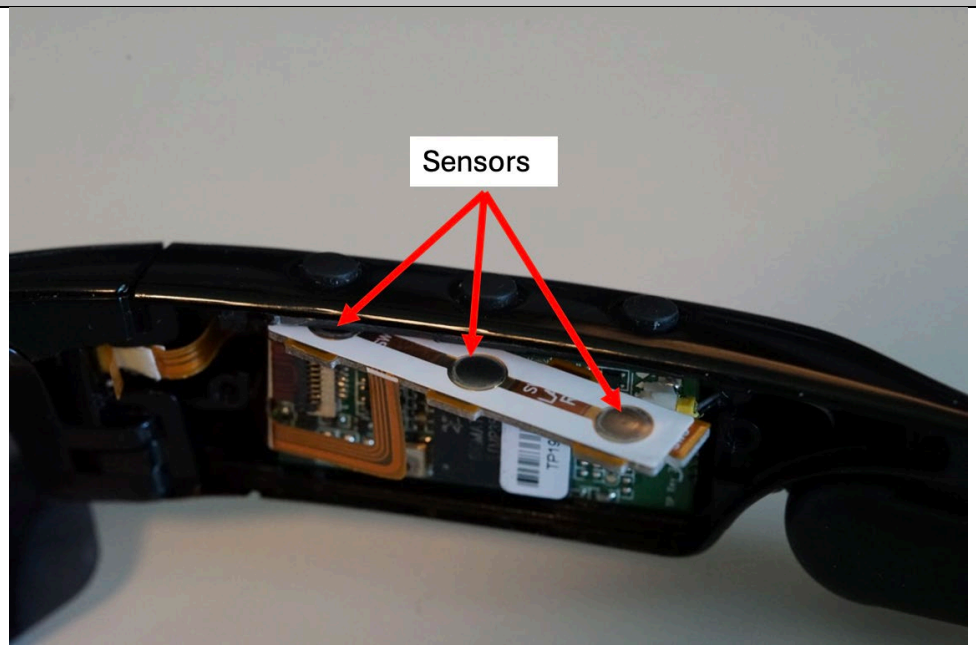
Claim Limitation	Claim Language	Prior Art Disclosure
		button with a capacitive touch switch could make the device feel more premium to consumers and could also improve water resistance. A POSITA would have had a reasonable expectation of success at least because this would have been a simple substitution of conventional parts. Capacitive touch sensors were well known in the art, as evidenced by at least the following references: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005) • Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005) • Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005) • QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 • Howell-596 at ¶57 • Eichelberger at Figs. 1a-1b, 3:20-23, 3:43-47, 3:54-57; • QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG; • PSoC CapSense

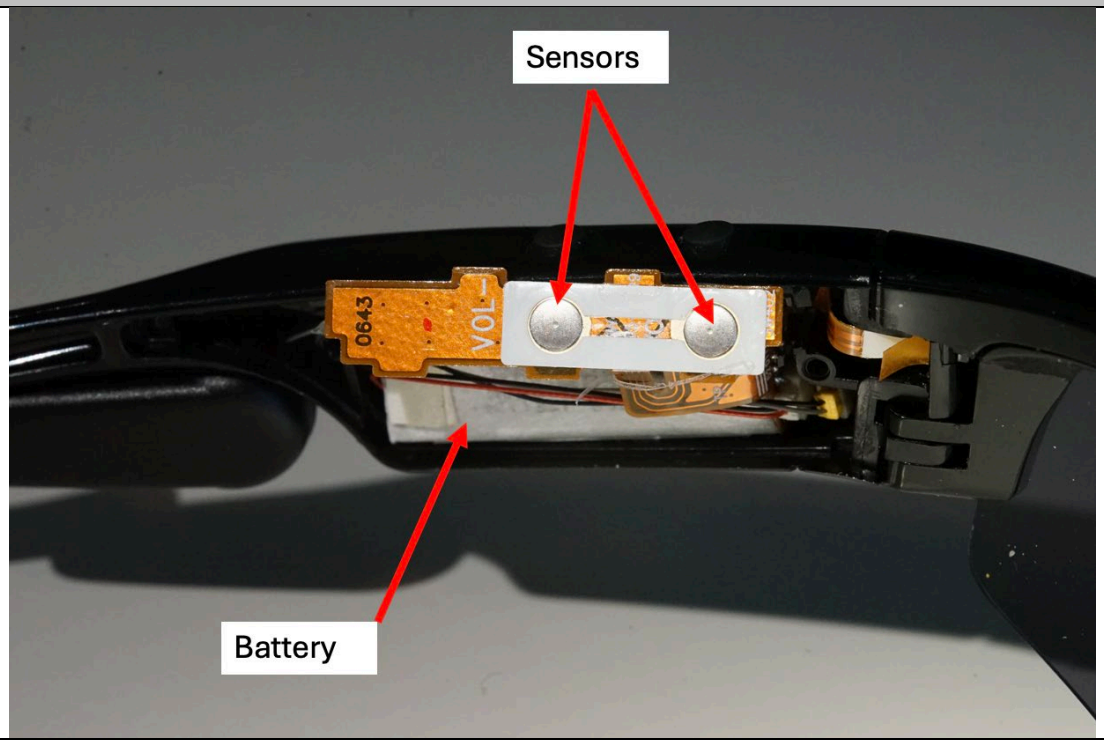
Claim Limitation	Claim Language	Prior Art Disclosure
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	As shown below, the ribbon cable in the right temple is a single structural element.  Alternatively, the ribbon cable in the left temple is a single structural element.

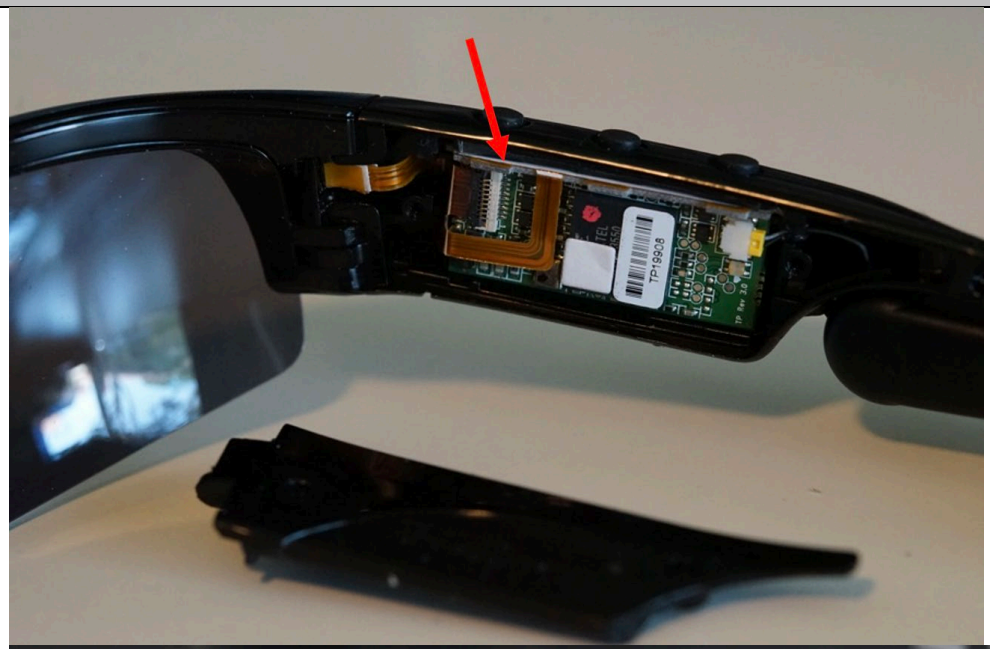
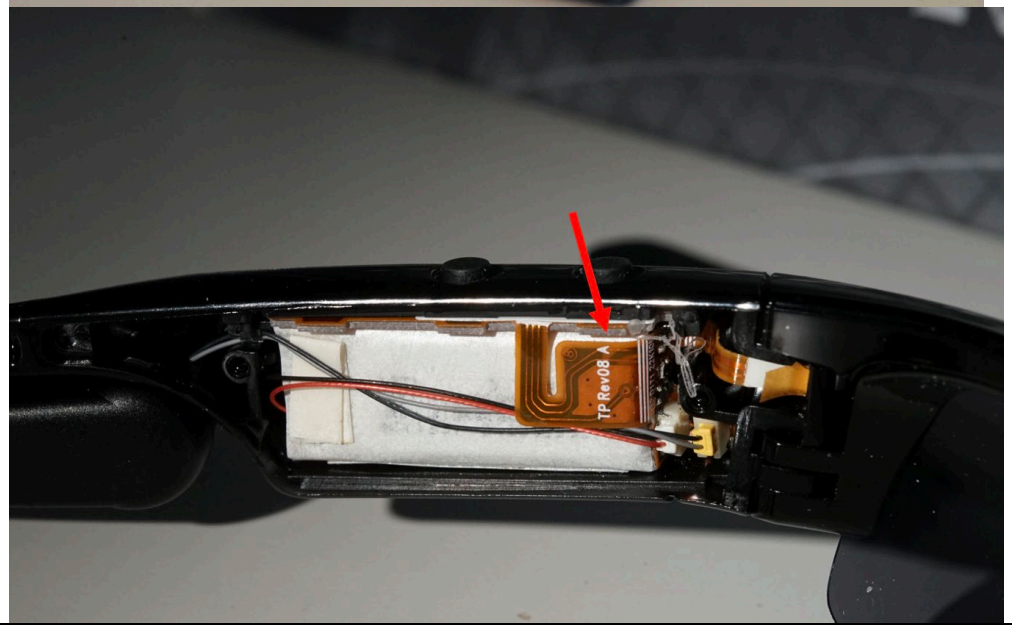
Claim Limitation	Claim Language	Prior Art Disclosure
		
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.	The ribbon cable in the right temple in the Oakley Thump Pro is configured to maintain the first conductive path as the right temple is moved relative to the lens housing. As shown below, the ribbon cable is a continuous cable that can bend as the temple is moved relative to the lens housing.

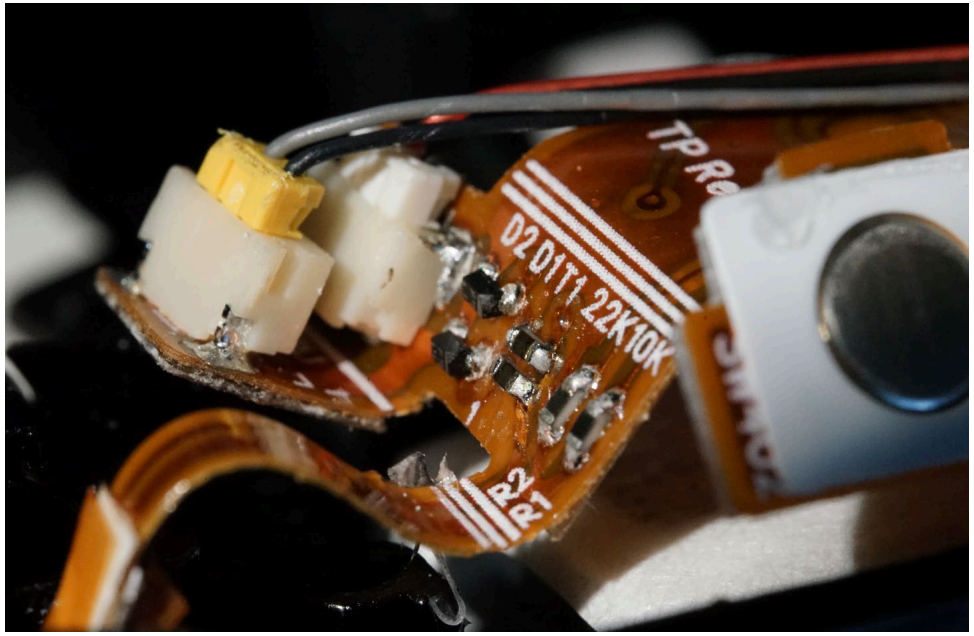
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, the ribbon cable in the left temple in the Oakley Thump Pro is also configured to maintain the first conductive path as the left temple is moved relative to the lens housing. As shown below, the ribbon cable is a continuous cable that can bend as the temple is moved relative to the lens housing.

Claim Limitation	Claim Language	Prior Art Disclosure
		
[15P]	A first method, comprising:	To the extent the preamble is limiting, the manufacturing of the Oakley Thump Pro comprises a method.
[15A]	providing a capacitive touch switch;	As discussed for Claim 6, it would have been obvious to modify the Oakley Thump Pro by substituting the button sensors for capacitive touch switches.
[15B]	disposing a plurality of electronic components on the capacitive switch; and	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs argued that the Accused Products satisfy this limitation because "the Accused Products include a capacitive touchpad that includes electronic components." Plaintiffs did not identify how any electronic components are "dispos[ed]" on a capacitive touch switch. At least under Plaintiffs' interpretation of the claim limitation, it would have been obvious to a POSITA to dispose a plurality of electronic components on the capacitive touch switch. For example, as shown below, the button sensors in the Oakley Thump Pro are positioned next to other electronics within the temples. Thus, when the button sensors are substituted for capacitive touch switches, a plurality of electronic components would be disposed on the capacitive touch switch.

Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		
[15C]	coupling the capacitive touch switch to a partial enclosure to constrain the capacitive touch switch.	In the modified Oakley Thump Pro, the capacitive touch switches are coupled to a partial enclosure to constrain the capacitive touch switch. As shown below, the original button sensors are coupled to a partial enclosure to constrain the sensors, at least under Plaintiffs' apparent interpretation of the limitation.

Claim Limitation	Claim Language	Prior Art Disclosure
		 

Claim Limitation	Claim Language	Prior Art Disclosure
[16]	The first method of claim 15, further comprising the step of disposing the enclosure substantially within a temple of an eyeglass frame.	As shown above with respect to limitations [15B] and [15C], in the modified Oakley Thump Pro, the enclosure is disposed substantially within a temple of an eyeglass frame, at least under Plaintiffs' apparent interpretation of this limitation.
[18]	The first method of claim 15, further comprising the step of applying a conformal coating to the plurality of electronic components.	In Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Plaintiffs did not set forth any contention as to how any Accused Product satisfies Claim 18. Plaintiffs' contention with respect to this claim was blank, aside from repeating the claim language. At least under Plaintiffs' apparent interpretation of "conformal coating," the Oakley Thump Pro had a conformal coating applied to the plurality of electronics. For example, the image below shows a conformal coating applied to the electronics in the Thump Pro.  To the extent Plaintiffs contend otherwise, it would have been obvious to apply a conformal coating to the plurality of electronic components. For example, it would have been obvious to coat the electronics assembly with a conformal coating as described in Sikonowiz. Designing

Claim Limitation	Claim Language	Prior Art Disclosure
		and Creating Printed Circuits, published in 1981 and authored by Walter Sikonowiz, devotes an entire section to the step of "Conformal Coating." Sikonowiz at 135. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." *Id.* at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. Conformal coatings were also well-known in the industry and widely available. For example, Chemtronics sold conformal coatings under the brand Konform since at least as early as 1980. *See also* Chemtronics Conformal Coatings Guide. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. This principle known to a POSITA would have provided further motivation to apply a conformal coating as disclosed in Sikonowiz or as sold by Chemtronics to the Oakley Thump Pro. Because conformal coatings were commonplace with printed circuit boards as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying Sikonowiz's teachings to the Oakley Thump Pro. Applying a conformal coating as Sikonowiz teaches would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly would accomplish its intended function with the added benefit of keeping moisture and contaminants from interfering with the electronics. Additionally, Quantum Research Group sold QTouch microchips including QT110, QT160, QT240, QT1080, and QT1100A-ISG which, on information and belief, were integrated circuits used for capacitive touch sensors. *See, e.g.*, "Secrets of a Successful QTouch™ Design"; QT1100A-ISG 10 Key QTouch™ Sensor IC. The product literature for the QT1100A-ISG QTouch microchip explains, "All capacitive sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out

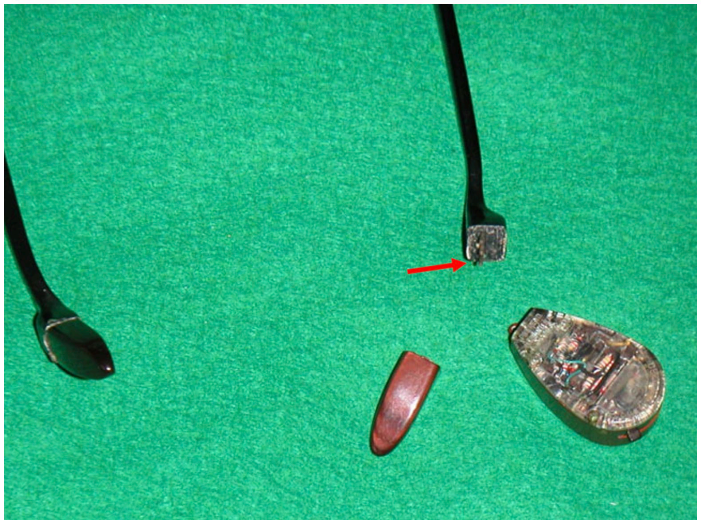
Claim Limitation	Claim Language	Prior Art Disclosure
		moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also been motivated to add a conformal coating to the electronic components disposed on a capacitive touch sensor as recommended in the product literature.

Exhibit B3 - Invalidity of U.S. Patent No. 8,801,174 Based on Acousticon A-230

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	The Acousticon A-230 is a first device. *See* https://www.hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm
[1A]	a lens housing adapted to support a first lens and a second lens;	The Acousticon A-230 has a lens housing adapted to support a first lens and second lens.

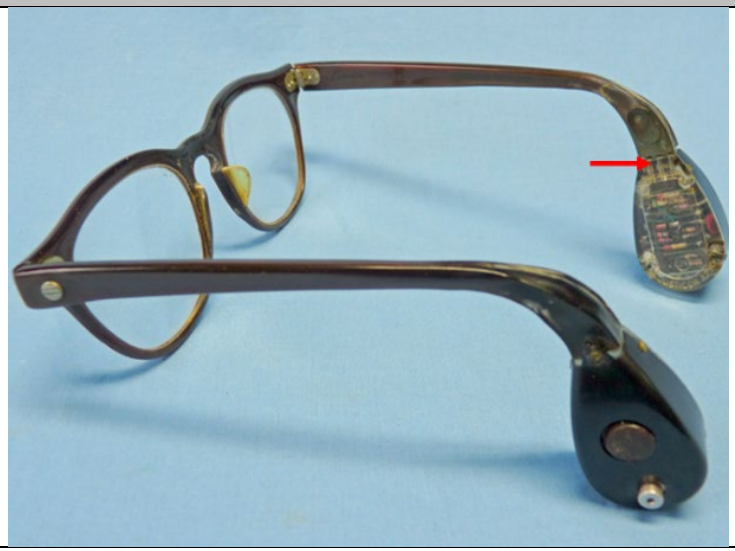
Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a first temple movably coupled to the lens housing;	The Acousticon A-230 has two temples, either of which is a first temple movably coupled to the lens housing.
[1C]	a second temple movably coupled to the lens housing;	As discussed above, the Acousticon A-230 has two temples, either of which is a second temple movably coupled to the lens housing.

Claim Limitation	Claim Language	Prior Art Disclosure
[1D]	an electronics module disposed at least partially within the first temple;	The Acousticon A-230 has two electronics modules, one in each temple. Thus, regardless of which temple is identified as the "first temple," the A-230 discloses an electronics module disposed at least partially within the first temple, at least under Plaintiffs' interpretation of the limitation that electronics module reads on electronics contained within the temple.

Claim Limitation	Claim Language	Prior Art Disclosure
[1E]	a first electrical conductor coupled to the first temple,	The Acousticon A-230 has a first electrical conductor coupled to the first temple. 

Claim Limitation	Claim Language	Prior Art Disclosure
[1F]	wherein a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor; and	In the Acousticon A-230, a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor. "There were three conductors in a cable running down the arms and across the bridge of the glasses to connect the two sides." https://www.hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm
[1G]	a second electrical conductor coupled to the first temple,	The Acousticon A-230 had a second electrical conductor coupled to the first temple.

Claim Limitation	Claim Language	Prior Art Disclosure
[1H]	wherein a second conductive path is provided from the first temple to the lens housing at least in part by the second electrical conductor;	In the Acousticon A-230, a first conductive path is provided from the first temple to the lens housing at least in part by the first electrical conductor. "There were three conductors in a cable running down the arms and across the bridge of the glasses to connect the two sides." https://www.hearingaidmuseum.com/gallery/Transistor%20(Ear)/Eyeglass/Acousticon/info/acousticona230.htm
[1I]	wherein the first and second electrical conductors are configured to couple the electronics module to the first temple	The first and second electrical conductors in the Acousticon A-230 are configured to couple the electronics module to the first temple to constrain the electronics module.

Claim Limitation	Claim Language	Prior Art Disclosure
	to constrain the electronics module.	
[2]	The first device of claim 1, wherein the first electrical conductor is integrally coupled to the first temple.	As shown below, the first electrical conductor is integrally coupled to the first temple in the Acousticon A-230.

Claim Limitation	Claim Language	Prior Art Disclosure
[5]	The first device of claim 1, wherein the electronics module comprises any two of: a power source, a controller, and a sensor.	The electronics module in the right temple contains at least a controller and a sensor, including, *inter alia*, volume controls and a microphone.

Claim Limitation	Claim Language	Prior Art Disclosure
[6]	The first device of claim 5, wherein the sensor comprises a touch switch.	The Acousticon A-230 comprised a touch switch. As shown below, the Acousticon A-230 had a volume slider which is a touch switch.

Claim Limitation	Claim Language	Prior Art Disclosure
		  Alternatively, the claim also would have been obvious over the Acousticon A-230 in view of the knowledge of a POSITA and/or the references discussed below. Capacitive touch switches were well known in the art by the time of the ’174 Patent and it would have been obvious to a POSITA to combine the disclosure of the Acousticon A-230 with a capacitive touch sensor. A POSITA would have been motivated to do so because this would have been the simple substitution of one known element for another to obtain predictable results. A POSITA would also have been motivated to do so because this would have been the use of a known technique to improve similar devices in the same way. For example, the substitution of a push button with a capacitive touch switch could make the device feel more premium to consumers and could also improve water resistance. A POSITA would have had a reasonable expectation of success at least because this would have been a simple substitution of conventional parts. Capacitive touch sensors were well known in the art, as evidenced by at least the following references: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005) • Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005) • Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005)

Claim Limitation	Claim Language	Prior Art Disclosure
		• QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 • Howell-596 at ¶57 • Eichelberger at Figs. 1a-1b, 3:20-23, 3:43-47, 3:54-57; • QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG; • PSoC CapSense
[12]	The first device of claim 1, wherein the first electrical conductor comprises a single structural element.	As shown below, the electrical conductor comprises a single structural element.
[13]	The first device of claim 1, wherein the first electrical conductor is configured to maintain the first conductive path as	The first electrical conductor is configured to maintain the first conductive path as the first temple is moved relative to the lens housing.

Claim Limitation	Claim Language	Prior Art Disclosure
	the first temple is moved relative to the lens housing.	

Claim Limitation	Claim Language	Prior Art Disclosure

Exhibit C1 - Invalidity of U.S. Patent No. 8,905,541

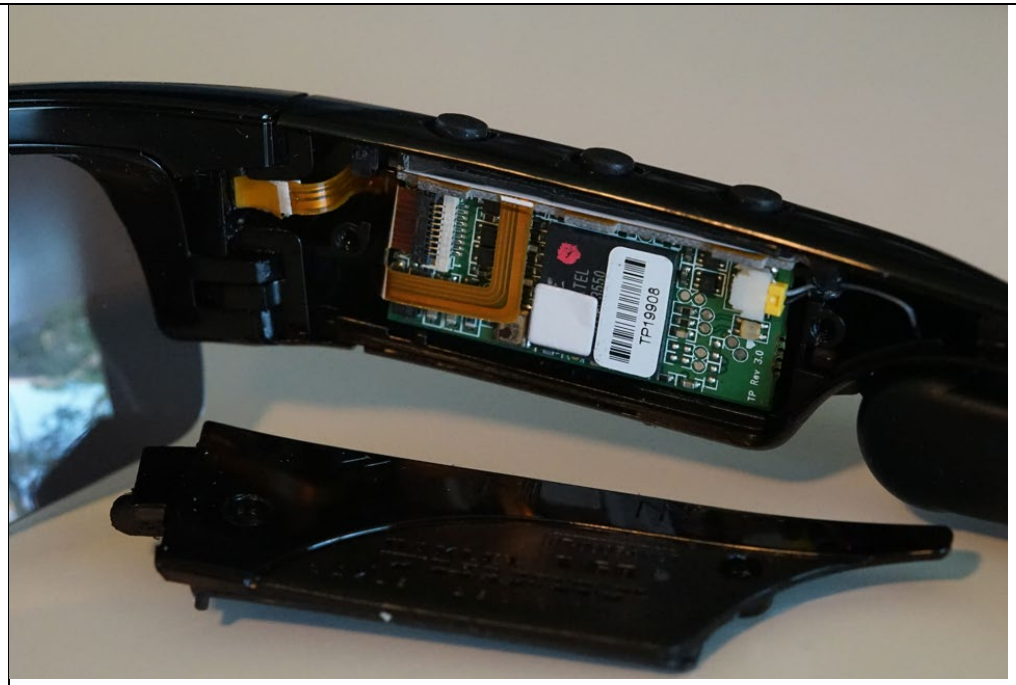
1. Howell-596

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01071 Petition § VII.A.1. and portions of Howell-596 and Howell-158 cited therein, § IX.A.1. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	See IPR2024-01071 Petition § VII.A.1. and portions of Howell-596 and Howell-158 cited therein, § IX.A.1. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.
[1B]	a first lens and a second lens coupled to the frame; and	See IPR2024-01071 Petition § VII.A.2. and portions of Howell-596 and Howell-158 cited therein, § IX.A.2. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.
[1C]	an electronics module, wherein the electronics module is located within the housing module;	See IPR2024-01071 Petition § VII.A.3. and portions of Howell-596 and Howell-158 cited therein, § IX.A.3. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 1 would have been obvious over Howell-596 in view of Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro and Oakley RAZRwire contain an electronics module[1] located within a housing module, under Plaintiff's contention that electronics module reads on a printed circuit board.

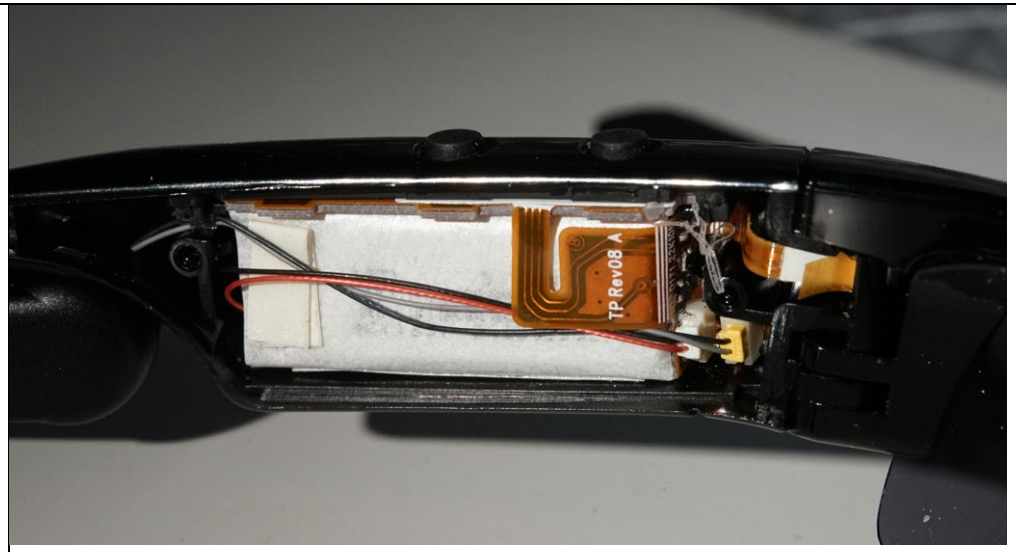
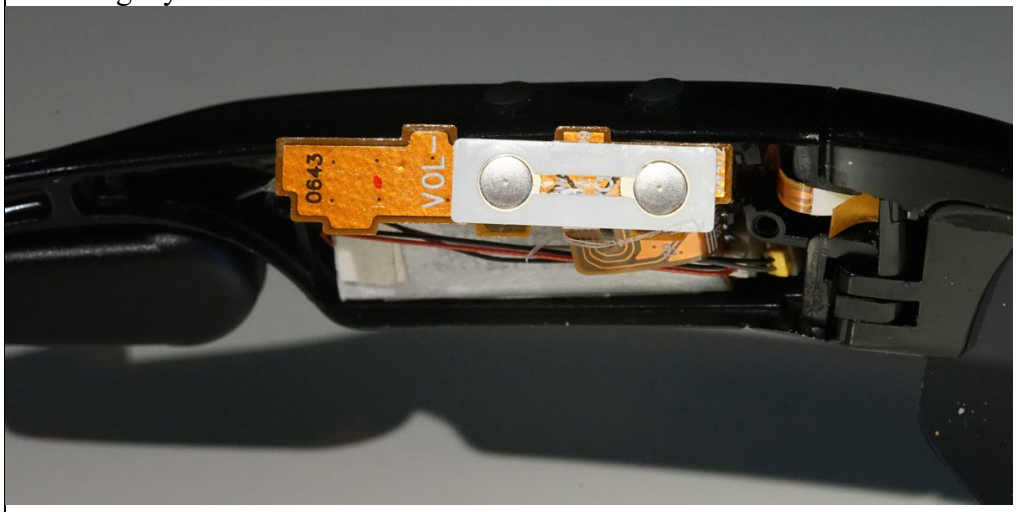
[1] References herein to "electronics module" address Plaintiff's contention that electronics module reads on a printed circuit board.

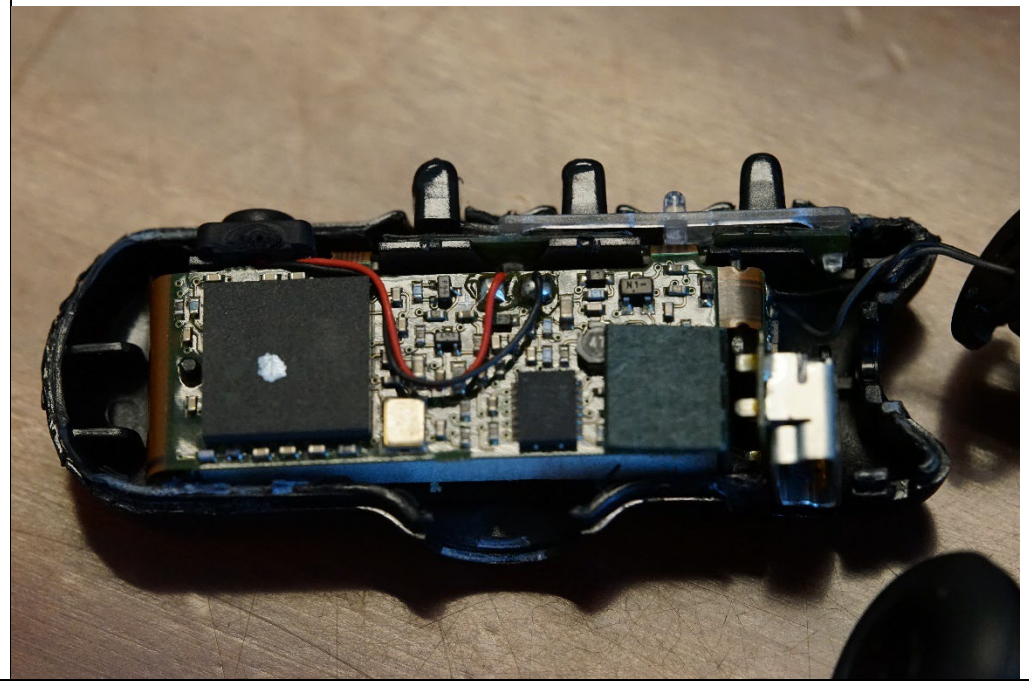
		 Above: Oakley Thump Pro Above: Oakley RAZRWire
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	See IPR2024-01071 Petition § VII.A.3. and portions of Howell-596 and Howell-158 cited therein, § IX.A.3. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.

[1E]	wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.	See IPR2024-01071 Petition § VII.A.4. and portions of Howell-596 and Howell-158 cited therein, § IX.A.4. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 1 also would have been obvious over Howell-596 in view of the Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro has numerous insulating layers that are disposed between one or more electronic components located within the electronics module and the frame of the first device. The Oakley Thump Pro has electronics modules containing layers of glue, plastic, and/or paper. The housing module for the right temple comprises a black plastic material. The electronics module in the right temple has multiple insulating layers. There is a white square-shaped insulating material adhered to the processor. That white insulating material is an insulating layer that is disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging, which is an insulating layer that is disposed between one or more electronic components and the frame. The orange ribbon cable has an insulating layer that is disposed between one or more electronic components and the frame and is also covered by an insulating layer that is disposed between one or more electronic components and the frame.

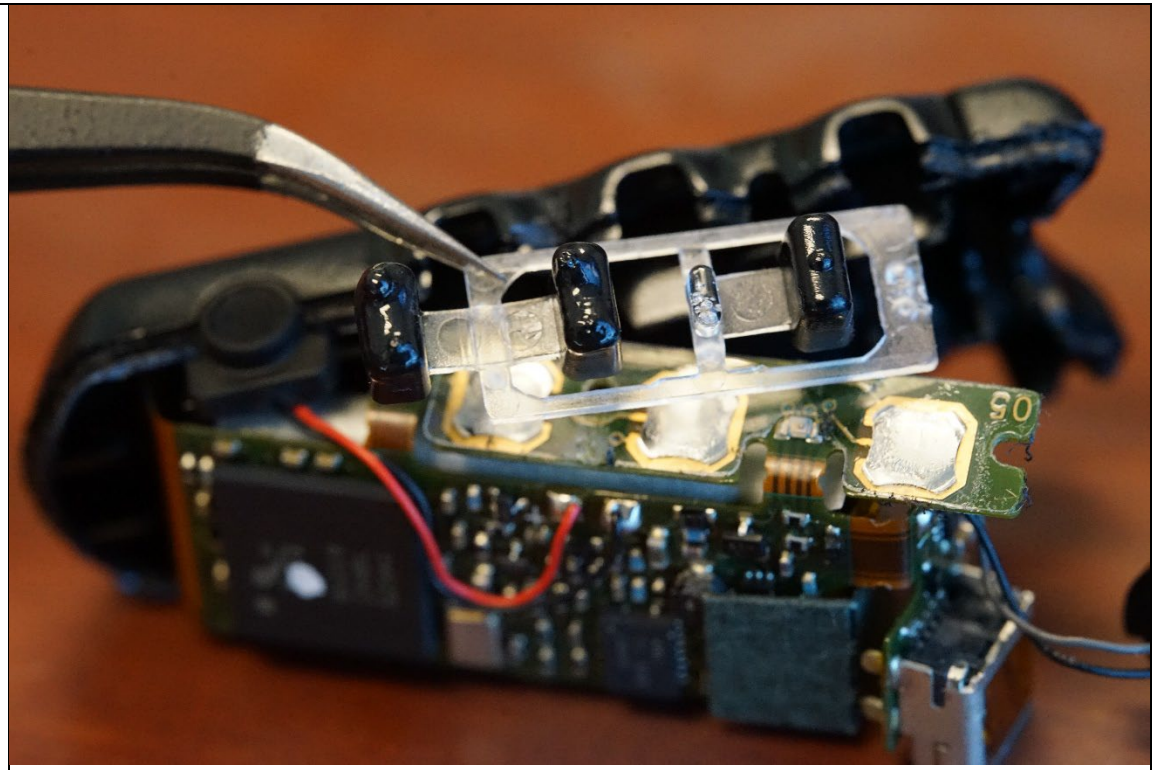
		 The sensing mechanisms are on a board. There is also a white insulating layer between the three metal circles and the board, and this insulating layer is disposed between one or more electronic components and the frame.

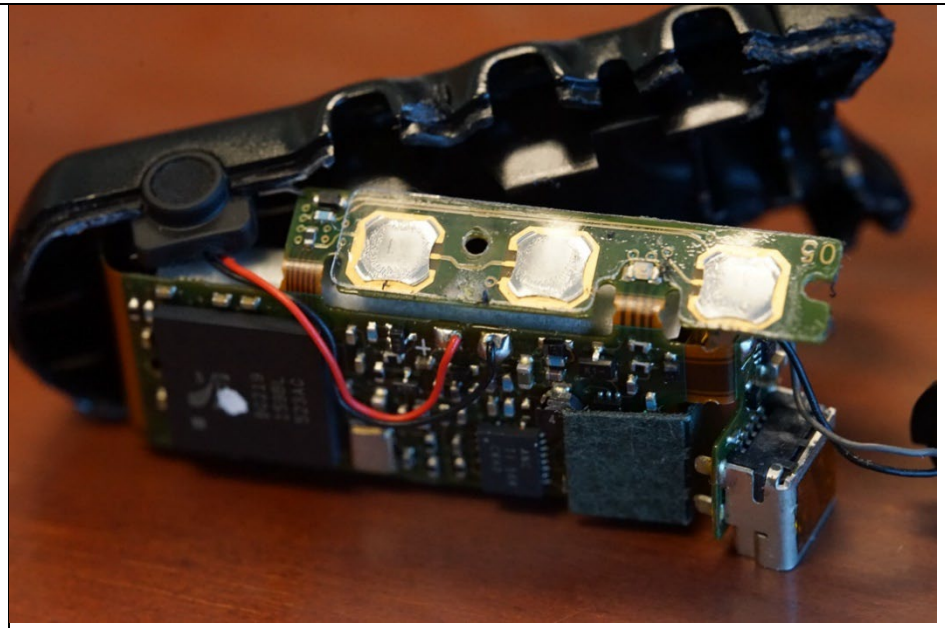
		 The housing module for the left temple comprises a black plastic material. The electronics module in the left temple has multiple insulating layers. The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The red, grey, and black wires are covered by insulating layers that are disposed between one or more electronic components and the frame. There is adhesive tape on the battery. The orange ribbon cable has an insulating layer.

		 The sensing mechanisms are on a board, which has an insulating layer that is disposed between one or more electronic components and the frame. There is also a white insulating layer between the two metal circles and the board. 

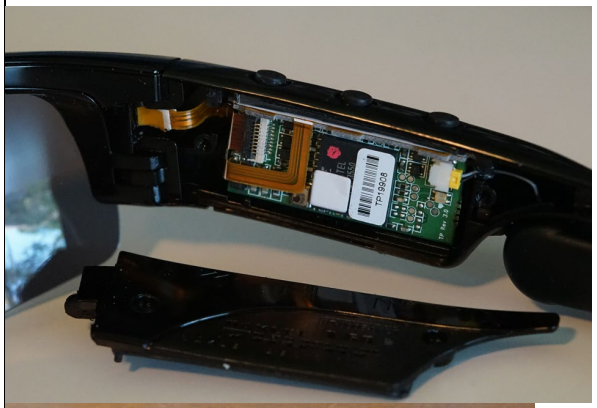
		Similarly, the Oakley RAZRWire has electronics modules containing layers of glue, plastic, and/or paper. The housing module comprises a black plastic material. The electronics module has multiple insulating layers. The two integrated circuits shown in the photo below both comprise a black plastic package which is an insulating material. Those black insulating materials are insulating layers that are disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging. The red and black wires have an insulating layer that is disposed between one or more electronic components and the frame. 

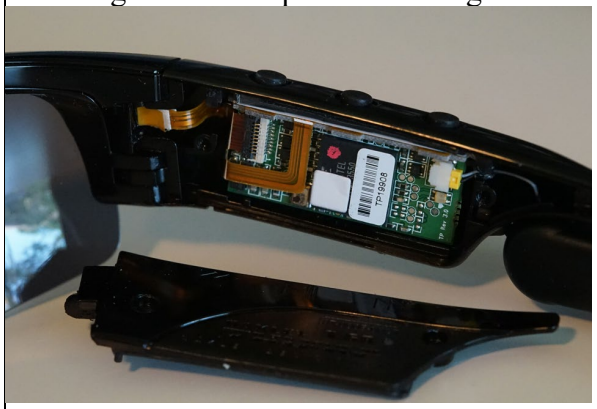
		 The sensing mechanisms are on a board. There is also a transparent insulating layer between the three metal circles and the board.

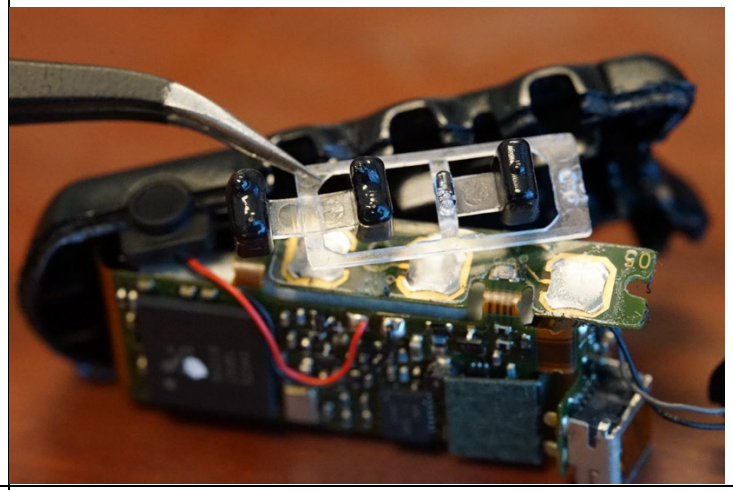
		 The orange ribon cables have an insulating layer.

		 The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The black wire is covered by an insulating layer that is disposed between one or more electronic components and the frame.

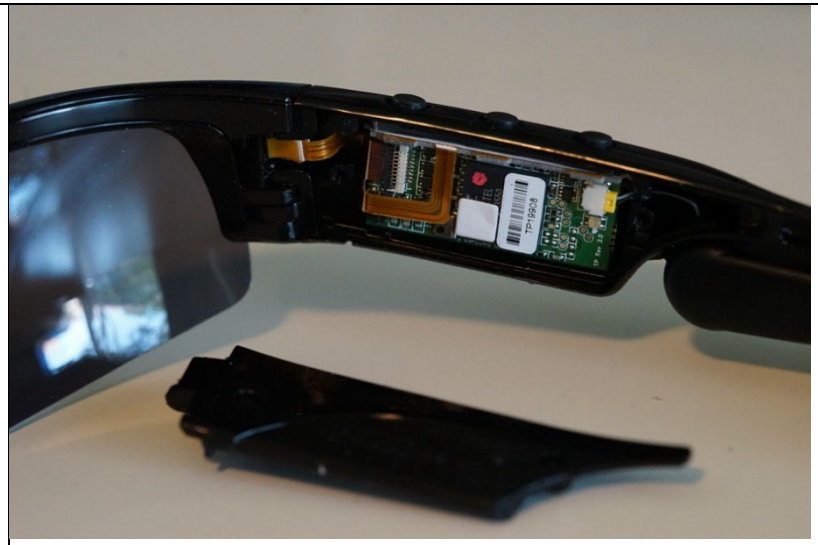
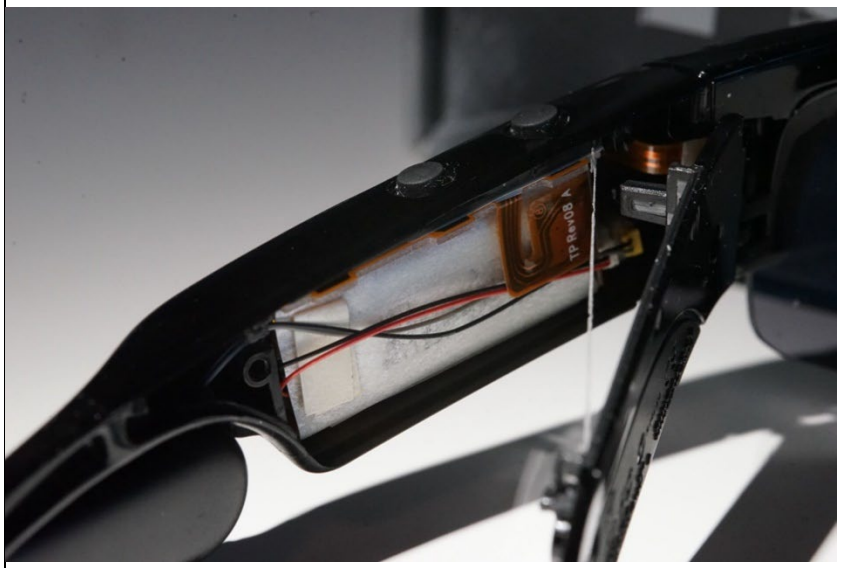
		 Alternatively, a POSITA would have been motivated to combine Howell-596 with the disclosures of insulating layers in the Oakley Thump Pro or Oakley RAZRWire because this was common practice in the industry and would have been common sense to any POSITA. Insulating layers prevent electronic circuits from coming into direct contact with each other and causing undesirable and harmful short circuits. It was standard practice to insulate electric components. For example, a 2003 Generic Standard on Printed Board Design instructed that metal-cased components shall be "insulated from adjacent electrically conductive elements." IPC-2221A, 57, 64. Applying insulating layers as disclosed in Oakley Thump Pro or Oakley RAZRWire to Howell-596 represents nothing more than the simple addition of one known element (insulating layer) to another known element (temple containing electronics) to obtain predictable results (electrically insulating the electronics from the temple to prevent circuits from being shorted or to reduce leakage current). Similarly, the combination represents the use of a known technique (surrounding electrical components with an insulating layer) to improve similar glasses in the same way.

[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	See IPR2024-01071 Petition § VII.B. and portions of Howell-596 and Howell-158 cited therein, § IX.B. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 2 also would have been obvious over Howell-596 in view of Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Oakley Thump Pro/RAZRWire housing module comprises insulating layers. 

[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	See IPR2024-01071 Petition § VII.C. and portions of Howell-596 and Howell-158 cited therein, § IX.C. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 3 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	See IPR2024-01071 Petition § VII.D. and portions of Howell-596 and Howell-158 cited therein, § IX.D.1. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	See IPR2024-01071 Petition § VII.D. and portions of Howell-596 and Howell-158 cited therein, § IX.D.2. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 4 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included insulating layers disposed between the housing module and the electronics module, including the white square on the Sigmatel controller. 

		The RAZRWire also included insulating layers disposed between the housing module and electronics module including the insulating layers on the red and black wires and the transparent insulating layer on the sensors. 
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	See IPR2024-01071 Petition § VII.E. and portions of Howell-596 and Howell-158 cited therein, § IX.E. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein. Alternatively, Claim 5 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included an insulating layer that comprises a portion of the electronics module. The Oakley RAZRWire also included insulating layers comprising a portion of the electronics module.
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	See IPR2024-01071 Petition § VII.F. and portions of Howell-596 and Howell-158 cited therein, § IX.F. and portions of Howell-596 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein.

		Alternatively, Claim 6 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[12]	The first device of claim 1, wherein the structural member comprises a cavity in the first temple; and wherein the housing module is configured to be selectively placed within the cavity.	See IPR2024-01071 Petition § VII.L. and portions of Howell-596 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein. Alternatively, Claim 12 would have been obvious over Howell-596 and Oakley Thump Pro, under Plaintiffs' contention for this claim. As Plaintiffs' contentions allege for the accused products, the Oakley Thump Pro includes various electronics located within a cavity of the structural member of the Oakley Thump Pro, and also includes a printed circuit board within the temple.

[16]	The first device of claim 1, wherein the structural member comprises the first temple.	See IPR2024-01071 Petition § VII.O. and portions of Howell-596 and Howell-158 cited therein, § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § IX.G. and portions of Howell-596 cited therein, § X. and portions of Howell-596 and Hattori-913 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VII. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein, § IX. and portions of Howell-596 cited therein. Alternatively, Claim 16 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1. Alternatively, Claim 16 would have been obvious over Howell-596, Hattori-913, and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	See IPR2024-01071 Petition § VII.O. and portions of Howell-596 and Howell-158 cited therein, § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § IX.G. and portions of Howell-596 cited therein, § X. and portions of Howell-596 and Hattori-913 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-596 cited therein, § VII. and portions of Howell-596 cited therein, § VIII. and portions of Howell-596 cited therein, § IX. and portions of Howell-596 cited therein. Alternatively, Claim 16 would have been obvious over Howell-596 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1. Alternatively, Claim 16 would have been obvious over Howell-596, Hattori-913, and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.

2. Howell-158

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01071 Petition § VII.A.1. and portions of Howell-596 and Howell-158 cited therein, § XI.A.1. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.1. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	See IPR2024-01071 Petition § VII.A.1. and portions of Howell-596 and Howell-158 cited therein, § XI.A.1. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.1. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[1B]	a first lens and a second lens coupled to the frame; and	See IPR2024-01071 Petition § VII.A.2. and portions of Howell-596 and Howell-158 cited therein, § XI.A.2. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.2. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[1C]	an electronics module, wherein the electronics module is located within the housing module;	See IPR2024-01071 Petition § VII.A.3. and portions of Howell-596 and Howell-158 cited therein, § XI.A.3. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.3. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	See IPR2024-01071 Petition § VII.A.3. and portions of Howell-596 and Howell-158 cited therein, § XI.A.3. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.3. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[1E]	wherein an insulating layer is disposed between one or more electronic components located	See IPR2024-01071 Petition § VII.A.4. and portions of Howell-596 and Howell-158 cited therein, § XI.A.4. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.A.4. and portions of Kokonaski-999 and Howell-158 cited therein; See

	within the electronics module and the frame of the first device.	IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	See IPR2024-01071 Petition § VII.B. and portions of Howell-596 and Howell-158 cited therein, § XI.B. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.B. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	See IPR2024-01071 Petition § VII.C. and portions of Howell-596 and Howell-158 cited therein, § XI.C. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.C. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	See IPR2024-01071 Petition § VII.D. and portions of Howell-596 and Howell-158 cited therein, § XI.D. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.D. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	See IPR2024-01071 Petition § VII.D. and portions of Howell-596 and Howell-158 cited therein, § XI.D. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.D. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	See IPR2024-01071 Petition § VII.E. and portions of Howell-596 and Howell-158 cited therein, § XI.E. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.E. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	See IPR2024-01071 Petition § VII.F. and portions of Howell-596 and Howell-158 cited therein, § XI.F. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.F. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.

[12]	The first device of claim 1, wherein the structural member comprises a cavity in the first temple; and wherein the housing module is configured to be selectively placed within the cavity.	See IPR2024-01071 Petition § VII.L. and portions of Howell-596 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein.
[16]	The first device of claim 1, wherein the structural member comprises the first temple.	See IPR2024-01071 Petition § VII.O. and portions of Howell-596 and Howell-158 cited therein, § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § XI.K. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.K. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § VII. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	See IPR2024-01071 Petition § VII.O. and portions of Howell-596 and Howell-158 cited therein, § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § XI.K. and portions of Kokonaski-166 and Howell-158 cited therein, § XII.K. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § VI. and portions of Howell-158 cited therein, § VII. and portions of Howell-158 cited therein, § X. and portions of Howell-158 cited therein, § XI. and portions of Howell-158 cited therein.

3. Hattori-913

Claim Limitation	Claim Language	Prior Art Disclosure
[16]	The first device of claim 1, wherein the structural member comprises the first temple.	See IPR2024-01071 Petition § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § X. and portions of Howell-596 and Hattori-913 cited therein; See IPR2024-01071 Ex. 1002 § VII. and portions of Hattori-913 cited therein, § IX. and portions of Hattori-913 cited therein.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	See IPR2024-01071 Petition § VIII. and portions of Howell-596, Howell-158, and Hattori-913 cited therein, § X. and portions of Howell-596 and Hattori-913 cited therein; See IPR2024-01071 Ex. 1002 § VII. and portions of Hattori-913 cited therein, § IX. and portions of Hattori-913 cited therein.

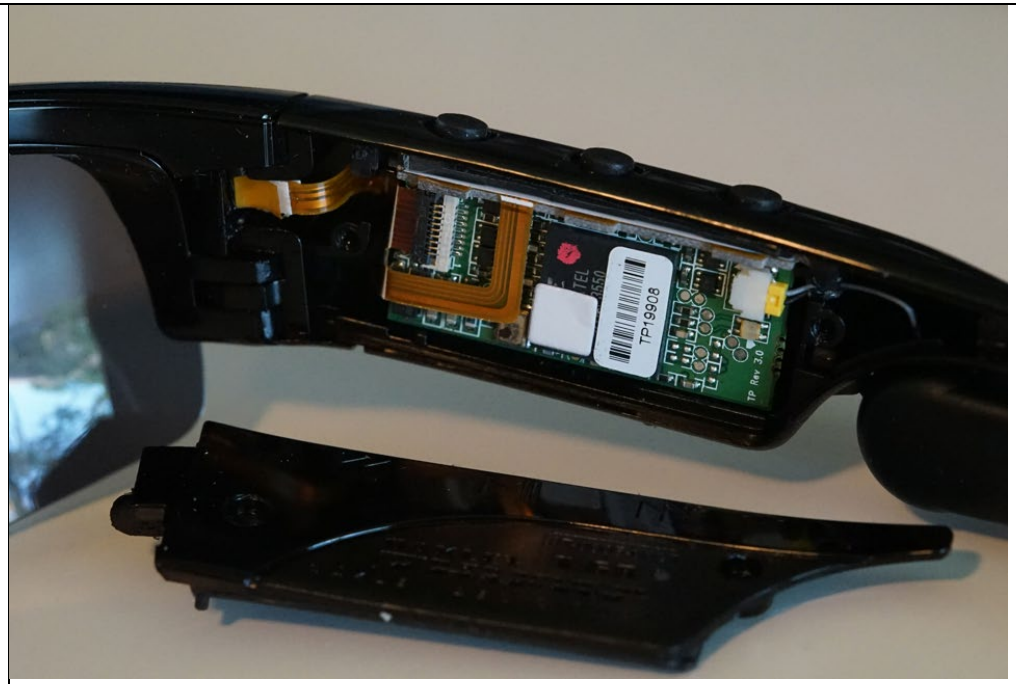
4. Kokonaski-166

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01071 Petition § XI.A.1. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein.
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	See IPR2024-01071 Petition § XI.A.1. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein.
[1B]	a first lens and a second lens coupled to the frame; and	See IPR2024-01071 Petition § XI.A.2. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein.
[1C]	an electronics module, wherein the electronics module is located within the housing module;	See IPR2024-01071 Petition § XI.A.3. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 1 would have been obvious over Kokonaski-166 in view of Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro and Oakley RAZRwire contain an electronics module[2] located within a housing module, under Plaintiff's contention that electronics module reads on a printed circuit board.

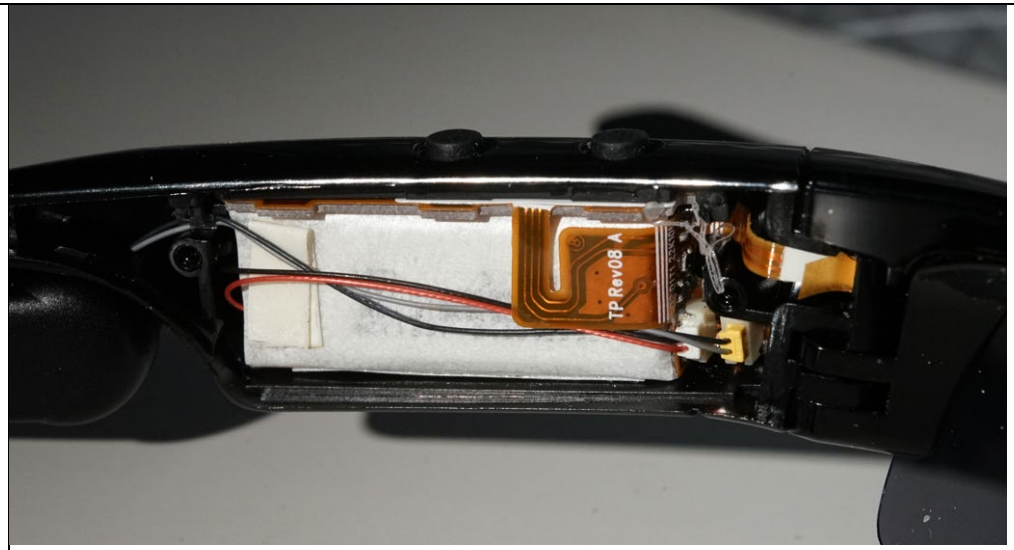
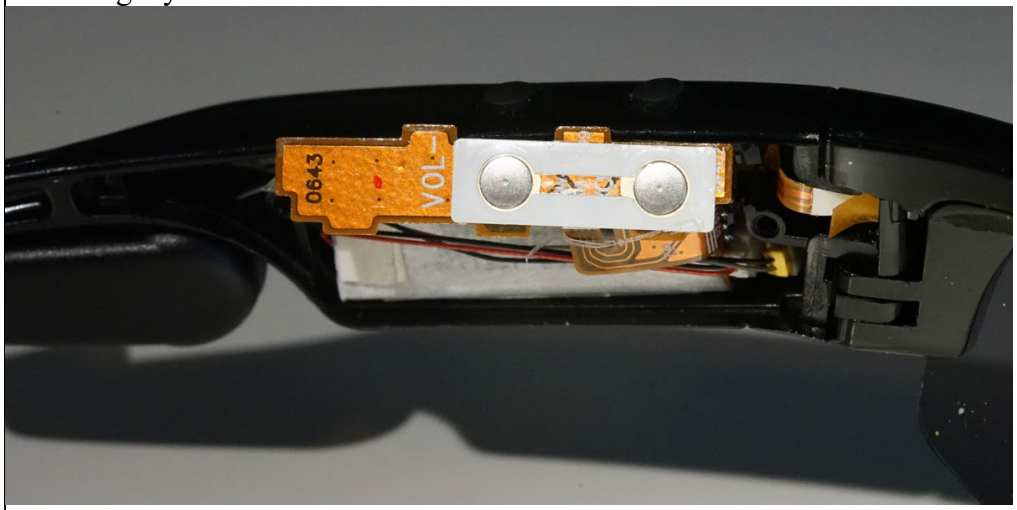
[2] References herein to "electronics module" address Plaintiff's contention that electronics module reads on a printed circuit board.

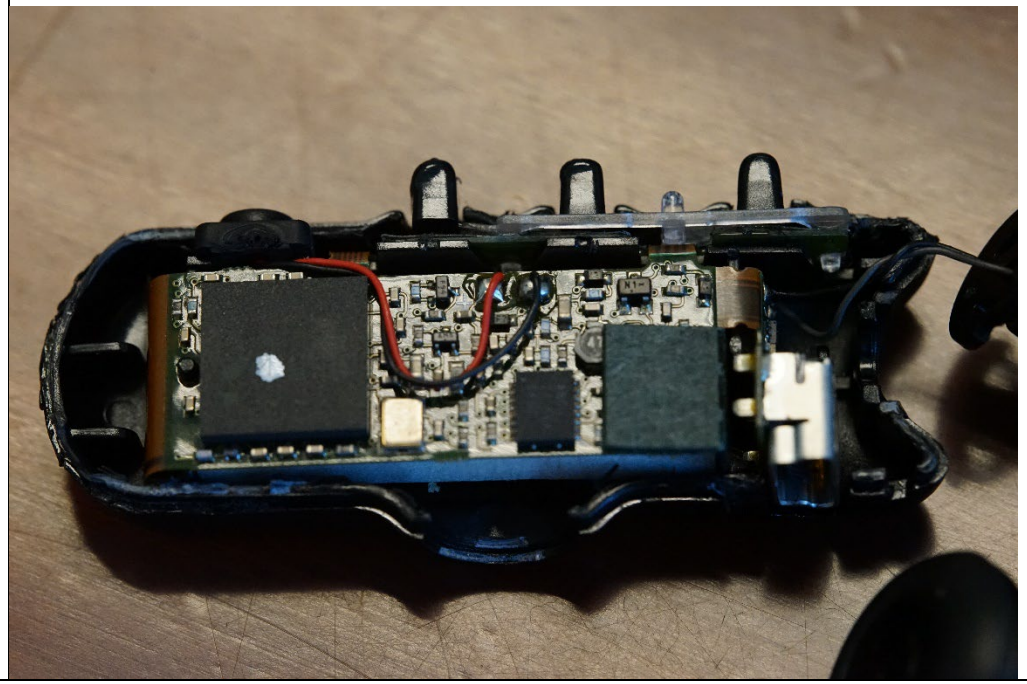
		 Above: Oakley Thump Pro Above: Oakley RAZRWire
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	See IPR2024-01071 Petition § XI.A.3. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein.

[1E]	wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.	See IPR2024-01071 Petition § XI.A.4. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 1 also would have been obvious over Kokonaski-166 in view of the Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro has numerous insulating layers that are disposed between one or more electronic components located within the electronics module and the frame of the first device. The Oakley Thump Pro has electronics modules containing layers of glue, plastic, and/or paper. The housing module for the right temple comprises a black plastic material. The electronics module in the right temple has multiple insulating layers. There is a white square-shaped insulating material adhered to the processor. That white insulating material is an insulating layer that is disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging, which is an insulating layer that is disposed between one or more electronic components and the frame. The orange ribbon cable has an insulating layer that is disposed between one or more electronic components and the frame and is also covered by an insulating layer that is disposed between one or more electronic components and the frame.

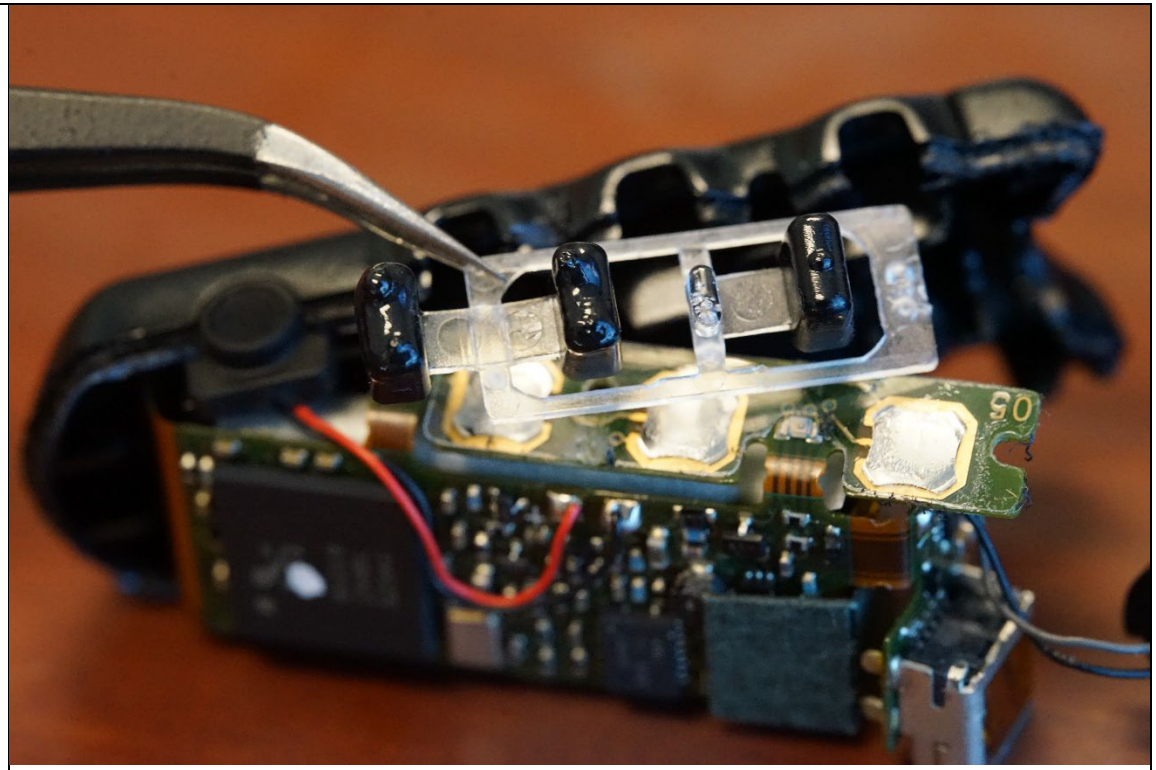
		 The sensing mechanisms are on a board. There is also a white insulating layer between the three metal circles and the board, and this insulating layer is disposed between one or more electronic components and the frame.

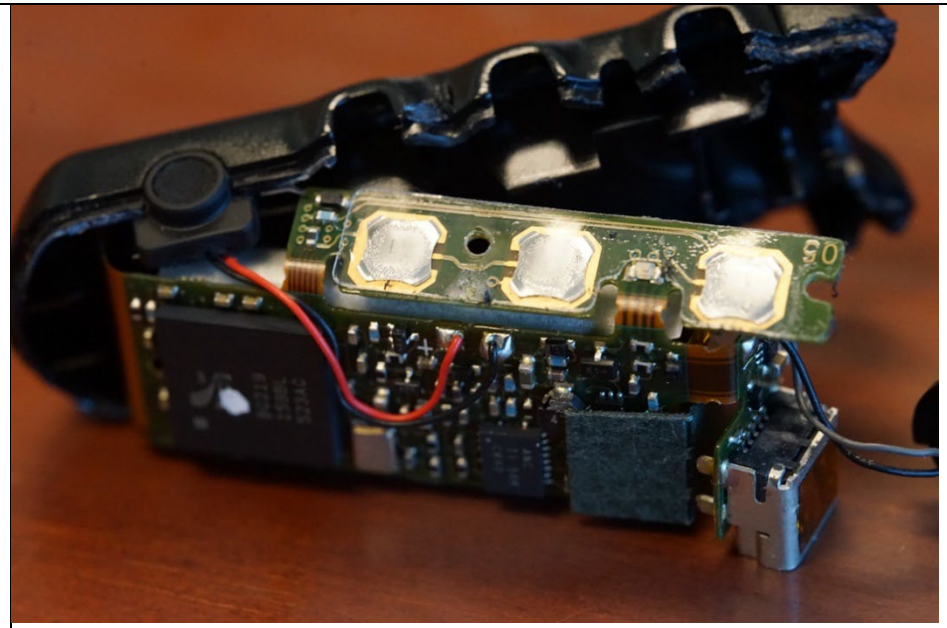
		 The housing module for the left temple comprises a black plastic material. The electronics module in the left temple has multiple insulating layers. The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The red, grey, and black wires are covered by insulating layers that are disposed between one or more electronic components and the frame. There is adhesive tape on the battery. The orange ribbon cable has an insulating layer.

		 The sensing mechanisms are on a board, which has an insulating layer that is disposed between one or more electronic components and the frame. There is also a white insulating layer between the two metal circles and the board. 

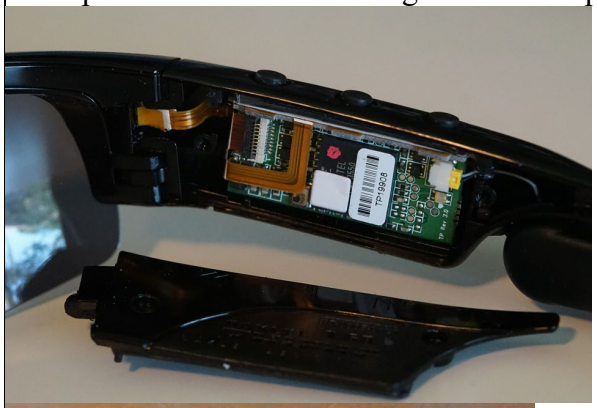
		Similarly, the Oakley RAZRWire has electronics modules containing layers of glue, plastic, and/or paper. The housing module comprises a black plastic material. The electronics module has multiple insulating layers. The two integrated circuits shown in the photo below both comprise a black plastic package which is an insulating material. Those black insulating materials are insulating layers that are disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging. The red and black wires have an insulating layer that is disposed between one or more electronic components and the frame. 

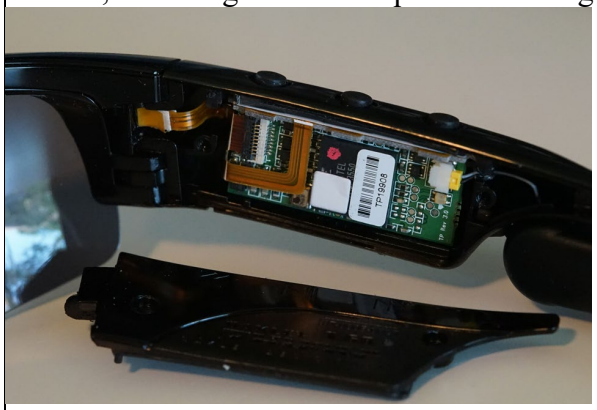
		 The sensing mechanisms are on a board. There is also a transparent insulating layer between the three metal circles and the board.

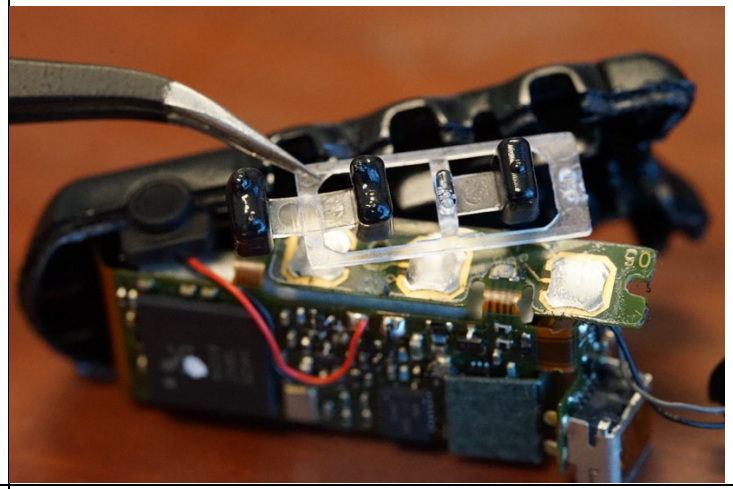
		 The orange ribon cables have an insulating layer.

		 The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The black wire is covered by an insulating layer that is disposed between one or more electronic components and the frame.

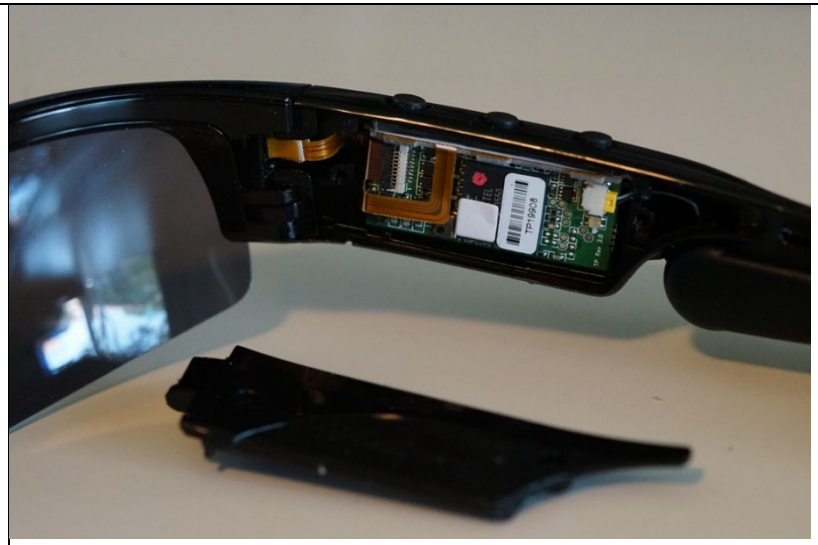
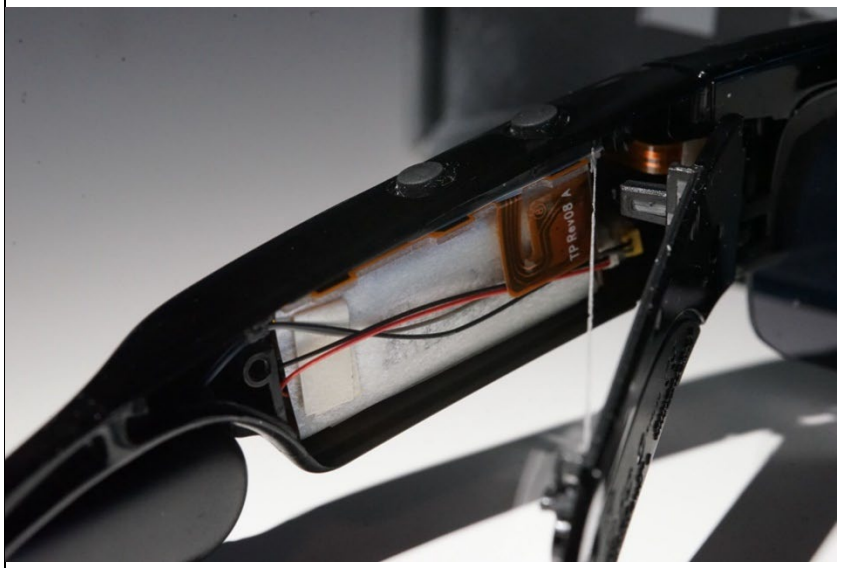
		 Alternatively, a POSITA would have been motivated to combine Kokonaski-166 with the disclosures of insulating layers in the Oakley Thump Pro or Oakley RAZRWire because this was common practice in the industry and would have been common sense to any POSITA. Insulating layers prevent electronic circuits from coming into direct contact with each other and causing undesirable and harmful short circuits. It was standard practice to insulate electric components. For example, a 2003 Generic Standard on Printed Board Design instructed that metal-cased components shall be "insulated from adjacent electrically conductive elements." IPC-2221A, 57, 64. Applying insulating layers as disclosed in Oakley Thump Pro or Oakley RAZRWire to Kokonaski-166 represents nothing more than the simple addition of one known element (insulating layer) to another known element (temple containing electronics) to obtain predictable results (electrically insulating the electronics from the temple to prevent circuits from being shorted or to reduce leakage current). Similarly, the combination represents the use of a known technique (surrounding electrical components with an insulating layer) to improve similar glasses in the same way.

[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	See IPR2024-01071 Petition § XI.B. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 2 also would have been obvious over Kokonaski-166 in view of Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Oakley Thump Pro/RAZRWire housing module comprises insulating layers. 

[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	See IPR2024-01071 Petition § XI.C. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 3 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	See IPR2024-01071 Petition § IX.D. and portions of Howell-596 cited therein, § XI.D. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein.
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	See IPR2024-01071 Petition § IX.D. and portions of Howell-596 cited therein, § XI.D. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 4 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included insulating layers disposed between the housing module and the electronics module, including the white square on the Sigmatel controller.  The RAZRWire also included insulating layers disposed between the housing module and electronics module including the insulating layers on the red and black wires and the transparent insulating layer on the sensors.

		
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	See IPR2024-01071 Petition § XI.E. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 5 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included an insulating layer that comprises a portion of the electronics module. The Oakley RAZRWire also included insulating layers comprising a portion of the electronics module.
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	See IPR2024-01071 Petition § XI.F. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 6 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[12]	The first device of claim 1, wherein the structural member comprises a cavity in the first	Claim 12 would have been obvious over Kokonaski-166 and Oakley Thump Pro, under Plaintiffs' contention for this claim.

	temple; and wherein the housing module is configured to be selectively placed within the cavity.	As Plaintiffs' contentions allege for the accused products, the Oakley Thump Pro includes various electronics located within a cavity of the structural member of the Oakley Thump Pro, and also includes a printed circuit board within the temple.

[16]	The first device of claim 1, wherein the structural member comprises the first temple.	See IPR2024-01071 Petition § XI.K. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 16 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	See IPR2024-01071 Petition § XI.K. and portions of Kokonaski-166 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § X. and portions of Kokonaski-166 cited therein. Alternatively, Claim 16 would have been obvious over Kokonaski-166 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.

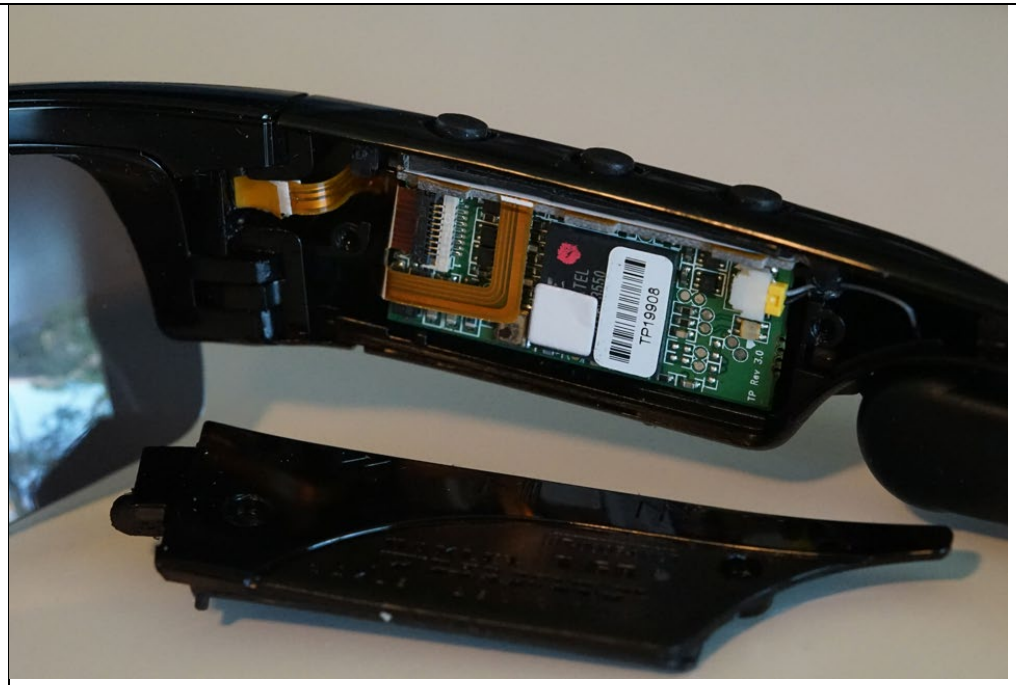
5. Kokonaski-999

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	See IPR2024-01071 Petition § XII.A.1. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	See IPR2024-01071 Petition § XII.A.1. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.
[1B]	a first lens and a second lens coupled to the frame; and	See IPR2024-01071 Petition § XII.A.2. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.
[1C]	an electronics module, wherein the electronics module is located within the housing module;	See IPR2024-01071 Petition § XII.A.3. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 1 would have been obvious over Kokonaski-999 in view of Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro and Oakley RAZRwire contain an electronics module[3] located within a housing module, under Plaintiff's contention that electronics module reads on a printed circuit board.

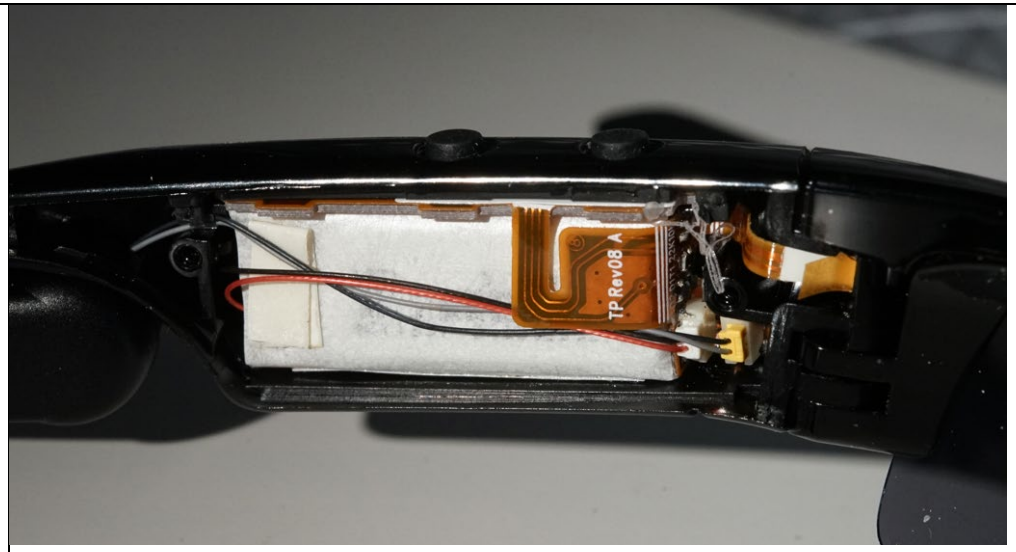
[3] References herein to "electronics module" address Plaintiff's contention that electronics module reads on a printed circuit board.

		 Above: Oakley Thump Pro Above: Oakley RAZRWire
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	See IPR2024-01071 Petition § XII.A.3. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.

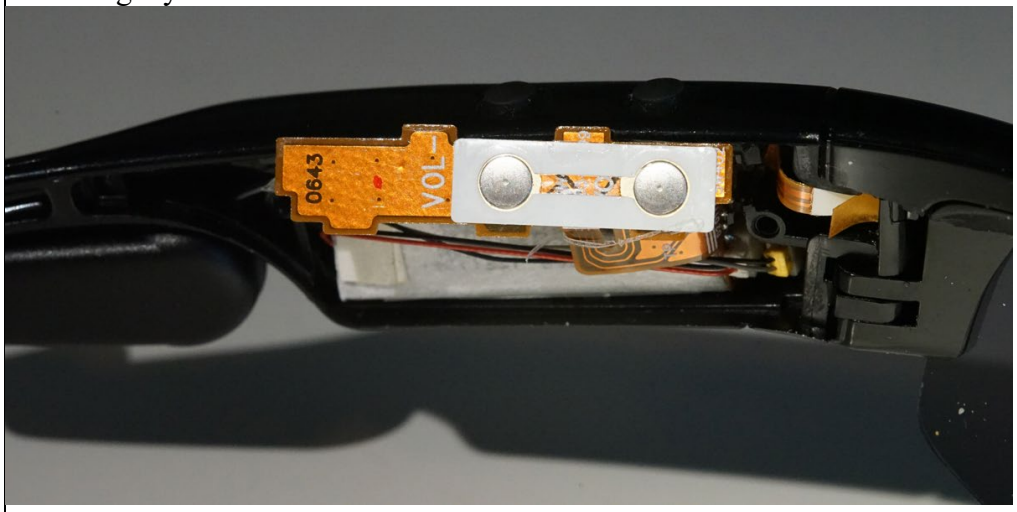
[1E]	wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.	See IPR2024-01071 Petition § XII.A.4. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 1 also would have been obvious over Kokonaski-999 in view of the Oakley Thump Pro or Oakley RAZRWire. The Oakley Thump Pro has numerous insulating layers that are disposed between one or more electronic components located within the electronics module and the frame of the first device. The Oakley Thump Pro has electronics modules containing layers of glue, plastic, and/or paper. The housing module for the right temple comprises a black plastic material. The electronics module in the right temple has multiple insulating layers. There is a white square-shaped insulating material adhered to the processor. That white insulating material is an insulating layer that is disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging, which is an insulating layer that is disposed between one or more electronic components and the frame. The orange ribbon cable has an insulating layer that is disposed between one or more electronic components and the frame and is also covered by an insulating layer that is disposed between one or more electronic components and the frame.

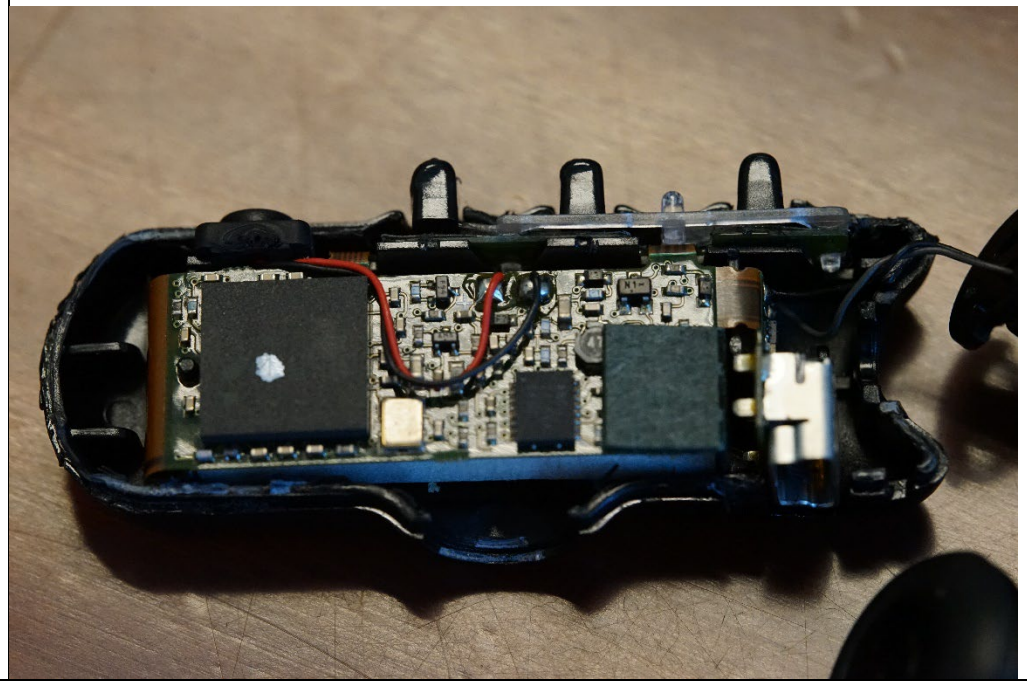
		 The sensing mechanisms are on a board. There is also a white insulating layer between the three metal circles and the board, and this insulating layer is disposed between one or more electronic components and the frame.

		 The housing module for the left temple comprises a black plastic material. The electronics module in the left temple has multiple insulating layers. The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The red, grey, and black wires are covered by insulating layers that are disposed between one or more electronic components and the frame. There is adhesive tape on the battery. The orange ribbon cable has an insulating layer.

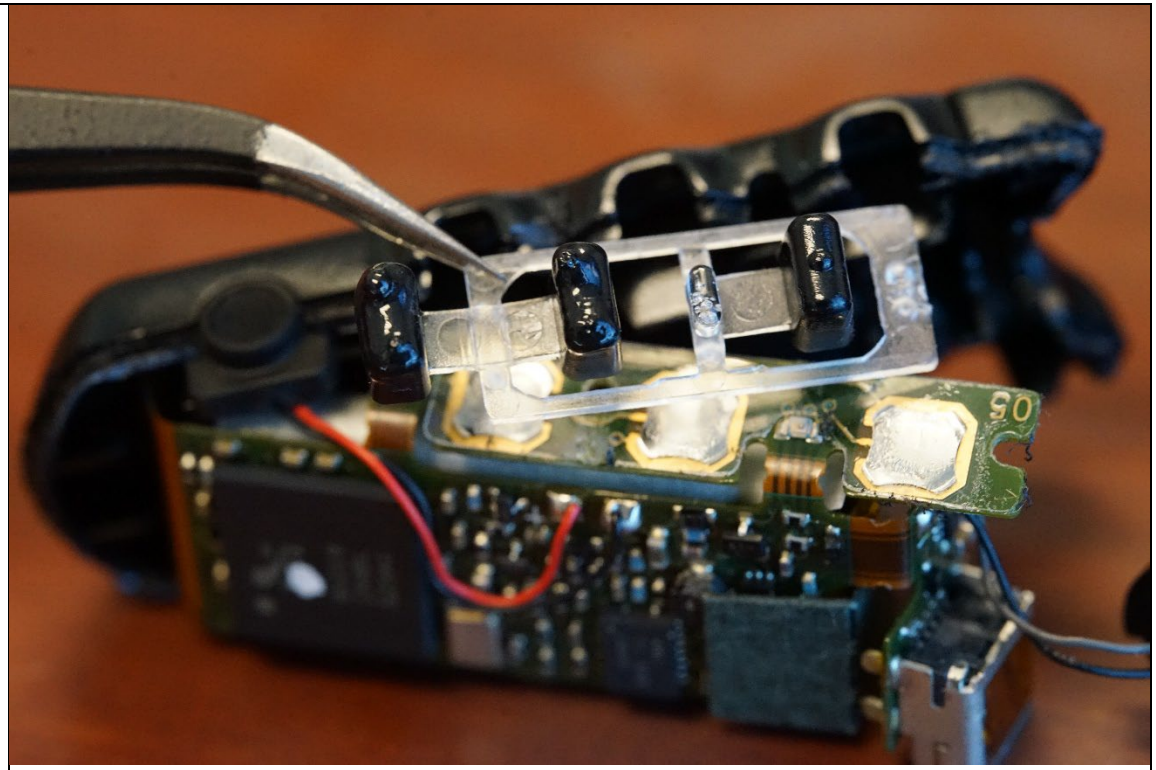


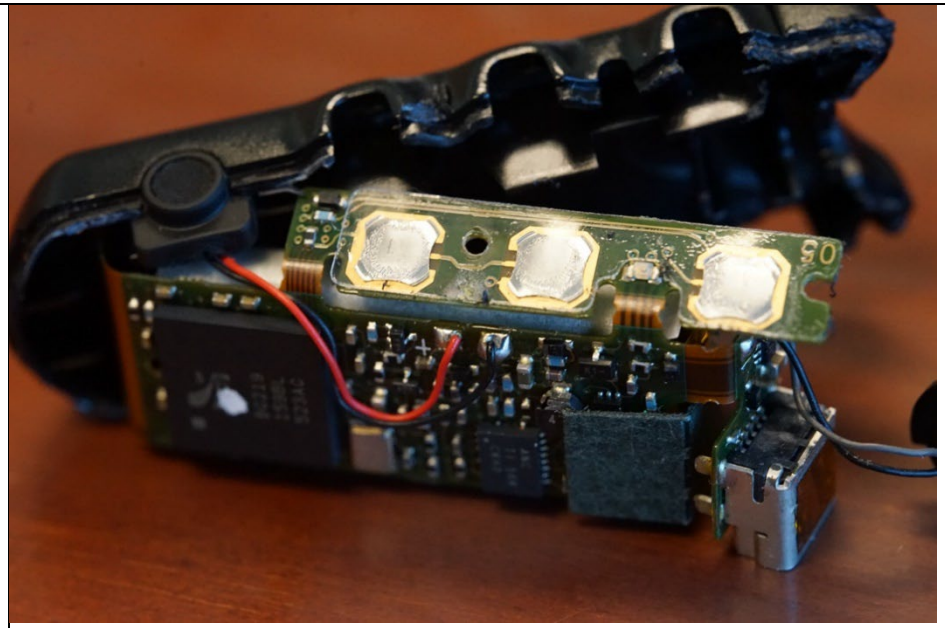
The sensing mechanisms are on a board, which has an insulating layer that is disposed between one or more electronic components and the frame. There is also a white insulating layer between the two metal circles and the board.



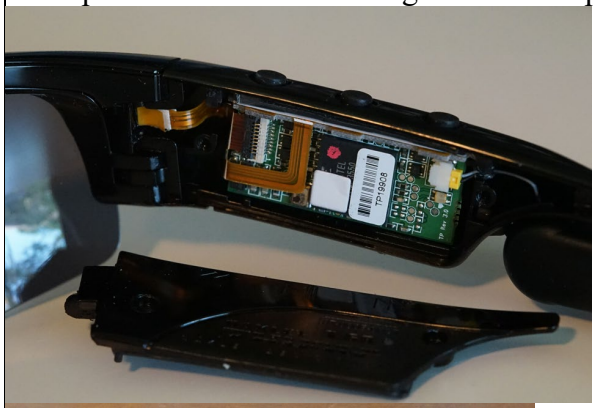
		Similarly, the Oakley RAZRWire has electronics modules containing layers of glue, plastic, and/or paper. The housing module comprises a black plastic material. The electronics module has multiple insulating layers. The two integrated circuits shown in the photo below both comprise a black plastic package which is an insulating material. Those black insulating materials are insulating layers that are disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging. The red and black wires have an insulating layer that is disposed between one or more electronic components and the frame. 

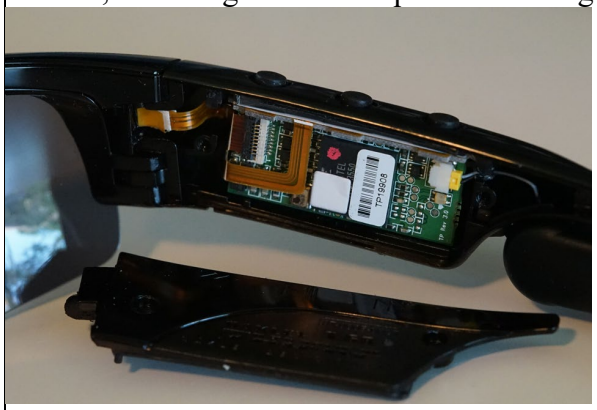
		 The sensing mechanisms are on a board. There is also a transparent insulating layer between the three metal circles and the board.

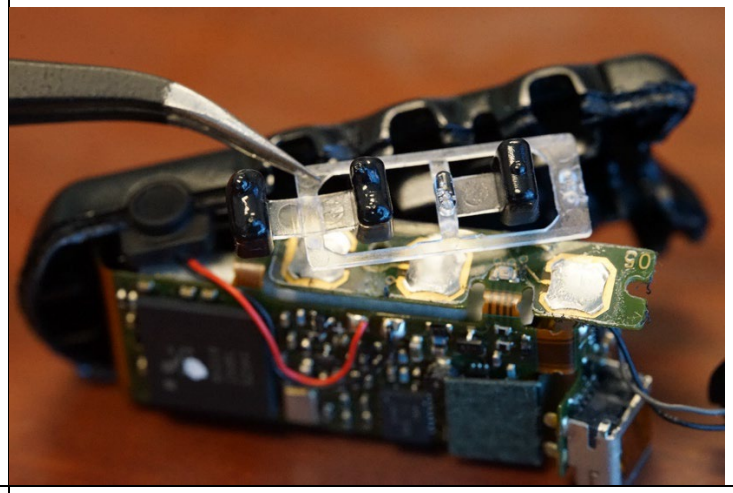
		 The orange ribon cables have an insulating layer.

		 The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The black wire is covered by an insulating layer that is disposed between one or more electronic components and the frame.

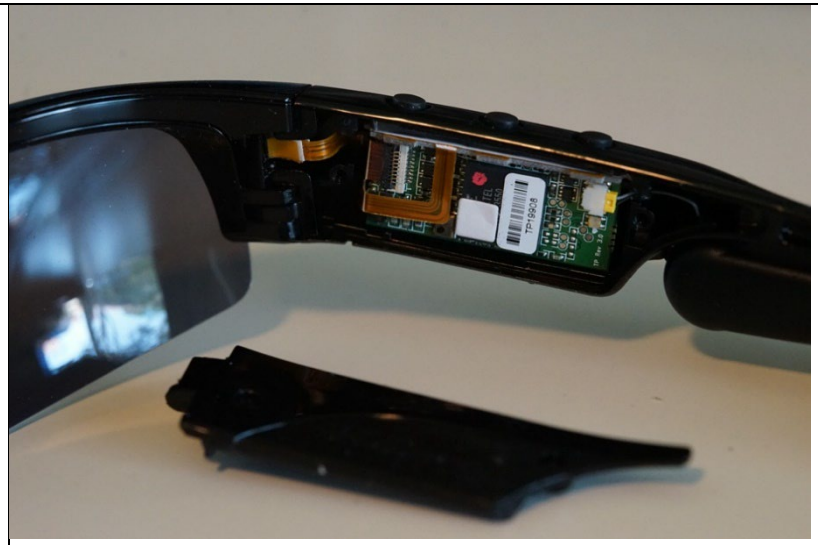
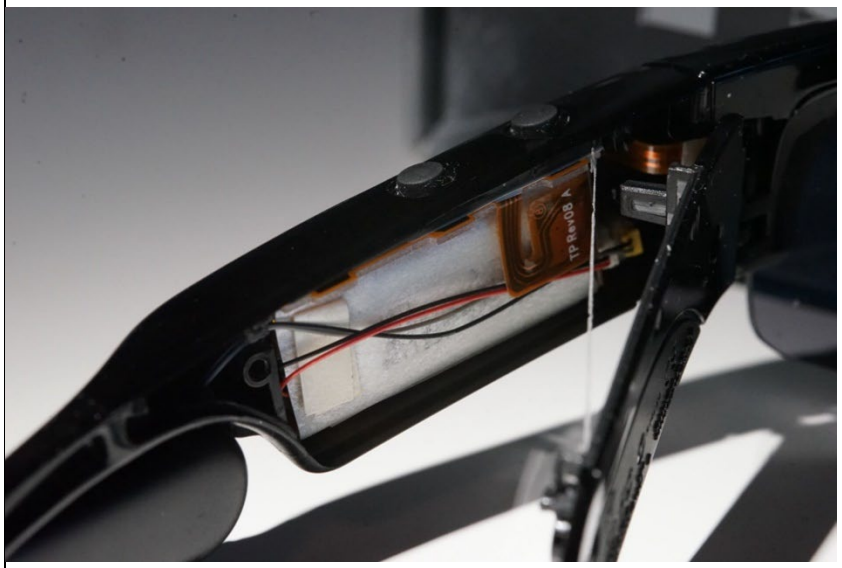
		 Alternatively, a POSITA would have been motivated to combine Kokonaski-999 with the disclosures of insulating layers in the Oakley Thump Pro or Oakley RAZRWire because this was common practice in the industry and would have been common sense to any POSITA. Insulating layers prevent electronic circuits from coming into direct contact with each other and causing undesirable and harmful short circuits. It was standard practice to insulate electric components. For example, a 2003 Generic Standard on Printed Board Design instructed that metal-cased components shall be "insulated from adjacent electrically conductive elements." IPC-2221A, 57, 64. Applying insulating layers as disclosed in Oakley Thump Pro or Oakley RAZRWire to Kokonaski-999 represents nothing more than the simple addition of one known element (insulating layer) to another known element (temple containing electronics) to obtain predictable results (electrically insulating the electronics from the temple to prevent circuits from being shorted or to reduce leakage current). Similarly, the combination represents the use of a known technique (surrounding electrical components with an insulating layer) to improve similar glasses in the same way.

[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	See IPR2024-01071 Petition § XII.B. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 2 also would have been obvious over Kokonaski-999 in view of Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Oakley Thump Pro/RAZRWire housing module comprises insulating layers. 

[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	See IPR2024-01071 Petition § XII.C. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 3 would have been obvious over Kokonaski-999 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	See IPR2024-01071 Petition § XII.D. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	See IPR2024-01071 Petition § XII.D. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 4 would have been obvious over Kokonaski-999 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included insulating layers disposed between the housing module and the electronics module, including the white square on the Sigmatel controller.  The RAZRWire also included insulating layers disposed between the housing module and electronics module including the insulating layers on the red and black wires and the transparent insulating layer on the sensors.

		
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	See IPR2024-01071 Petition § XII.E. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 5 would have been obvious over Kokonaski-999 and Oakley Thump Pro or Oakley RAZRWire. As discussed above for Claim 1, the Thump Pro included an insulating layer that comprises a portion of the electronics module. The Oakley RAZRWire also included insulating layers comprising a portion of the electronics module.
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	See IPR2024-01071 Petition § XII.F. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein. Alternatively, Claim 6 would have been obvious over Kokonaski-999 and Oakley Thump Pro or Oakley RAZRWire for the reasons explained for Claim 1.
[12]	The first device of claim 1, wherein the structural member comprises a cavity in the first temple; and wherein the	Claim 12 would have been obvious over Kokonaski-999 and Oakley Thump Pro, under Plaintiffs' contention for this claim.

	housing module is configured to be selectively placed within the cavity.	As Plaintiffs' contentions allege for the accused products, the Oakley Thump Pro includes various electronics located within a cavity of the structural member of the Oakley Thump Pro, and also includes a printed circuit board within the temple.

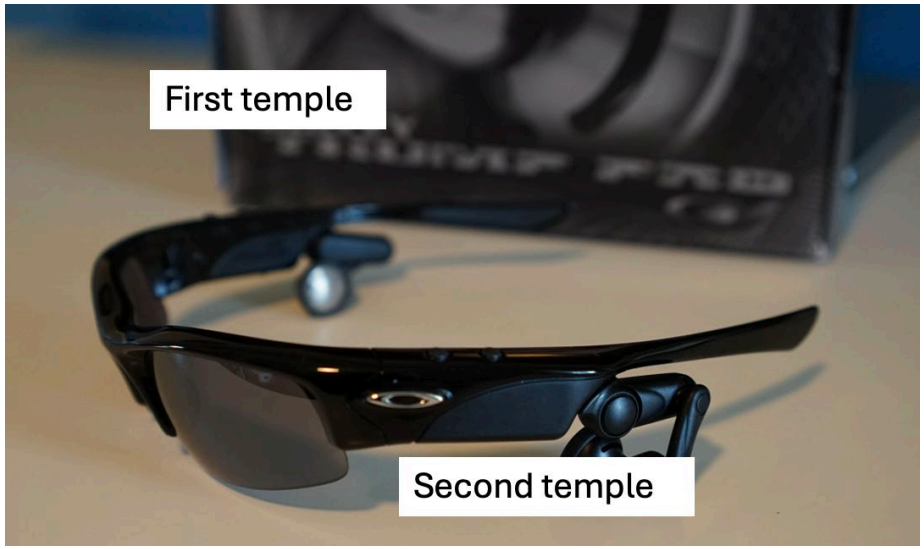
		 

[16]	The first device of claim 1, wherein the structural member comprises the first temple.	See IPR2024-01071 Petition § XII.K. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	See IPR2024-01071 Petition § XII.K. and portions of Kokonaski-999 and Howell-158 cited therein; See IPR2024-01071 Ex. 1002 § XI. and portions of Kokonaski-999 cited therein.

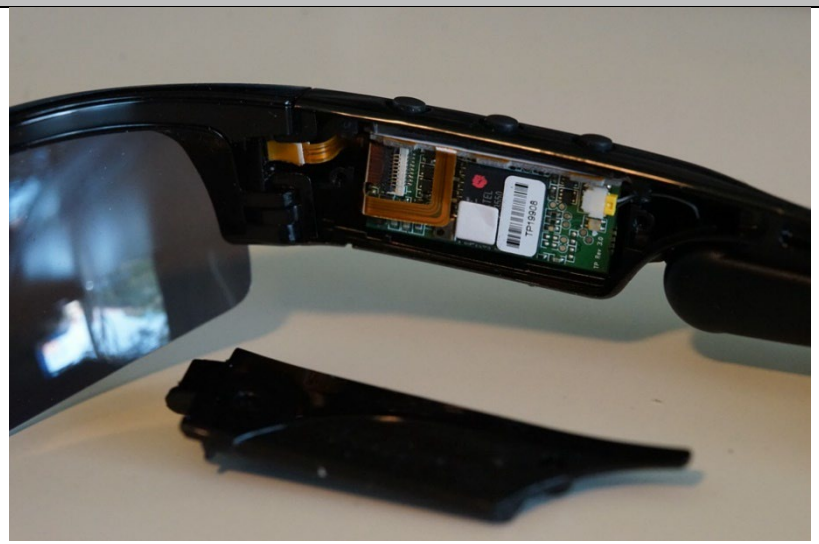
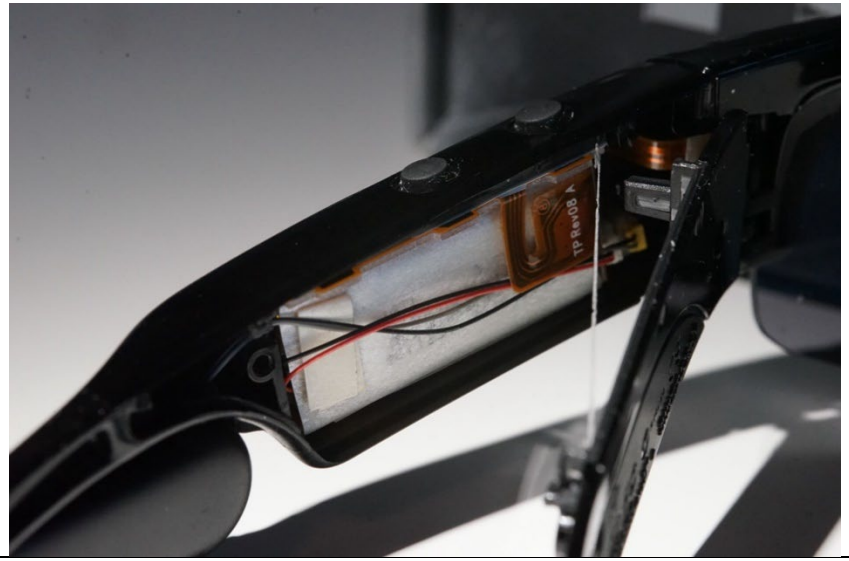
Exhibit C2 - Invalidity of U.S. Patent No. 8,905,541 Based on Oakley Thump Pro

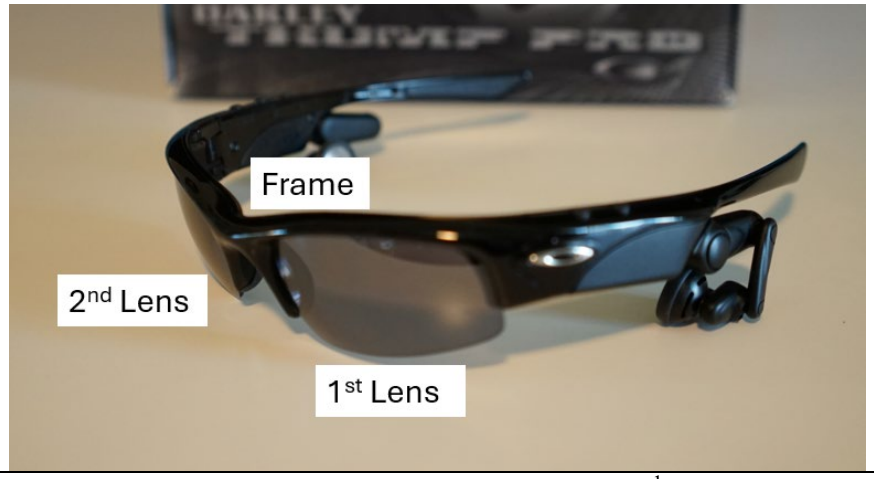
Upon information and belief, the Oakley Thump and Thump 2 had similar structures to the Oakley Thump Pro. Luxottica reserves the right to rely upon the Oakley Thump and/or the Thump 2 in addition to the Thump Pro.

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	The Oakley Thump Pro is a first device.

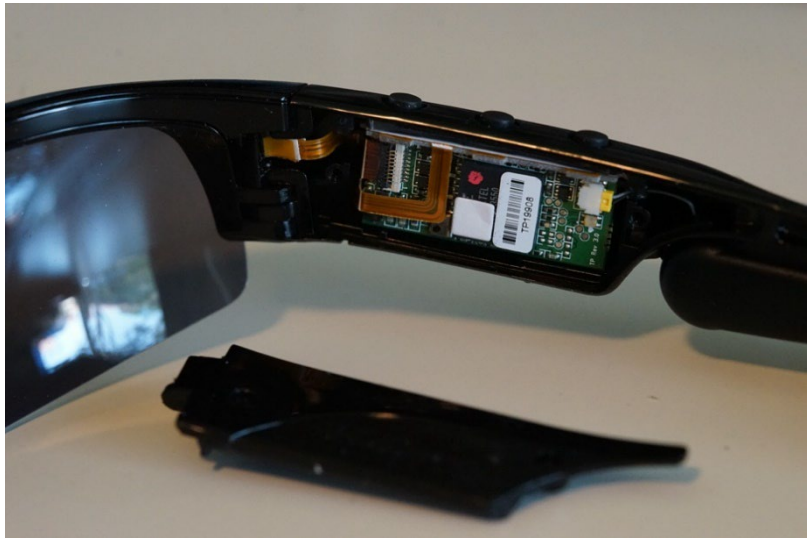
Claim Limitation	Claim Language	Prior Art Disclosure
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	The Oakley Thump Pro has a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member. 

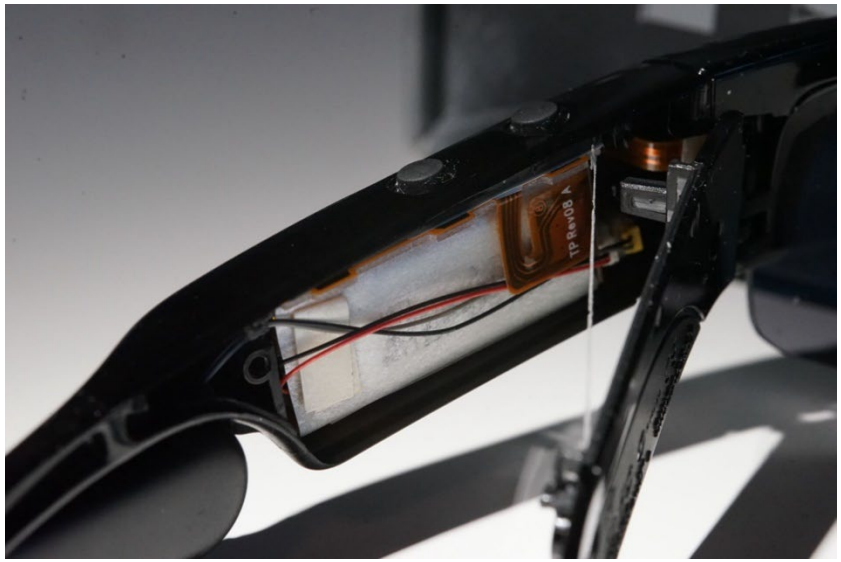
Claim Limitation	Claim Language	Prior Art Disclosure
		Luxottica notes that the identification of the right and left temples as the first and second temples, respectively, is arbitrary, and Luxottica reserves all rights to rely on the left and right temples, as the first and second temples, respectively. The Oakley Thump Pro has a frame comprising a housing module coupled to a structural member. The Oakley Thump Pro has a housing module coupled to a structural member, as shown below:

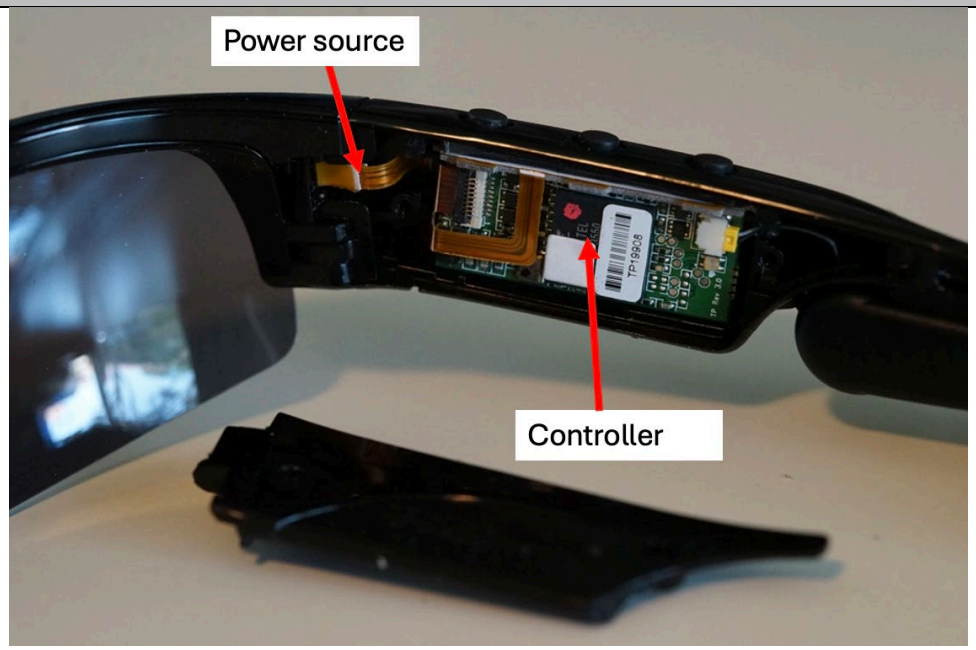
Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, the Oakley Thump Pro has a housing module coupled to a structural member, as shown below: 

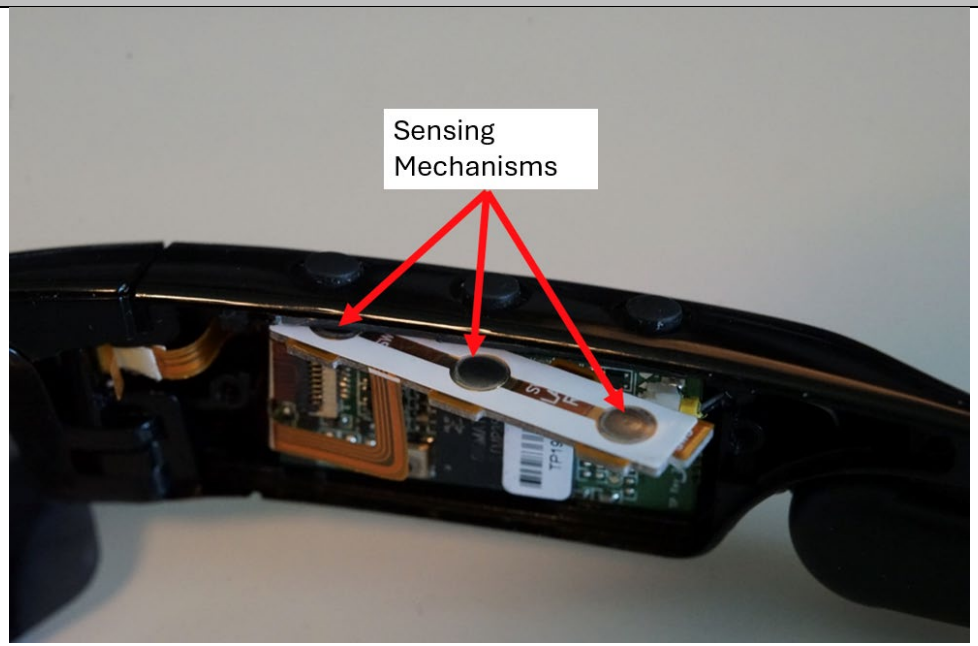
Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a first lens and a second lens coupled to the frame; and	The Oakley Thump Pro has a first lens and a second lens coupled to the frame, as shown below: 
[1C]	an electronics module, wherein the electronics module is located within the housing module;	The Oakley Thump Pro has an electronics module[1] in the temple, wherein the electronics module is located within the housing module, under Plaintiffs' contention for this limitation. Under Plaintiffs' contention for this limitation, the Oakley Thump Pro has an electronics module located within a housing module that coupled to a structural member in the right temple, as shown below:

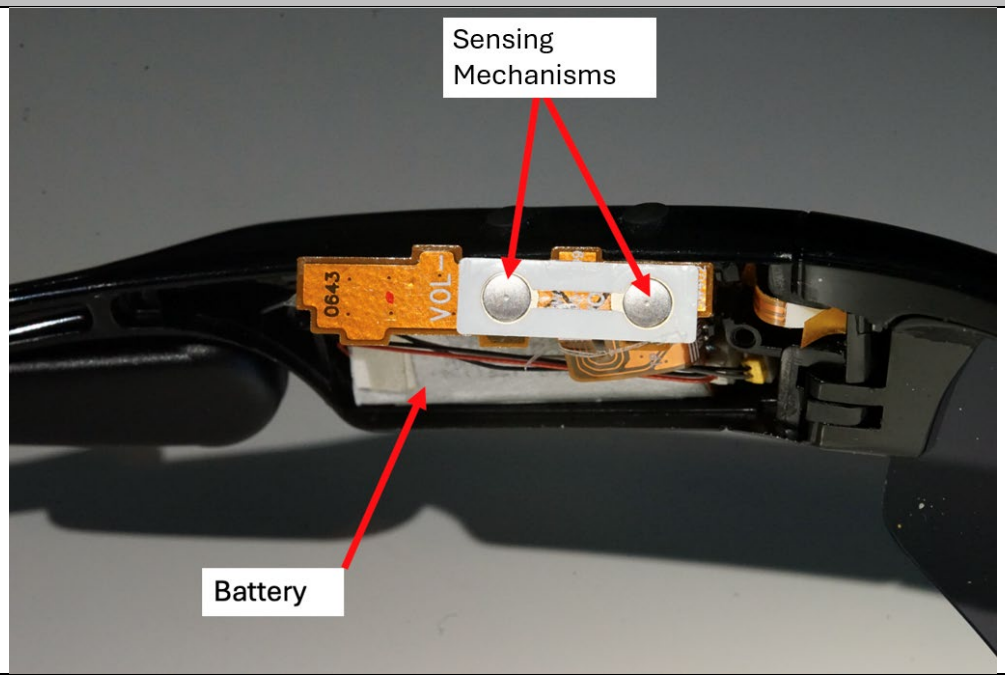
[1] References herein to "electronics module" address Plaintiff's interpretation that electronics module reads on a printed circuit board.

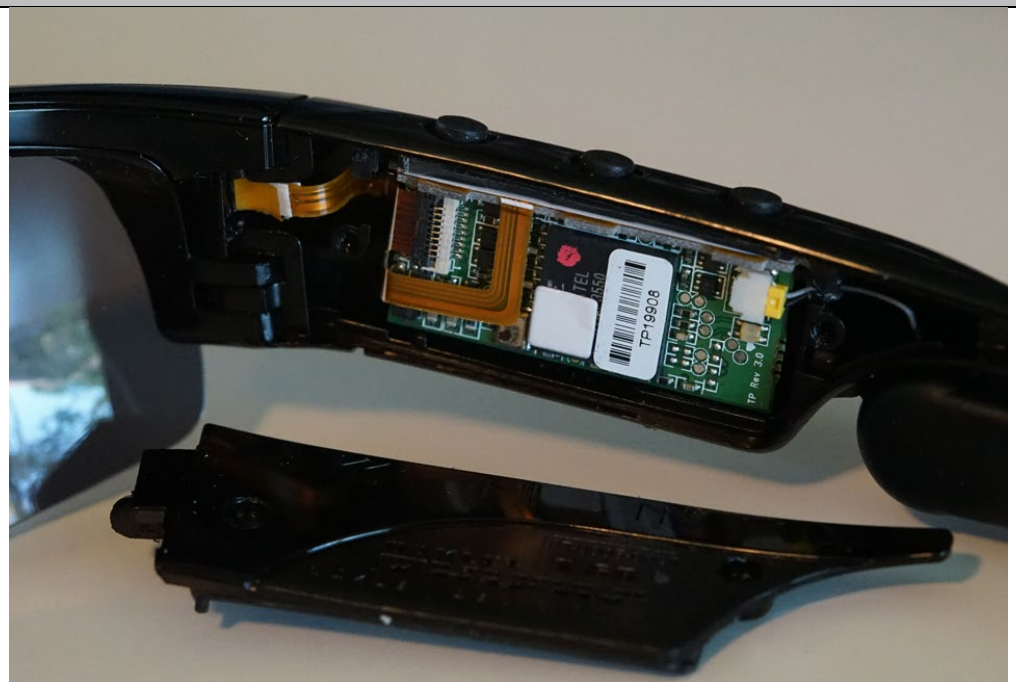
Claim Limitation	Claim Language	Prior Art Disclosure
		  

Claim Limitation	Claim Language	Prior Art Disclosure
		Alternatively, under Plaintiff's interpretation that an electronics module reads on a printed circuit board, the Oakley Thump Pro has an electronics module located within a housing module that is coupled to a structural member, as shown below: 
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	The Oakley Thump Pro has an electronic module that comprises at least any two of: a power source; a controller; and a sensing mechanism, under Plaintiffs' contention for this limitation. Under Plaintiffs' contention for this limitation, the electronics module in the right temple of the Oakley Thump Pro contains a power source, namely, the ribbon cable which supplies at least power from the battery located in the left temple, a controller, namely, the Sigmatel STMP3550, and at least three sensing mechanisms corresponding to the three playback control buttons, as shown below.

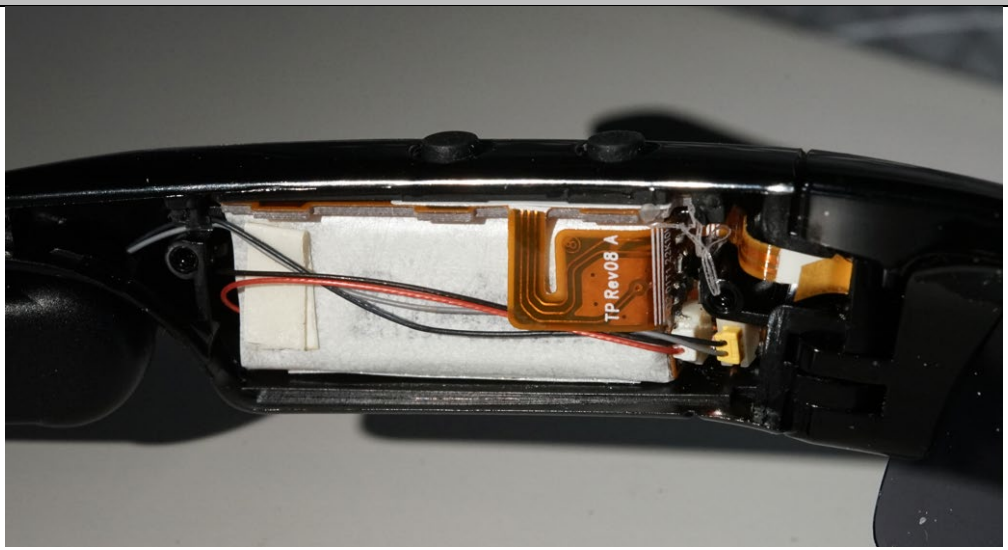
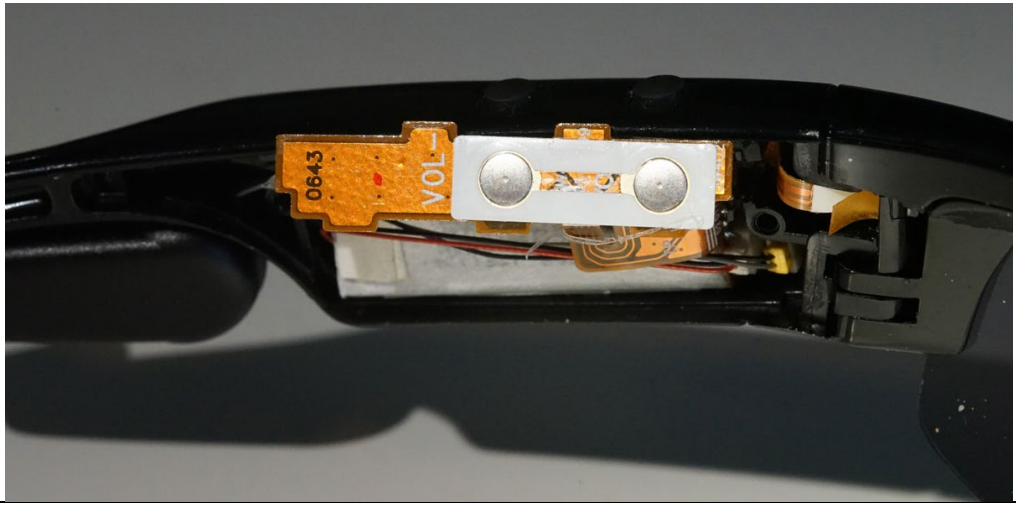
Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		 Under Plaintiffs' contention for this limitation, alternatively, the electronics module contains a power source, namely the battery, and at least two sensing mechanisms corresponding to the volume controls, as shown below.

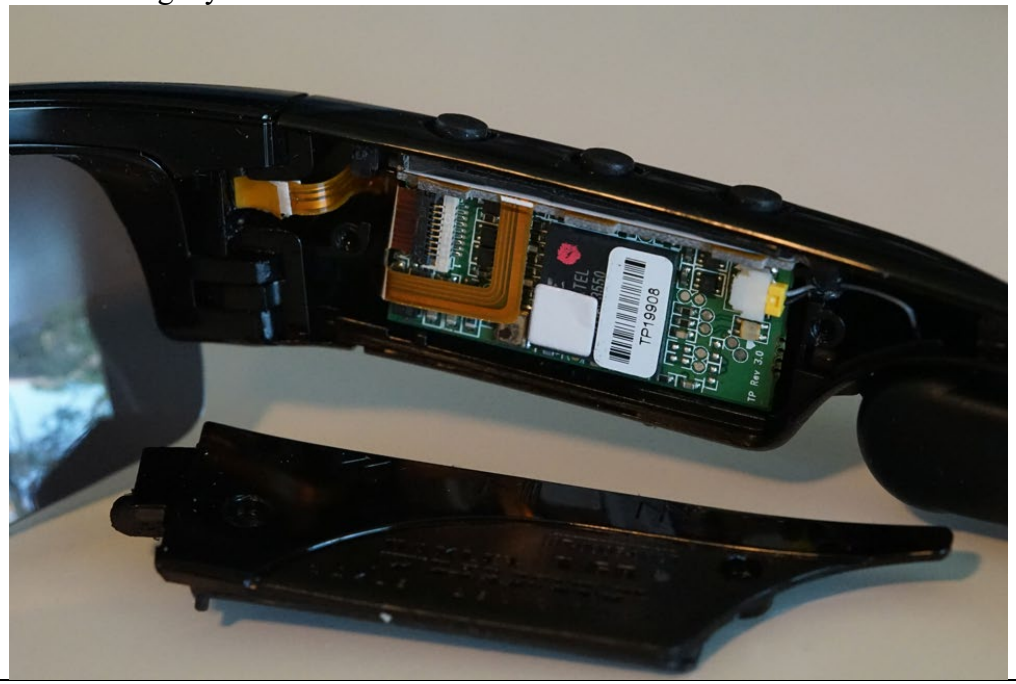
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1E]	wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.	The Oakley Thump Pro has numerous insulating layers that are disposed between one or more electronic components located within the electronics module and the frame of the first device. The Oakley Thump Pro has electronics modules containing layers of glue, plastic, and/or paper. The housing module for the right temple comprises a black plastic material. The electronics module in the right temple has multiple insulating layers. There is a white square-shaped insulating material adhered to the processor. That white insulating material is an insulating layer that is disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging, which is an insulating layer that is disposed between one or more electronic components and the frame. The orange ribbon cable has an insulating layer that is disposed between one or more electronic components and the frame and is also covered by an insulating layer that is disposed between one or more electronic components and the frame.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The sensing mechanisms are on a board. There is also a white insulating layer between the three metal circles and the board, and this insulating layer is disposed between one or more electronic components and the frame.

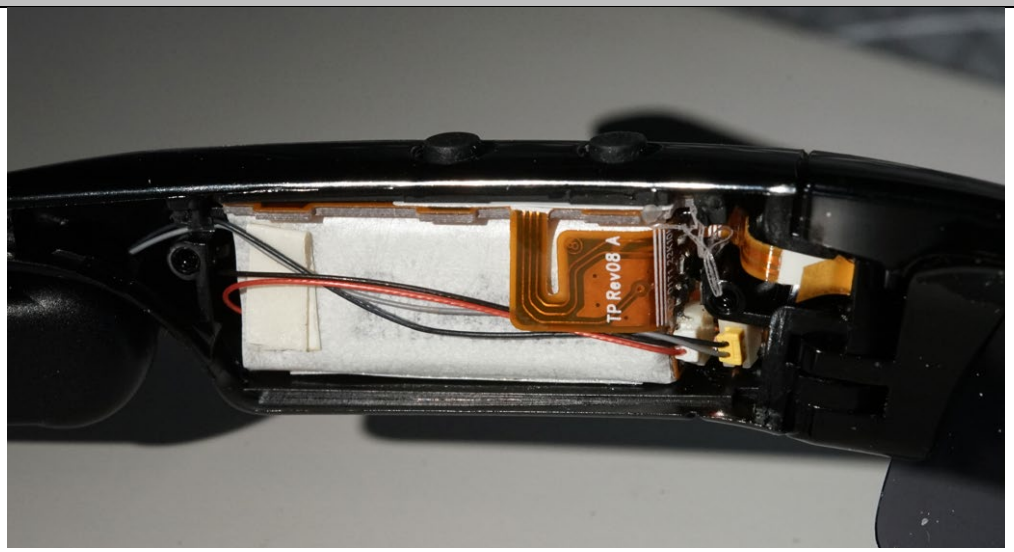
Claim Limitation	Claim Language	Prior Art Disclosure
		  The housing module for the left temple comprises a black plastic material. The electronics module in the left temple has multiple insulating layers. The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The red, grey, and black wires are covered by insulating layers that are disposed between one or more electronic components and the frame. There is adhesive tape on the battery. The orange ribbon cable has an insulating layer.

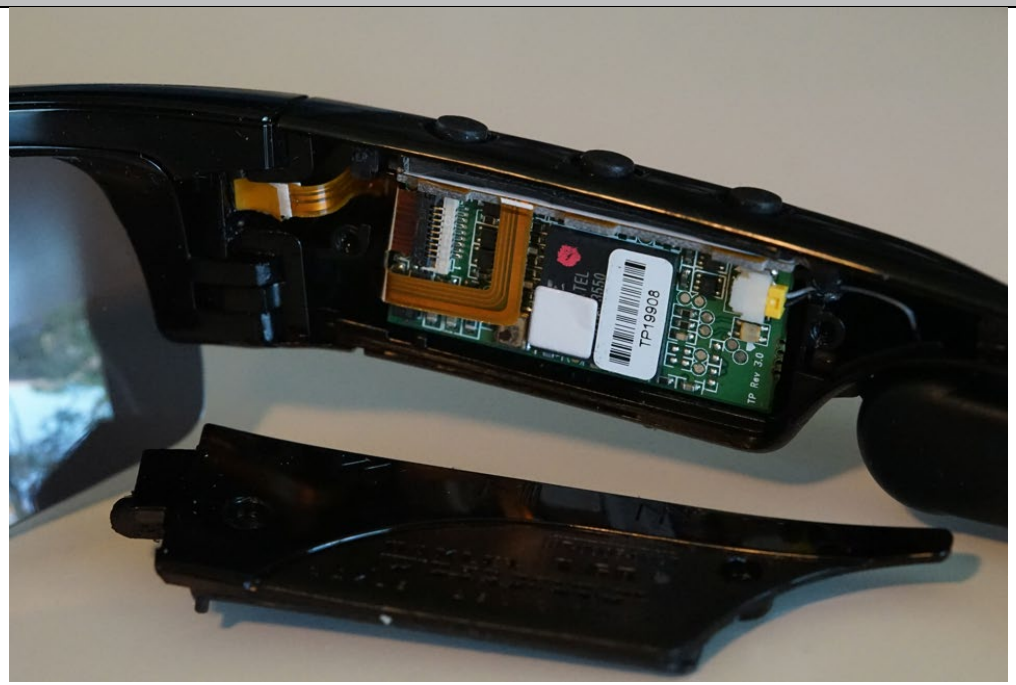
Claim Limitation	Claim Language	Prior Art Disclosure
		 The sensing mechanisms are on a board, which has an insulating layer that is disposed between one or more electronic components and the frame. There is also a white insulating layer between the two metal circles and the board. 

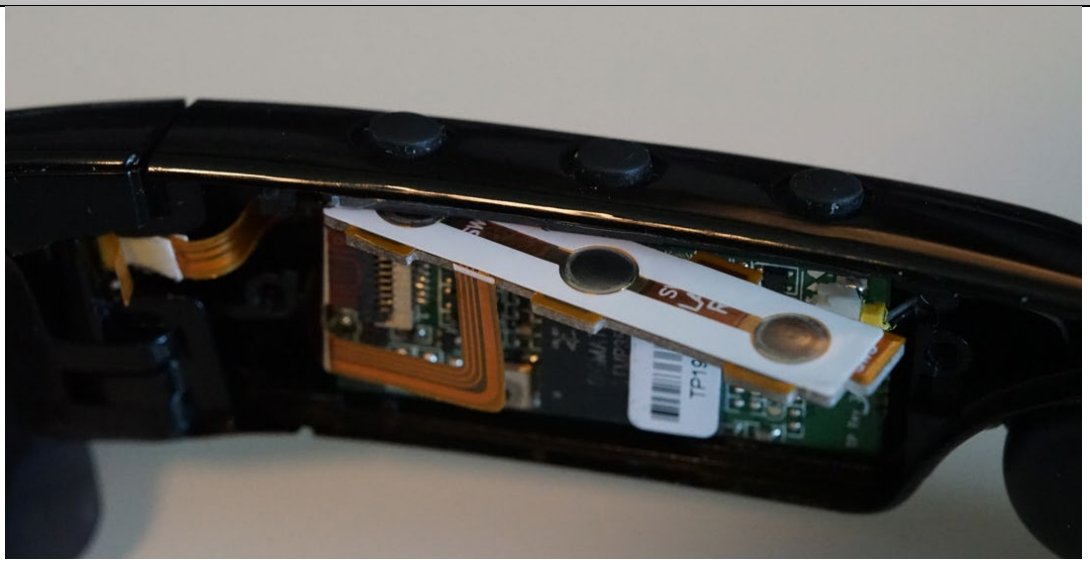
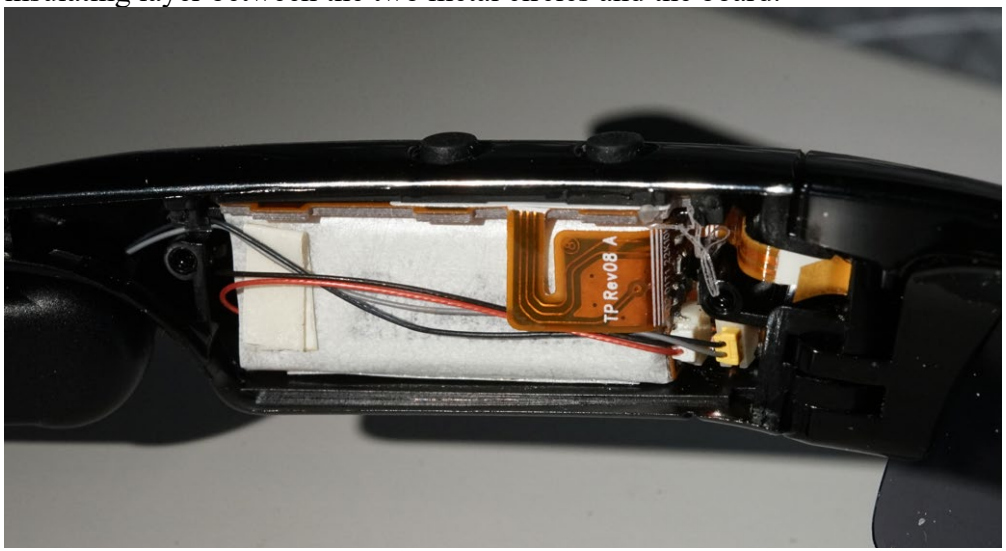
Claim Limitation	Claim Language	Prior Art Disclosure
[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	The Oakley Thump Pro has a housing module in the temple that comprises an insulating layer, under Plaintiffs' contention for this limitation. The housing module for each temple comprises a black plastic material, which is an insulating layer. As discussed above with respect to Limitation [1E], the Oakley Thump Pro has an electronics module within the housing module in each temple that comprises numerous insulating layers. *See* Limitation [1E]. In addition, the right temple has an electronics module with integrated circuits that each have plastic packaging.
[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	As discussed above with respect to Limitation [1D], the Oakley Thump Pro has an electronics module in each temple that comprises conductive material, under Plaintiffs' contention for this limitation. *See* Limitation [1D]. The Oakley Thump Pro contains a printed circuit board that comprises conductive materials.
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	Under Plaintiffs' contention for this limitation, as discussed above with respect to Limitation 3, the Oakley Thump Pro has a housing module that comprises conductive material. *See* Limitation [3]. Alternatively, it also would have been obvious to use a conductive material such as a metallic material for the housing module. Eyeglasses, including eyeglass temples, were commonly

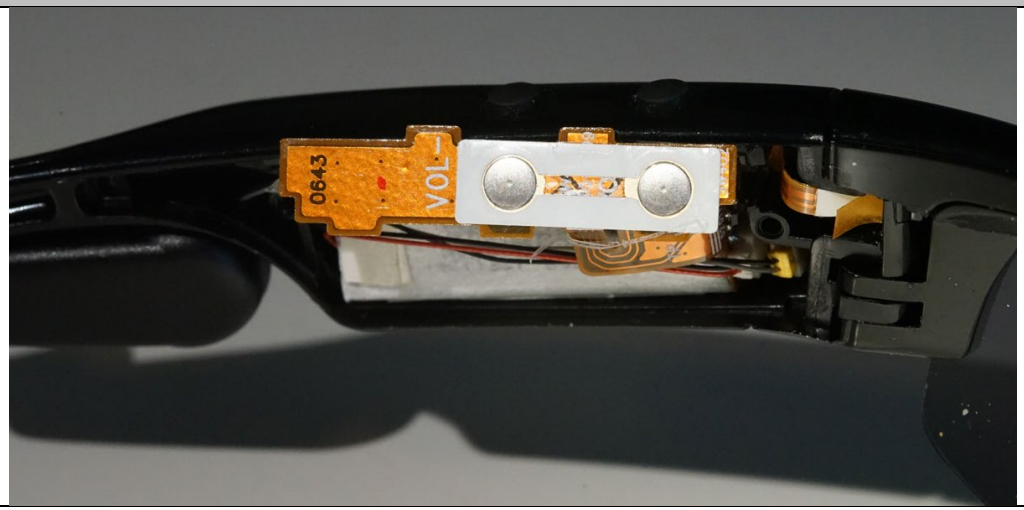
Claim Limitation	Claim Language	Prior Art Disclosure
		made from conductive materials such as metals, and it would have been obvious as a design choice to incorporate the electronics module within a housing module that is metallic. This would have been an obvious design choice at least because eyewear also serves a fashion and aesthetic function and many styles of eyewear were made from metallic materials. *See also* Spitzer at 8:20-23 ("Additionally, if the temple is made from metal or is metal coated, the circuits can be shielded so that the radio frequency interference from the internal circuits is minimized.").
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	As discussed above with respect to Limitation [1E], the Oakley Thump Pro has an insulating layer disposed between at least a portion of the housing module and the electronics module in each temple, under Plaintiffs' contention for this limitation. *See* Limitation [1E]. There is a white square like insulating material adhered to the processor. The integrated circuits on the circuit board are housed within plastic packaging. The orange ribbon cable has an insulating layer. 

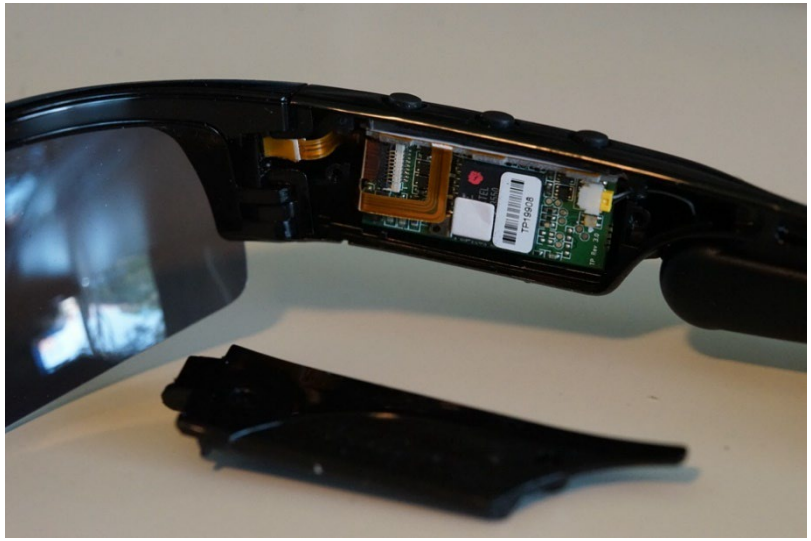
Claim Limitation	Claim Language	Prior Art Disclosure
		The sensing mechanisms are on a board, which has an insulating layer that is disposed between at least a portion of the housing module and the electronics module. The sensing mechanisms are on a board, which has an insulating layer that is disposed between at least a portion of the housing module and the electronics module. There is also a white insulating layer between the two metal circles and the board that is disposed between at least a portion of the housing module and the electronics module.

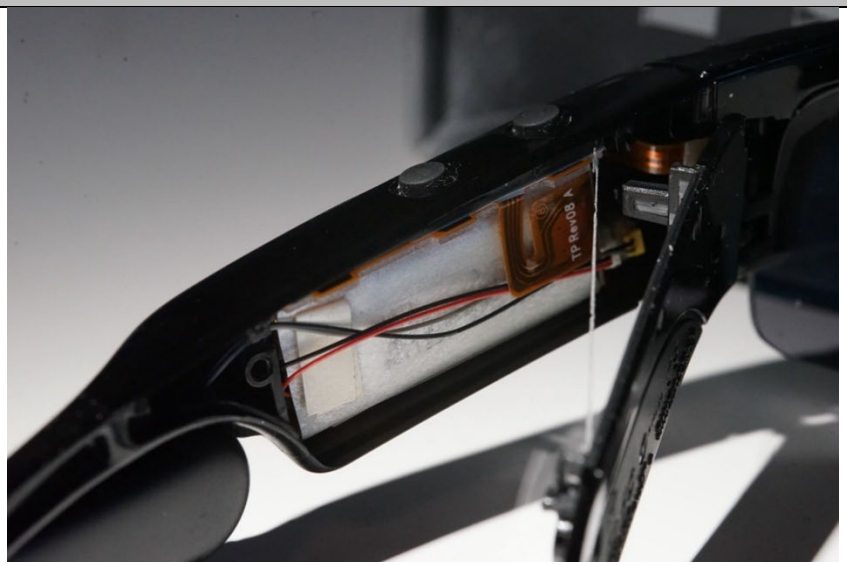
Claim Limitation	Claim Language	Prior Art Disclosure
		 *See also* Spitzer at 8:20-23 ("Additionally, if the temple is made from metal or is metal coated, the circuits can be shielded so that the radio frequency interference from the internal circuits is minimized.").
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	As discussed above with respect to Limitation [1E], the Oakley Thump Pro has an insulating layer that comprises a portion of the electronics module, under Plaintiffs' contention for this limitation. *See* Limitation [1E]. There is a white square like insulating material adhered to the processor. The integrated circuits on the circuit board are housed within plastic packaging. The orange ribbon cable has an insulating layer.

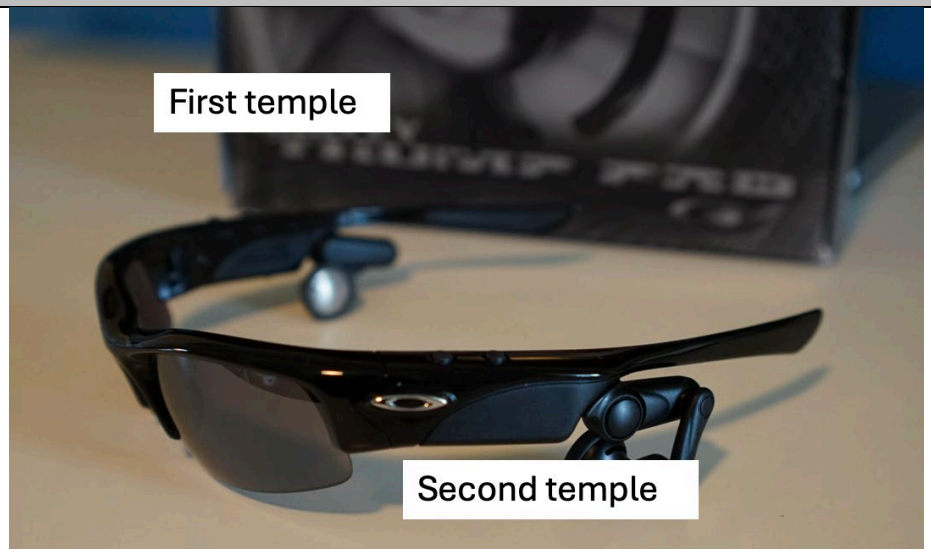
Claim Limitation	Claim Language	Prior Art Disclosure
		 The sensing mechanisms are on a board, which has an insulating layer.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The sensing mechanisms are on a board, which has an insulating layer. There is also a white insulating layer between the two metal circles and the board. 

Claim Limitation	Claim Language	Prior Art Disclosure
		
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	As discussed above with respect to Limitation 3, the Oakley Thump Pro has a housing module that comprises conductive material, under Plaintiffs' contention for this limitation. The Oakley Thump Pro includes electronics in the electronics modules that are located in the housing module, under Plaintiffs' contention for this limitation. *See* Limitation [3]. Alternatively, it would have been obvious to form the housing module using a conductive material as described with respect to Limitation [4A].
[12]	The first device of claim 1, wherein the structural member comprises a cavity in the first temple; and wherein the housing module is configured to be selectively placed within the cavity.	The Oakley Thump has a structural member that comprises a cavity in the first temple, wherein the housing module is configured to be selectively placed within the cavity, under Plaintiffs' contention for this claim. As Plaintiffs' contentions allege for the accused products, the Oakley Thump Pro includes various electronics located within a cavity of the structural member of the Oakley Thump Pro, and also includes a printed circuit board within the temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		  

Claim Limitation	Claim Language	Prior Art Disclosure
		
[16]	The first device of claim 1, wherein the structural member comprises the first temple.	The Oakley Thump Pro has a structural member that comprises the first temple. Each temple of the Oakley Thump Pro has a structural member that comprises the temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	The Oakley Thump Pro has a first temple that comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple, under Plaintiffs' contention for this limitation. As Plaintiffs' contentions allege for the accused products, the Oakley Thump includes various electronics in at least one module located at at least one portion of the temple as shown in the image below.

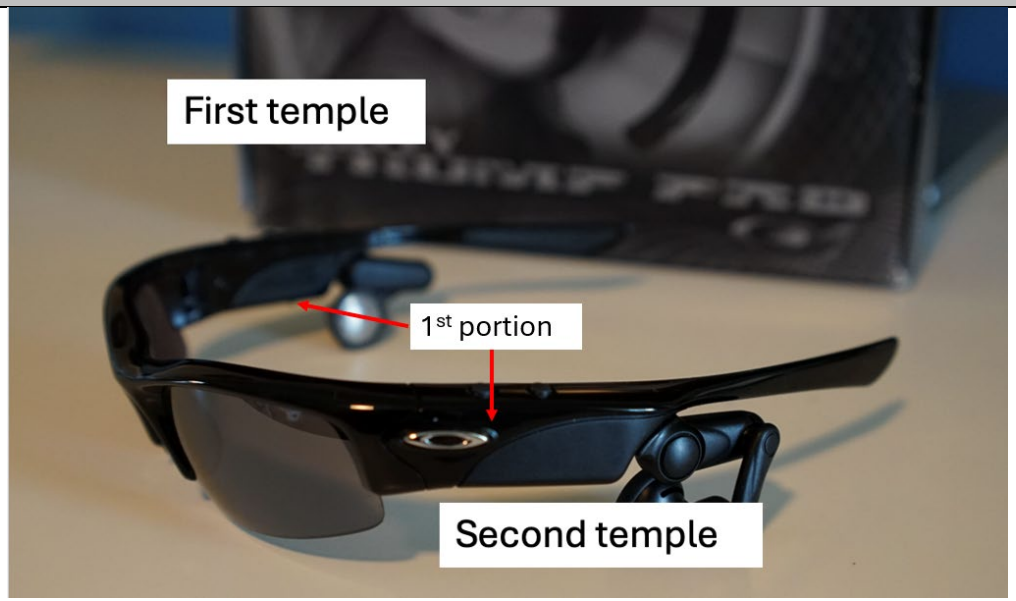
Claim Limitation	Claim Language	Prior Art Disclosure
		

Exhibit C3 - Invalidity of U.S. Patent No. 8,905,541 Based on Oakley RAZRWire

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	A first device, comprising:	The Oakley RAZRWire a first device.
[1A]	a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member;	The Oakley RAZRWire has a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member.

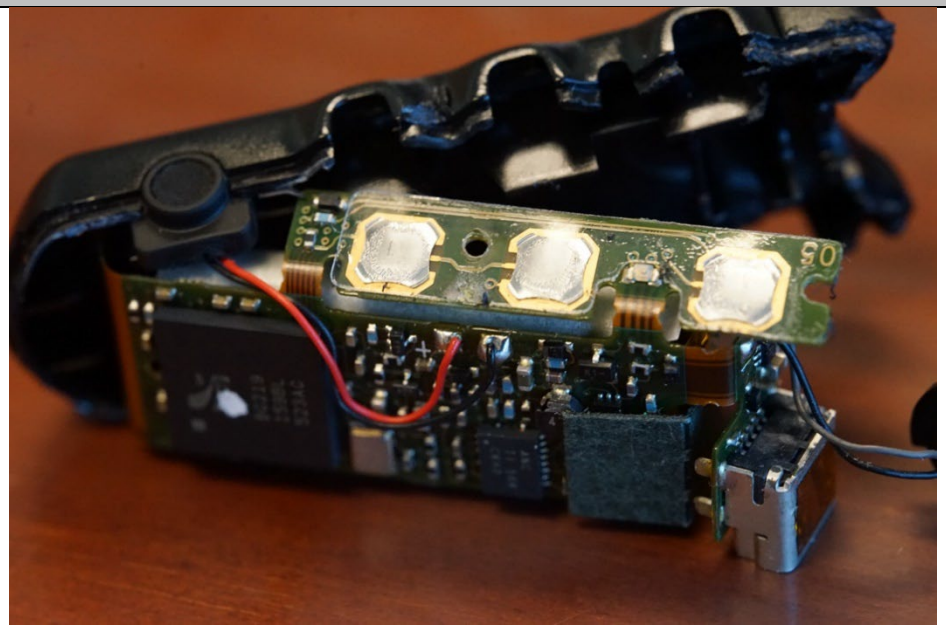
Claim Limitation	Claim Language	Prior Art Disclosure
		The module is swappable between the left and right temples.
[1B]	a first lens and a second lens coupled to the frame; and	The Oakley RAZRWire has a first lens and a second lens coupled to the frame, as shown below:
[1C]	an electronics module, wherein the electronics module is located within the housing module;	The Oakley RAZRWire has an electronics module,[1] wherein the electronics module is located within the housing module, under Plaintiffs' contention for this limitation.

[1] References herein to "electronics module" address Plaintiff's interpretation that electronics module reads on a printed circuit board.

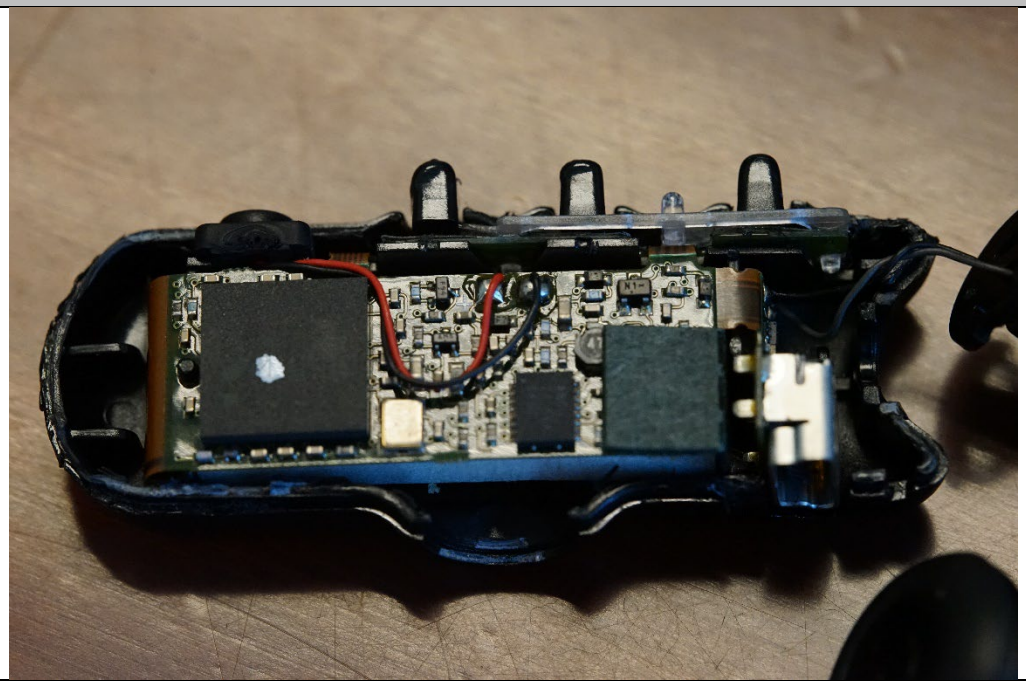
Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
[1D]	wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and	The Oakley RAZRWire has an electronic module that comprises at least any two of: a power source; a controller; and a sensing mechanism, under Plaintiffs' contention for this limitation. Under Plaintiffs' contention for this limitation, the electronics module includes a power source, namely, the battery, a controller, and at least three switches/sensors corresponding to the three buttons.

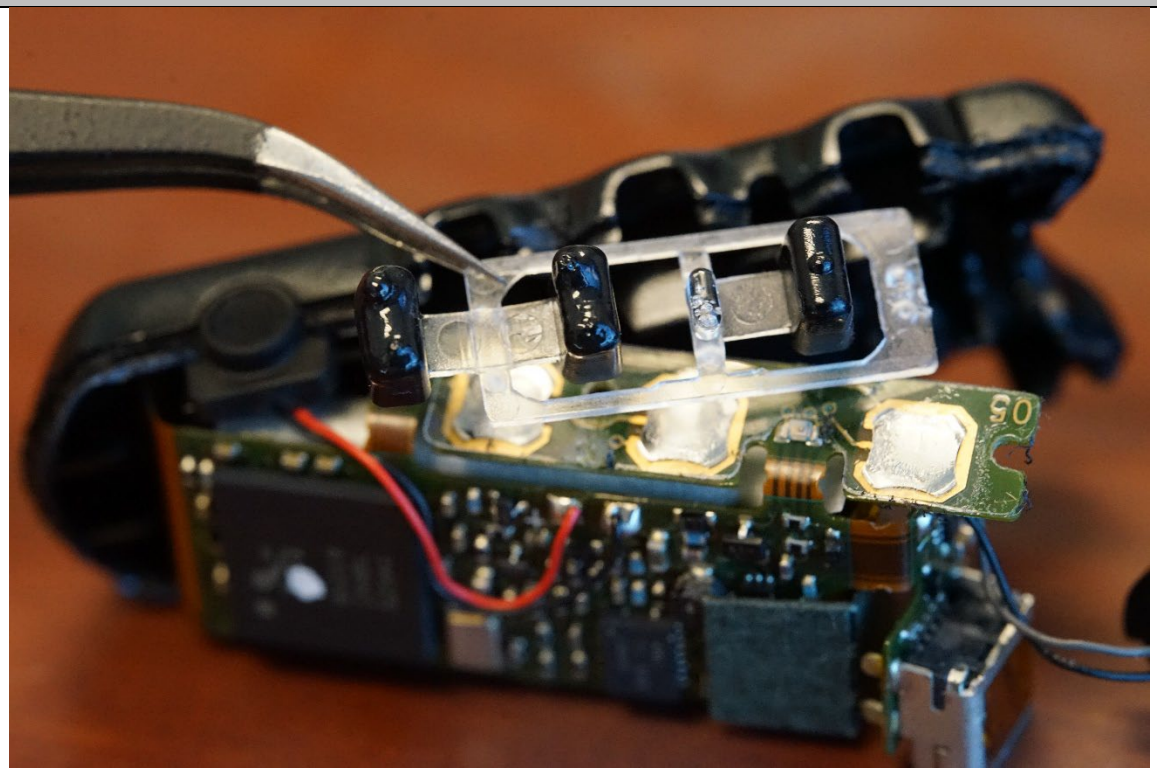
Claim Limitation	Claim Language	Prior Art Disclosure
		Above: Electronics module in RAZRWire, showing controller on left side of PCB.

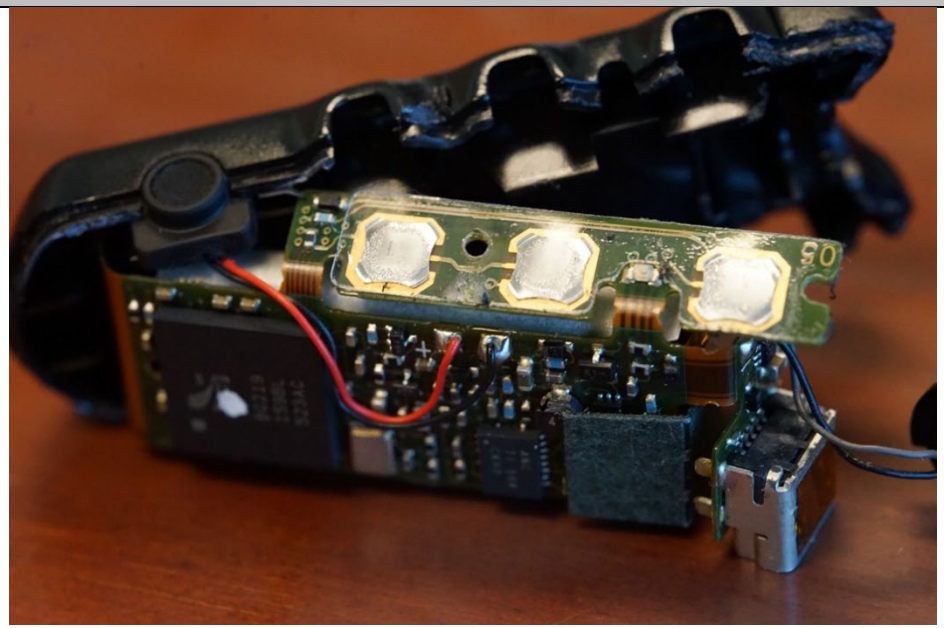
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Three sensors/switches

Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Battery
[1E]	wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.	The Oakley RAZRWire has numerous insulating layers that are disposed between one or more electronic components located within the electronics module and the frame of the first device. The Oakley RAZRWire has electronics modules containing layers of glue, plastic, and/or paper. The housing module comprises a black plastic material. The electronics module has multiple insulating layers. The two integrated circuits shown in the photo below both comprise a black plastic package which is an insulating material. Those black insulating materials are insulating layers that are disposed between one or more electronic components and the frame. The integrated circuits on the circuit board are housed within plastic packaging. The red and black wires have an insulating layer that is disposed between one or more electronic components and the frame.

Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		The sensing mechanisms are on a board. There is also a transparent insulating layer between the three metal circles and the board.

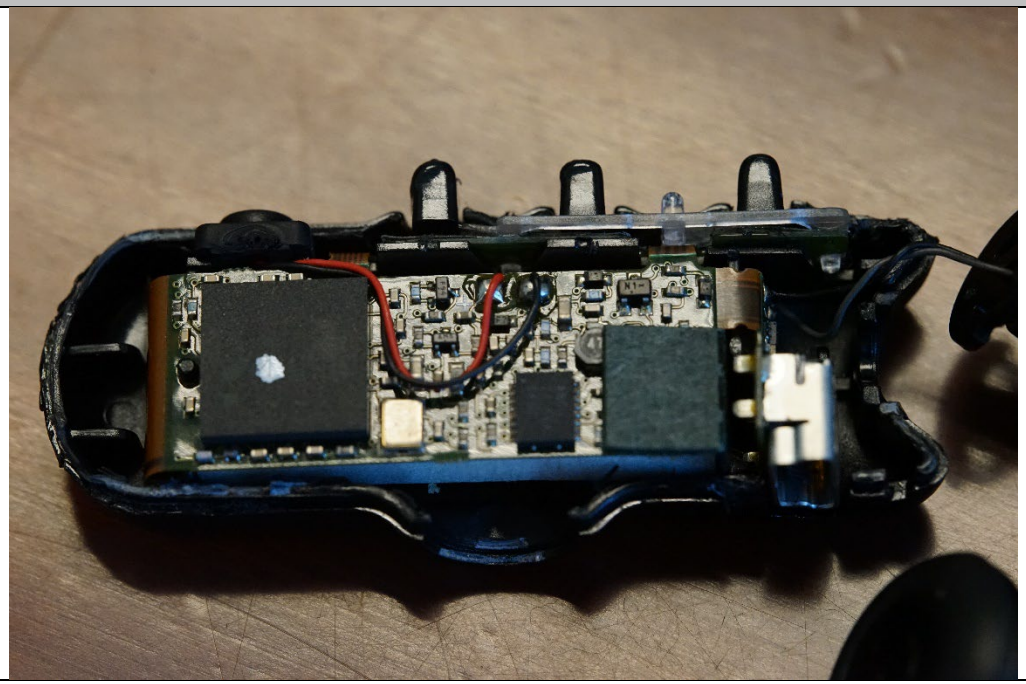
Claim Limitation	Claim Language	Prior Art Disclosure
		 The orange ribon cables have an insulating layer.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The battery is covered by an insulating layer that is disposed between one or more electronic components and the frame. The black wire is covered by an insulating layer that is disposed between one or more electronic components and the frame.

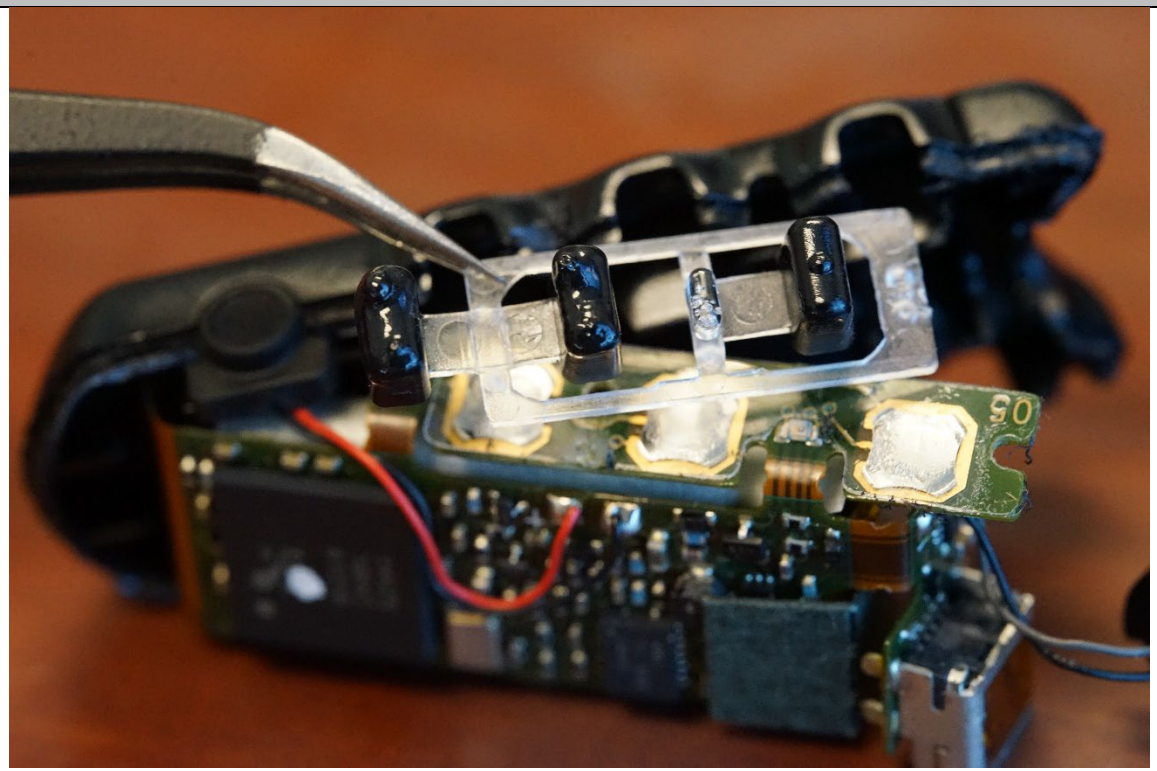
Claim Limitation	Claim Language	Prior Art Disclosure
[2]	The first device of claim 1, wherein the housing module comprises the insulating layer.	The Oakley RAZRWire has a housing module that comprises an insulating layer, under Plaintiffs' contention for this limitation. The housing module comprises a black plastic material, which is an insulating layer. As discussed above with respect to Limitation [1E], the Oakley RAZRWire has an electronics module within the housing module that comprises numerous insulating layers. *See* Limitation [1E]. In addition, the electronics module has integrated circuits that each have plastic packaging.
[3]	The first device of claim 2, wherein the electronics module comprises a conductive material.	As discussed above with respect to Limitation [1D], the Oakley RAZRWire has an electronics module that comprises conductive material, under Plaintiffs' contention for this limitation. *See* Limitation [1D]. The Oakley RAZRWire contains a printed circuit board that comprises conductive materials.

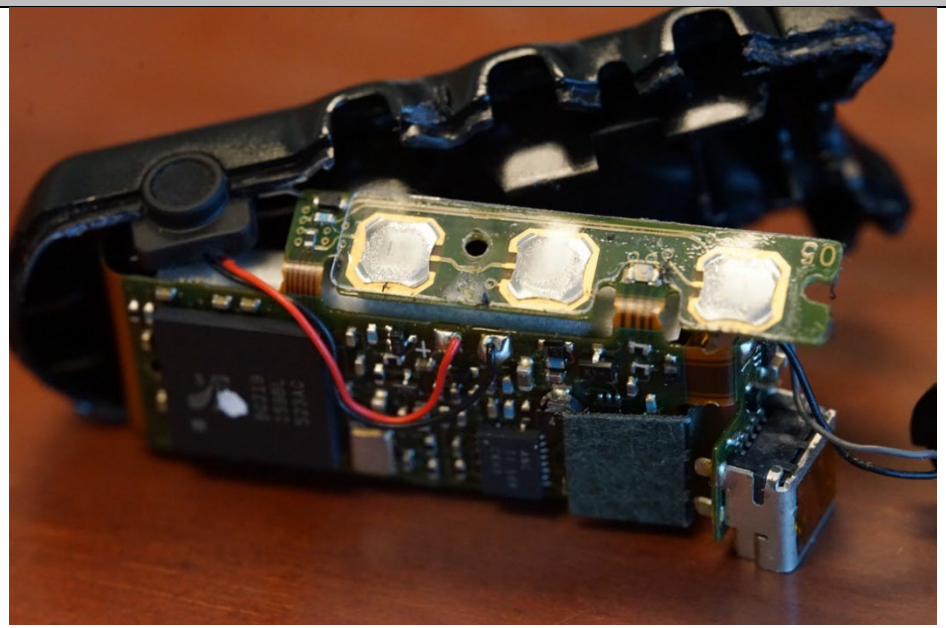
Claim Limitation	Claim Language	Prior Art Disclosure
[4A]	The first device of claim 1, wherein the housing module comprises a conductive material; and	Under Plaintiffs' contention for this limitation, as discussed above with respect to Limitation 3, the Oakley RAZRWire has a housing module that comprises conductive material. *See* Limitation [3]. Alternatively, it also would have been obvious to use a conductive material such as a metallic material for the housing module. Eyeglasses, including eyeglass temples, were commonly made from conductive materials such as metals, and it would have been obvious as a design

Claim Limitation	Claim Language	Prior Art Disclosure
		choice to incorporate the electronics module within a housing module that is metallic. This would have been an obvious design choice at least because eyewear also serves a fashion and aesthetic function and many styles of eyewear were made from metallic materials. *See also* Spitzer at 8:20-23 ("Additionally, if the temple is made from metal or is metal coated, the circuits can be shielded so that the radio frequency interference from the internal circuits is minimized.").
[4B]	wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.	The Oakley RAZRWire has an insulating layer disposed between at least a portion of the housing module and the electronics module. Under Plaintiffs' contention for this limitation, the Oakley RAZRWire has electronics modules containing layers of glue, plastic, and/or paper. . The integrated circuits on the circuit board are housed within plastic packaging. The red and black wires have an insulating layer that is disposed between at least a portion of the housing module and the electronics module.

Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		The sensing mechanisms are on a board. There is also a transparent insulating layer between the three metal circles and the board.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The orange ribon cables have an insulating layer.

Claim Limitation	Claim Language	Prior Art Disclosure
		 The battery is covered by an insulating layer that is disposed between at least a portion of the housing module and the electronics module. The black wire is covered by an insulating layer that is disposed between at least a portion of the housing module and the electronics module.

Claim Limitation	Claim Language	Prior Art Disclosure
		  See also Spitzer at 8:20-23 ("Additionally, if the temple is made from metal or is metal coated, the circuits can be shielded so that the radio frequency interference from the internal circuits is minimized.").
[5]	The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.	As discussed above with respect to Limitation [1E], the Oakley RAZRWire has an insulating layer that comprises a portion of the electronics module, under Plaintiffs' contention for this limitation. *See* Limitation [1E].
[6]	The first device of claim 5, wherein the housing module comprises a conductive material.	As discussed above with respect to Limitation 3, the Oakley RAZRWire has a housing module that comprises conductive material, under Plaintiffs' contention for this limitation. The Oakley RAZRWire includes electronics in the electronics module that is located in the housing module, under Plaintiffs' contention for this limitation. *See* Limitation [3]. Alternatively, it would have been obvious to form the housing module using a conductive material as described with respect to Limitation [4A].

Claim Limitation	Claim Language	Prior Art Disclosure
[16]	The first device of claim 1, wherein the structural member comprises the first temple.	The Oakley RAZRWire has a structural member that comprises the first temple.
[17]	The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.	The Oakley RAZRWire has a first temple that comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple, under Plaintiffs' contention for this limitation. As Plaintiffs' contentions allege for the accused products, the Oakley RAZRWire includes various electronics in at least one module located at at least one portion of the temple as shown in the image below.

Claim Limitation	Claim Language	Prior Art Disclosure

Exhibit D1 - Invalidity of U.S. Patent No. 10,598,960

1. Jannard-740

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	See IPR2024-01072 Petition § VII.A.1. and portions of Jannard-740 cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.
[1A]	an eyewear frame having a first temple and a second temple;	See IPR2024-01072 Petition § VII.A.2. and portions of Jannard-740 cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.
[1B]	a speaker supported by the eyewear frame;	See IPR2024-01072 Petition § VII.A.3. and portions of Jannard-740 cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.
[1C]	an application module mechanically coupled to the eyewear frame and operably coupled to the speaker, the application module comprising:	See IPR2024-01072 Petition § VII.A.4. and portions of Jannard-740 cited therein, §§ IX.A.–B.2. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.
[1D]	a microphone and a wireless chip	See IPR2024-01072 Petition § VII.A.5. and portions of Jannard-740 cited therein, §§ IX.A.–B.2. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.
[1E]	to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and	See IPR2024-01072 Petition § VII.A.6. and portions of Jannard-740 cited therein, §§ IX.A.–B.3. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein.

	provide the response to the wearer via the speaker.	Alternatively, Claim 1 also would have been obvious over Jannard-740 in combination with the Siri function on an external device like the Apple iPhone 4S. On or around October 4, 2011, Apple Inc. provided a demonstration of Siri during the announcement of the iPhone 4S. *See* https://www.youtube.com/watch?v=GUO6ZUDfTpE (LUX00015455)"("Siri Demo"). During the demonstration, an Apple representative used an iPhone with Siri to ask a verbal query and receive a response to the verbal query (e.g., "Q: What is the weather like today? A. "Here's the forecast for today" – Siri Demo at 3:54-4:03). It would have been obvious to a POSITA to combine the Jannard-740 and Siri running on an external device, for example, by modifying the eyewear disclosed in Jannard-740 to pair with an iPhone 4S and to enable the Siri function through the eyewear of Jannard-740. A POSITA also would have been motivated to combine them with Siri on the external device because this would have been the combination of known prior art elements to yield predictable results. A POSITA would have also been motivated to do so because this would have yielded an improved voice control functionality. A POSITA would have reasonably expected success in the combination at least because this was the use of existing electrical hardware and existing software according to their known functions.
[2]	The eyewear of claim 1, wherein the external device is a smart phone.	See IPR2024-01072 Petition § VII.B. and portions of Jannard-740 cited therein, §§ IX.A and IX.C. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein. Alternatively, Claim 2 also would have been obvious over Jannard-740 in view of Siri on the iPhone 4S as explained for Claim 1. iPhone 4S is a smartphone.
[6]	The eyewear of claim 1, wherein the application module further includes at least one electronic device.	See IPR2024-01072 Petition § VII.D. and portions of Jannard-740 cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein. Alternatively, Claim 6 also would have been obvious over Jannard-740 in view of Siri on the iPhone 4S as explained for Claim 1. Jannard-740 discloses the limitation of [6] as explained above.

[7]	The eyewear of claim 6, wherein the application module is further configured to control at least one function of the at least one electronic device.	See IPR2024-01072 Petition § VII.E. and portions of Jannard-740 cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein. Alternatively, Claim 7 also would have been obvious over Jannard-740 in view of Siri on the iPhone 4S as explained for Claim 1. Jannard-740 discloses the limitation of [7] as explained above.
[8]	The eyewear of claim 7, wherein the at least one function includes providing audio power to the at least one external device.	See IPR2024-01072 Petition §§ VII.F. and VII.F.1. and portions of Jannard-740 cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein. Alternatively, Claim 8 also would have been obvious over Jannard-740 in view of Siri on the iPhone 4S as explained for Claim 1. Jannard-740 discloses the limitation of [8] as explained above.
[10]	The eyewear of claim 1, wherein the application module further comprises a voice recognition chip.	See IPR2024-01072 Petition § VII.G. and portions of Jannard-740 cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.A., § V. and portions of Jannard-740 cited therein, § VII. and portions of Jannard-740 cited therein. Alternatively, Claim 10 also would have been obvious over Jannard-740 in view of Siri on the iPhone 4S as explained for Claim 1. Jannard-740 discloses the limitation of [10] as explained above.

2. Osterhout

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	See IPR2024-01072 Petition § VIII.A.1. and portions of Osterhout cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein.
[1A]	an eyewear frame having a first temple and a second temple;	See IPR2024-01072 Petition § VIII.A.2. and portions of Osterhout cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein.
[1B]	a speaker supported by the eyewear frame;	See IPR2024-01072 Petition § VIII.A.3. and portions of Osterhout cited therein, §§ IX.A.–B.1. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein.
[1C]	an application module mechanically coupled to the eyewear frame and operably coupled to the speaker, the application module comprising:	See IPR2024-01072 Petition § VIII.A.4. and portions of Osterhout cited therein, §§ IX.A.–B.2. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein.
[1D]	a microphone and a wireless chip	See IPR2024-01072 Petition § VIII.A.5. and portions of Osterhout cited therein, §§ IX.A.–B.2. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein.
[1E]	to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.	See IPR2024-01072 Petition § VIII.A.6. and portions of Osterhout cited therein, §§ IX.A.–B.3. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 1 also would have been obvious over Osterhout in combination with the Siri function on an external device like the Apple iPhone 4S. On or around October 4, 2011, Apple Inc. provided a demonstration of Siri during the announcement

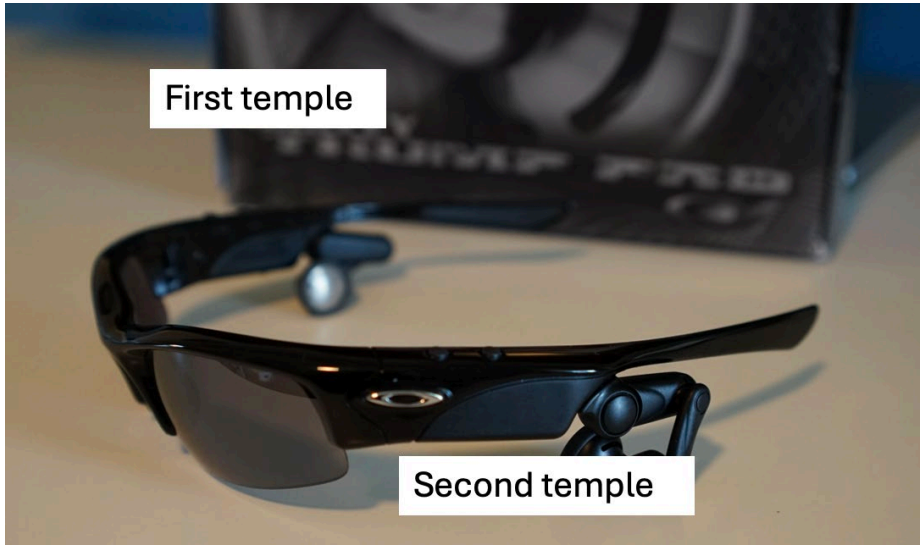
		of the iPhone 4S. *See* https://www.youtube.com/watch?v=GUO6ZUDfTpE (LUX00015455)"("Siri Demo"). During the demonstration, an Apple representative used an iPhone with Siri to ask a verbal query and receive a response to the verbal query (e.g., "Q: What is the weather like today? A. "Here's the forecast for today" – Siri Demo at 3:54-4:03). It would have been obvious to a POSITA to combine Osterhout and Siri running on an external device, for example, by modifying the eyewear disclosed in Osterhout to pair with an iPhone 4S and to enable the Siri function through the eyewear of Osterhout. A POSITA also would have been motivated to combine them with Siri on the external device because this would have been the combination of known prior art elements to yield predictable results. A POSITA would have also been motivated to do so because this would have yielded an improved voice control functionality. A POSITA would have reasonably expected success in the combination at least because this was the use of existing electrical hardware and existing software according to their known functions.
[2]	The eyewear of claim 1, wherein the external device is a smart phone.	See IPR2024-01072 Petition § VIII.B. and portions of Osterhout cited therein, §§ IX.A and IX.C. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 2 would have been obvious over Osterhout in combination with the Siri function on an external device like the iPhone 4S, for the reasons explained for Claim 1. The iPhone 4S is a smart phone.
[6]	The eyewear of claim 1, wherein the application module further includes at least one electronic device.	See IPR2024-01072 Petition § VIII.D. and portions of Osterhout cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 6 would have been obvious over Osterhout in combination with the Siri function on an external device like the iPhone 4S, for the reasons explained for Claim 1.
[7]	The eyewear of claim 6, wherein the application module is further	See IPR2024-01072 Petition § VIII.E. and portions of Osterhout cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See

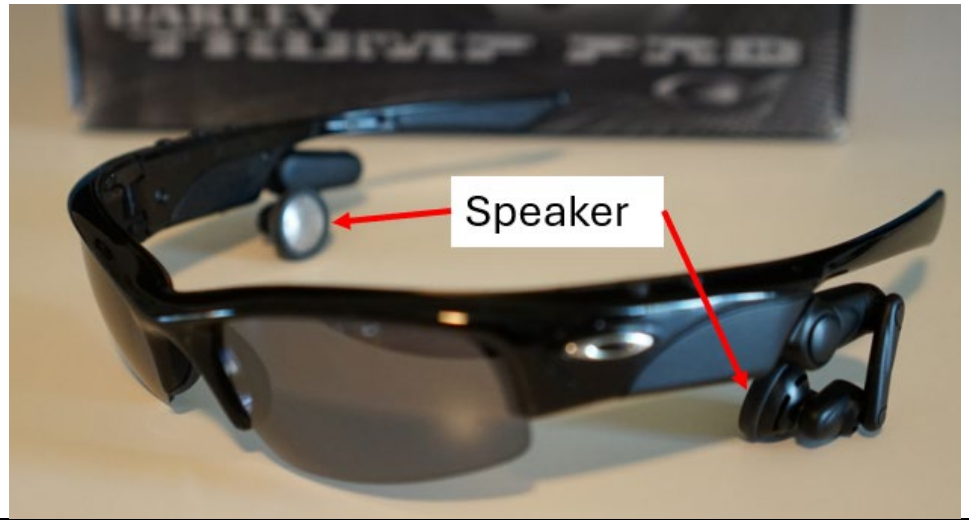
	configured to control at least one function of the at least one electronic device.	IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 7 would have been obvious over Osterhout in combination with the Siri function on an external device like the iPhone 4S, for the reasons explained for Claim 1.
[8]	The eyewear of claim 7, wherein the at least one function includes providing audio power to the at least one external device.	See IPR2024-01072 Petition § VIII.F. and portions of Osterhout cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 8 would have been obvious over Osterhout in combination with the Siri function on an external device like the iPhone 4S, for the reasons explained for Claim 1.
[10]	The eyewear of claim 1, wherein the application module further comprises a voice recognition chip.	See IPR2024-01072 Petition § VIII.G. and portions of Osterhout cited therein, §§ IX.A and IX.E. and portions of Jannard-740 and Osterhout cited therein; See IPR2024-01072 Ex. 1003 § IV.B., § VI. and portions of Osterhout cited therein, § VII. and portions of Osterhout cited therein. Alternatively, Claim 10 would have been obvious over Osterhout in combination with the Siri function on an external device like the iPhone 4S, for the reasons explained for Claim 1.

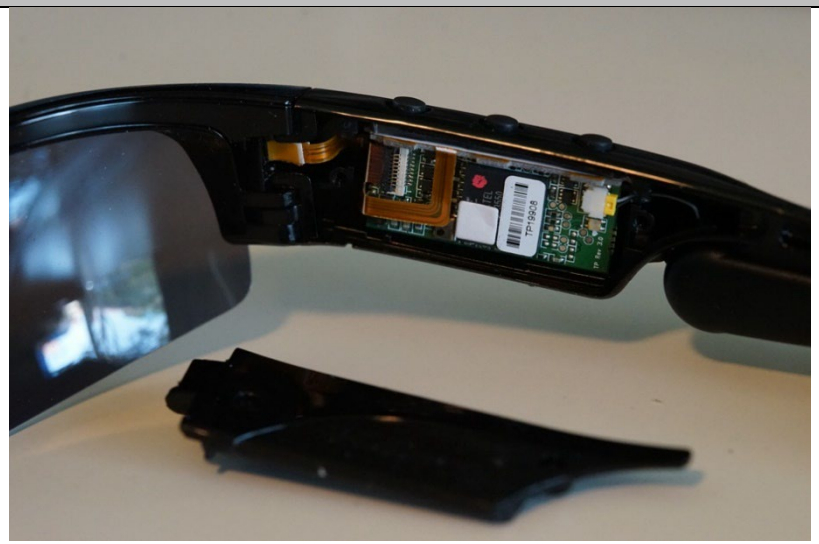
Exhibit D2 - Invalidity of U.S. Patent No. 10,598,960 Based on Oakley Thump Pro

Upon information and belief, the Oakley Thump and Thump 2 had similar structures to the Oakley Thump Pro. Luxottica reserves the right to rely upon the Oakley Thump and/or the Thump 2 in addition to the Thump Pro.

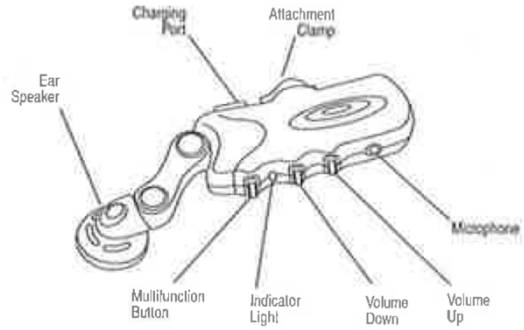
Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	To the extent the preamble is limiting, the Oakley Thump Pro is eyewear.

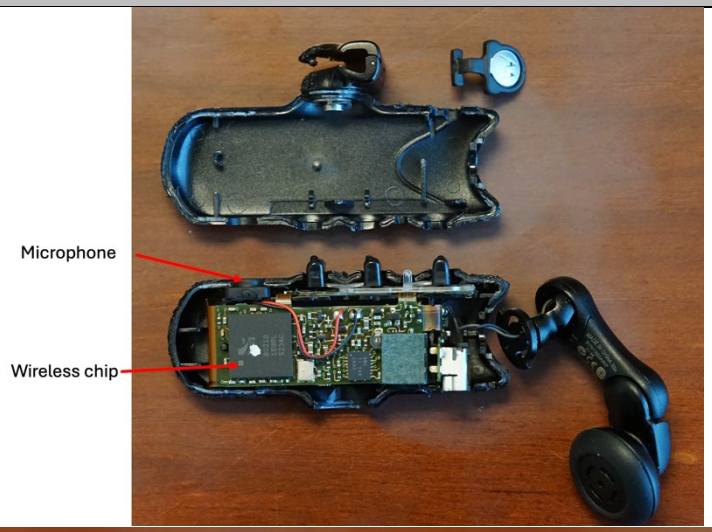
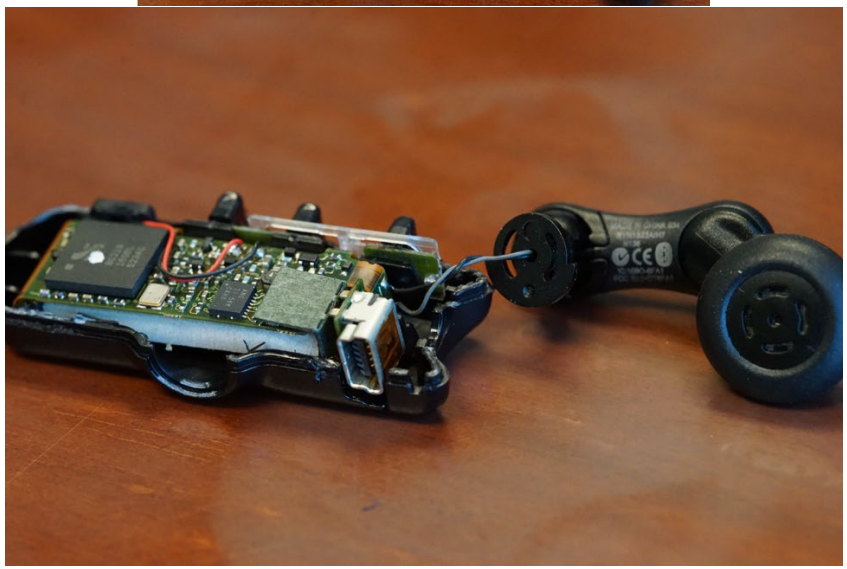
Claim Limitation	Claim Language	Prior Art Disclosure
[1A]	an eyewear frame having a first temple and a second temple;	The Oakley Thump Pro has an eyewear frame having a first temple and a second temple. 

Claim Limitation	Claim Language	Prior Art Disclosure
		Luxottica notes that the identification of the right and left temples as the first and second temples, respectively, is arbitrary, and Luxottica reserves all rights to rely on the left and right temples, as the first and second temples, respectively.
[1B]	a speaker supported by the eyewear frame;	The Oakley Thump Pro has a speaker supported by the eyewear frame. The left and right temple each have a speaker, as shown below: 
[1C]	an application module mechanically coupled to the eyewear frame and operably coupled to the speaker, the application module comprising:	Luxottica disagrees with Plaintiff's interpretation that an "electronics assembly" disposed within a temple of eyewear is an application module. Under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, EX. A-04 at 4-5, the Oakley Thump Pro has an application module mechanically coupled to the eyewear frame and operably coupled to the speaker. The Oakley Thump Pro has an application module in the right temple that is mechanically coupled to the eyewear frame. The application module comprises a controller, namely, the Sigmatel STMP3550, which is operably coupled to the speakers.

Claim Limitation	Claim Language	Prior Art Disclosure
		 To the extent the Oakley Thump Pro does not have an application module as recited by limitation [1C], this would have been obvious in view of the Oakley RAZRwire or Jannard-740. The Oakley RAZRWire has a self-enclosed independent electronics module unit, which is an application module.

Claim Limitation	Claim Language	Prior Art Disclosure
		Jannard-740 discloses a self-enclosed, independent electronics module unit, which is an application module. Jannard-740 discloses that "[t]he housing 140 is formed by attaching the first body portion 166 to the second body portion 168 along a part line, to provide a protective outer wall which defines at least one interior cavity for housing electronics." Jannard-740 at [0102]. This allows the housing 140 to be "… formed entirely or partially by insert molding or co-molding processes to produce embedded electronics in a unitary or monolithic module." *Id*. A POSITA would have been motivated to implement the Oakley Thump Pro's electronics in a self-enclosed independent unit like the Oakley RAZRwire or Jannard-740. A self-enclosed independent unit for electronics has known benefits including (i) space optimization, (ii) reduced manufacturing complexity, (iii) improved performance, (iv) enhanced durability and protection, and (v) better aesthetics. In addition, the combination represents the use of a known technique (including electronics for eyewear in self-enclosed, independent unit) to improve a known device and method (the Oakley Thump Pro's eyewear electronics) that is ready for improvement and yields predictable results (eyewear electronics incorporated in self-enclosed, independent unit for known benefits). The construction represents nothing more than the simple addition of one known element (module with electronics for eyewear) to another known element (Oakley Thump Pro's electronics in temple housing) to obtain predictable results (module incorporating electronics for coupling to temple to realize known benefits). A POSITA would have reasonably expected success in incorporating the Oakley RAZRWire or Jannard-740's teaching of a self-enclosed, independent unit in the Oakley Thump Pro because such incorporation would have been trivial for a POSITA. At most this would have involved limited structural and/or hardware updates that were well within a POSITA's abilities.
[1D]	a microphone and a wireless chip to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.	The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a microphone, a speaker, a Bluetooth antenna, and a Bluetooth transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. As shown below, the RAZRWire contained an application module mechanically coupled to the eyewear frame and operably coupled to the speaker and comprised a microphone and wireless chip.

Claim Limitation	Claim Language	Prior Art Disclosure
		 RAZRWire Manual (LUX00010272) at 3. Above: Oakley RAZRWire application module mechanically coupled to eyewear frame.

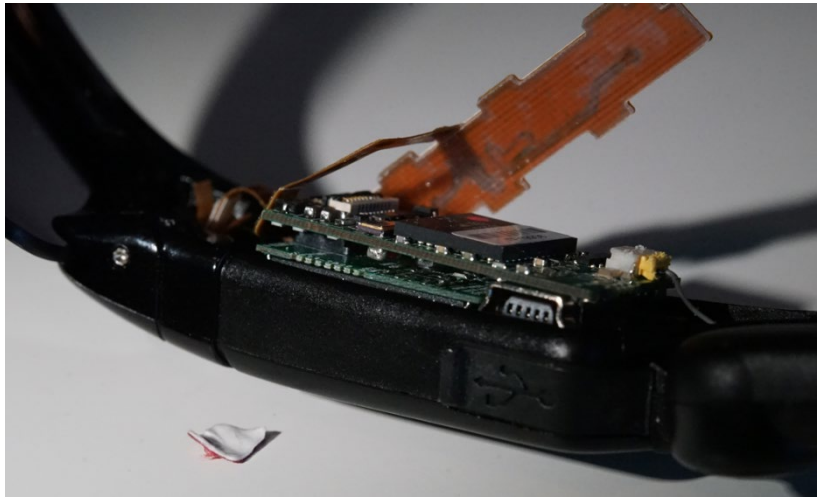
Claim Limitation	Claim Language	Prior Art Disclosure
		  The Oakley RAZRWire manual states that it is an eyewear with wireless Bluetooth technology for pairing with a Motorola phone and for placing and making calls via the eyewear.

Claim Limitation	Claim Language	Prior Art Disclosure
		OAKLEY® RAZRWIRE™ is the first eyewear to combine patented Oakley optics with wireless Bluetooth® technology. It frees you from wires by offering hands-free mobile communications anywhere and everywhere you want to be. Fully integrated electronics let you easily handle incoming and outgoing calls to your Bluetooth enabled cell phone from a range of up to thirty-three feet. Answer a call instantly without digging for your cell phone. Carry on a phone conversation without being tethered by a headset wire. The ultra-lightweight design offers the comfort, protection and clarity of Oakley optics combined with third-generation Motorola Bluetooth technology. RAZRWire Manual (LUX00013972) at 2. The Oakley RAZRWire further is able to receive a verbal query from a wearer, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker. As shown below, the Oakley RAZRWire has a Voice Dialing function wherein a user may speak a voice dial name into the RAZRWire and the RAZRWire will transmit the query to a paired Motorola phone, receive a response form the paired phone (e.g., a placed call) and provide the response to the wearer via the speaker (e.g., the placed call).

Claim Limitation	Claim Language	Prior Art Disclosure
		Advanced RAZRWIRE™ Making Calls While wearing the eyewear and module, make a call by: 1 On your phone, dial the phone number. 2 On your phone, press **Send**. You will hear the ringing while waiting for the recipient to answer the call. Voice Dialing While wearing the eyewear and module, make a voice-dial call by: **Note:** In order for this feature to work, your phone must have voice dial capabilities. See your phone's user's guide to set up voice dial recorded names in your phone book. Once voice dial names are set you can perform Voice Dialing with RAZRWIRE. 1 Press the **Multifunction Button** and listen for a tone. 2 Then when you hear a second tone, speak the voice dial name clearly. You will hear a low-pitch tone in the ear speaker when the call is sent. RAZRWire Manual (LUX00013972) at 6. A POSITA would have been motivated to combine the Oakley Thump Pro with the microphone, Bluetooth antenna, and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a microphone, Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated at least because the combination would entail the use of a known technique, namely, the use of a microphone and Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way. A POSITA would have had a reasonable expectation of success in performing the combination because the electronics and software in the RAZRWire were known and could be combined in the electronics and software already present in the Oakley Thump Pro. Accordingly, Claim 1

Claim Limitation	Claim Language	Prior Art Disclosure
		would have been obvious in view of the Oakley Thump Pro in combination with the Oakley RAZRWire. Alternatively, Claim 1 also would have been obvious over the Oakley Thump Pro in combination with the Oakley RAZRWire and the Apple iPhone 4S which had the Siri function. On or around October 4, 2011, Apple Inc. provided a demonstration of Siri during the announcement of the iPhone 4S. *See* https://www.youtube.com/watch?v=GUO6ZUDfTpE (LUX00015455)"("Siri Demo"). During the demonstration, an Apple representative used an iPhone with Siri to ask a verbal query and receive a response to the verbal query (e.g., "Q: What is the weather like today? A. "Here's the forecast for today" – Siri Demo at 3:54-4:03). It would have been obvious to a POSITA to combine the Oakley Thump Pro with the microphone, Bluetooth, and phone features of the Oakley RAZRWire, and with Siri running on an iPhone 4S to enable the Siri function through the microphone and wireless chip of the Oakley RAZRWire. A POSITA would have been motivated to combine the Oakley Thump Pro and Oakley RAZRWire as explained above. A POSITA also would have been motivated to combine them with Siri running on an iPhone 4S because this would have been the combination of known prior art elements to yield predictable results. A POSITA would have also been motivated to do so because this would have yielded an improved voice control functionality over the voice dial functions already present in the Oakley RAZRWire with a paired Motorola phone. A POSITA would have reasonably expected success in the combination at least because this was the use of existing electrical hardware and existing software according to their known functions.
[2]	The eyewear of claim 1, wherein the external device is a smart phone.	Claim 2 would have been obvious in view of the Oakley Thump Pro and the Oakley RAZRWire. The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. A POSITA would have been motivated to combine the Oakley Thump Pro with the Bluetooth antenna and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated at least because the combination would entail the use of a known technique, namely,

Claim Limitation	Claim Language	Prior Art Disclosure
		the use of Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way. Alternatively, Claim 2 also would have been obvious over the Oakley Thump Pro in combination with the Oakley RAZRWire and iPhone 4S with Siri, as explained above, for the reasons explained above for Limitation [1D]. The iPhone 4S is a smartphone.
[6]	The eyewear of claim 1, wherein the application module further includes at least one electronic device.	At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, EX. A-04 at 8-10, the Oakley Thump Pro has an application module that further includes at least one electronic device. The application module includes many electronic devices, including, for example, a small indicator light, Mini-B USB receptable, and buttons.

Claim Limitation	Claim Language	Prior Art Disclosure
		   Alternatively, Claim 6 would have been obvious in view of the Oakley Thump Pro and the Oakley RAZRWire. The Oakley RAZRWire was an electronic eyewear released at least as

Claim Limitation	Claim Language	Prior Art Disclosure
		early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. A POSITA would have been motivated to combine the Oakley Thump Pro with the Bluetooth antenna and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated at least because the combination would entail the use of a known technique, namely, the use of Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way.
[7]	The eyewear of claim 6, wherein the application module is further configured to control at least one function of the at least one electronic device.	The Oakley Thump Pro has an application module that is further configured to control at least one function of the at least one electronic device. For example, the Oakley Thump application module is configured to control the small indicator light by activating and deactivating the small indicator light and has buttons for play/pause, fast forwarding/next song, and fast backward/previous song. **CHARGING THE BATTERY** Battery life depends on many things, including volume level, external temperature and the format of the audio files. Under ideal conditions, the internal battery will provide approximately 6 hours of continuous playing time. If THUMP Pro hasn't been used for a while, the battery may need charging. The small indicator light (on the inner side of the right stem) will blink red when the remaining battery power is less than 20%. When the battery is low, you will hear warning tones between songs and during songs with more than 10 minutes remaining. Charge the internal battery by connecting THUMP Pro to your computer or the optional Wall Charger or Car Charger. • For charging with your computer, the computer must be turned on and cannot be in Sleep or Suspend mode. • For charging with an optional Wall Charger, make sure the charger is plugged into a working electrical outlet. THUMP Pro will be 80% charged after 1 hour, but a full 3-hour charge is recommended. When THUMP Pro is fully charged, the small indicator light will turn solid green. With the included USB cable, connect THUMP Pro directly to the USB port on your computer. Leave it connected for 3 hours. Oakley Thump Pro User Guide (LUX00013972) at 13.

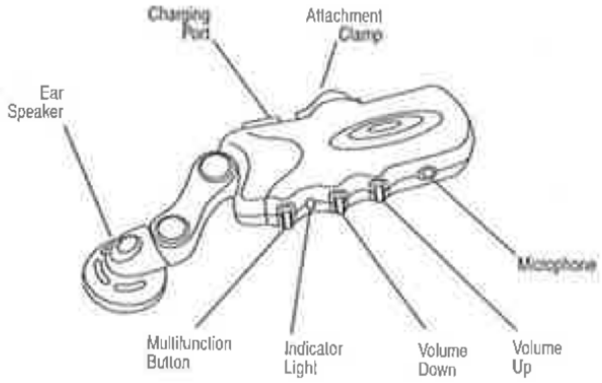
Claim Limitation	Claim Language	Prior Art Disclosure
		Alternatively, Claim 7 would have been obvious in view of the Oakley Thump Pro and the Oakley RAZRWire. The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. The Oakley RAZRWire has an application module that is configured to answer a call and end a call from a Bluetooth-paired phone. A POSITA would have been motivated to combine the Oakley Thump Pro with the Bluetooth antenna and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated at least because the combination would entail the use of a known technique, namely, the use of Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way.
[8]	The eyewear of claim 7, wherein the at least one function includes providing audio power to the at least one external device.	At least under Plaintiffs' apparent interpretation of Claim 8, Claim 8 would have been obvious for the same reasons explained above with respect to Claim 1.
[10]	The eyewear of claim 1, wherein the application module further comprises a voice recognition chip.	Claim 10 would have been obvious for the same reasons Claim 1 would have been obvious. The Oakley Thump Pro in combination with the Oakley RAZRWire and/or Jannard-740 contains an application module that recognizes voice commands.

Claim Limitation	Claim Language	Prior Art Disclosure
		Advanced RAZRWIRE™ Making Calls While wearing the eyewear and module, make a call by: 1 On your phone, dial the phone number. 2 On your phone, press **Send**. You will hear the ringing while waiting for the recipient to answer the call. Voice Dialing While wearing the eyewear and module, make a voice-dial call by: **Note:** In order for this feature to work, your phone must have voice dial capabilities. See your phone's user's guide to set up voice dial recorded names in your phone book. Once voice dial names are set you can perform Voice Dialing with RAZRWIRE. 1 Press the **Multifunction Button** and listen for a tone. 2 Then when you hear a second tone, speak the voice dial name clearly. You will hear a low-pitch tone in the ear speaker when the call is sent. RAZRWire Manual (LUX00013972) at 6. Alternatively, Claim 10 also would have been obvious in view of the Oakley Thump Pro (with or without Jannard-740), the Oakley RAZRWire (with or without iPhone 4S with Siri), and Jannard-382. The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. The Oakley RAZRWire has an application module that is configured to answer a call and end a call from a Bluetooth-paired phone. Jannard-382 discloses electronic eyewear that "… include ASIC-based noise-canceling technology, such as is available in chips from Andrea Electronics Corporation (AEC), to enable voice recognition in ambient noise up to about 130 Db or more." Jannard-382 [0265].

Claim Limitation	Claim Language	Prior Art Disclosure
		A POSITA would have been motivated to combine the Oakley Thump Pro with the Bluetooth antenna and transceiver of the Oakley RAZRWire at least because this would have been the combination of known prior art elements to yield predictable results, namely, the inclusion of a Bluetooth antenna and transceiver and associated circuitry from the RAZRWire to allow the Oakley Thump Pro to communicate wirelessly with a phone. A POSITA also would have been motivated at least because the combination would entail the use of a known technique, namely, the use of Bluetooth and associated Bluetooth antenna and transceiver, to improve a similar device in the same way. In addition, a POSITA would have been motivated to incorporate a voice recognition chip with the Oakley Thump Pro the Bluetooth antenna and transceiver of the Oakley RAZRWire because the chip is an off-the-shelf solution for providing voice recognition. *See also* Calderone at 1:9-13; Blum-612 at 19:28-20:1.

Exhibit D3 - Invalidity of U.S. Patent No. 10,598,960 Based on Oakley RAZRWire

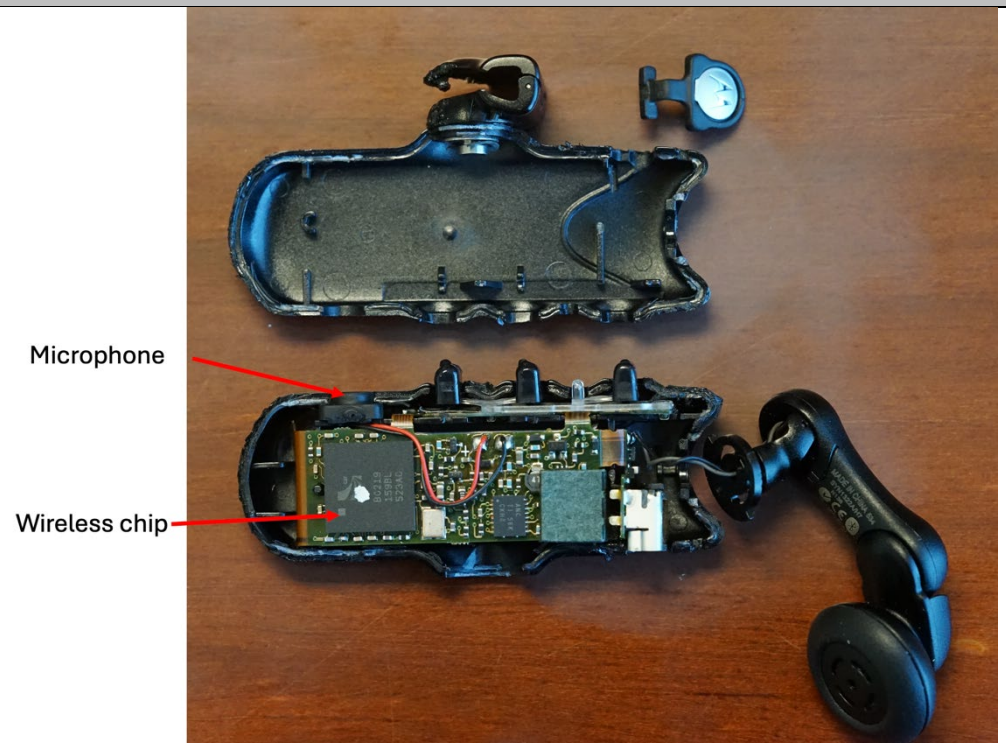
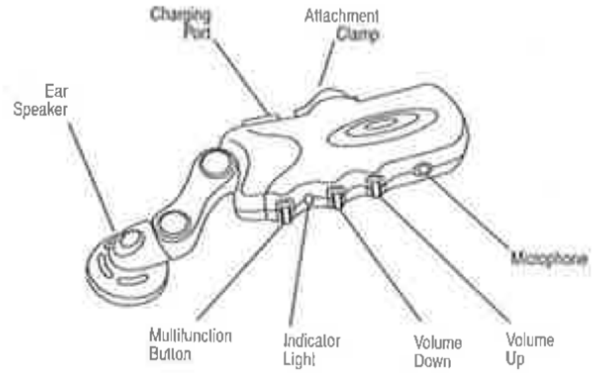
Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	Eyewear comprising:	To the extent the preamble is limiting, the Oakley RAZRWire is eyewear:
[1A]	an eyewear frame having a first temple and a second temple;	As shown below, the Oakley RAZRWire has a frame having a first and second temple:

Claim Limitation	Claim Language	Prior Art Disclosure
[1B]	a speaker supported by the eyewear frame;	As shown below, the Oakley RAZRWire has a speaker supported by the eyewear frame: 

Claim Limitation	Claim Language	Prior Art Disclosure
		RAZRWire Manual (LUX00013972) at 3.
[1C]	an application module mechanically coupled to the eyewear frame and operably coupled to the speaker, the application module comprising:	As shown below, the RAZRWire has an application module mechanically coupled to the eyewear frame and operably coupled to the speaker:

Claim Limitation	Claim Language	Prior Art Disclosure

Claim Limitation	Claim Language	Prior Art Disclosure
[1D]	a microphone and a wireless chip to receive a verbal query from a wearer of the eyewear, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker.	As shown below, the application module comprises a microphone and wireless chip:

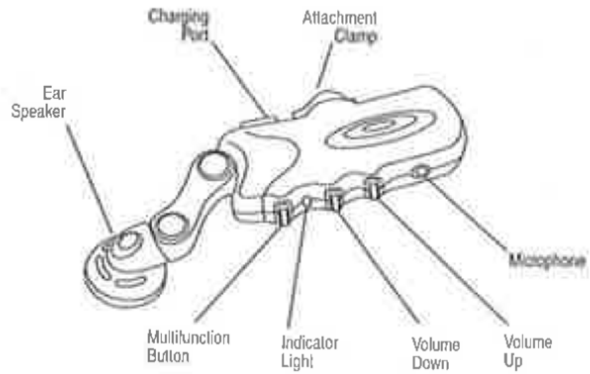
Claim Limitation	Claim Language	Prior Art Disclosure
		  RAZRWire Manual (LUX00013972) at 3.

Claim Limitation	Claim Language	Prior Art Disclosure
		The Oakley RAZRWire manual states that it is an eyewear with wireless Bluetooth technology for pairing with a Motorola phone and for placing and making calls via the eyewear. OAKLEY® RAZRWIRE™ is the first eyewear to combine patented Oakley optics with wireless Bluetooth® technology. It frees you from wires by offering hands-free mobile communications anywhere and everywhere you want to be. Fully integrated electronics let you easily handle incoming and outgoing calls to your Bluetooth enabled cell phone from a range of up to thirty-three feet. Answer a call instantly without digging for your cell phone. Carry on a phone conversation without being tethered by a headset wire. The ultra-lightweight design offers the comfort, protection and clarity of Oakley optics combined with third-generation Motorola Bluetooth technology. RAZRWire Manual (LUX00013972) at 2. The Oakley RAZRWire further is able to receive a verbal query from a wearer, wirelessly transmit the verbal query to an external device, receive a response to the verbal query, and provide the response to the wearer via the speaker. As shown below, the Oakley RAZRWire has a Voice Dialing function wherein a user may speak a voice dial name into the RAZRWire and the RAZRWire will transmit the query to a paired Motorola phone, receive a response form the paired phone (e.g., a placed call) and provide the response to the wearer via the speaker (e.g., the placed call).

Claim Limitation	Claim Language	Prior Art Disclosure
		Advanced RAZRWIRE™ Making Calls While wearing the eyewear and module, make a call by: 1 On your phone, dial the phone number. 2 On your phone, press **Send**. You will hear the ringing while waiting for the recipient to answer the call. Voice Dialing While wearing the eyewear and module, make a voice-dial call by: **Note:** In order for this feature to work, your phone must have voice dial capabilities. See your phone's user's guide to set up voice dial recorded names in your phone book. Once voice dial names are set you can perform Voice Dialing with RAZRWIRE. 1 Press the **Multifunction Button** and listen for a tone. 2 Then when you hear a second tone, speak the voice dial name clearly. You will hear a low-pitch tone in the ear speaker when the call is sent. RAZRWire Manual (LUX00013972) at 6. Alternatively, Claim 1 also would have been obvious over the Oakley RAZRWire in combination with an iPhone 4S with the Siri function. On or around October 4, 2011, Apple Inc. provided a demonstration of Siri during the announcement of the iPhone 4S. *See* https://www.youtube.com/watch?v=GUO6ZUDfTpE (LUX00015455) ("Siri Demo"). During the demonstration, an Apple representative used an iPhone with Siri to ask a verbal query and receive a response to the verbal query (e.g., "Q: What is the weather like today? A. "Here's the forecast for today" – Siri Demo at 3:54-4:03). It would have been obvious to a POSITA to combine the Oakley RAZRWire and Siri running on an iPhone 4S, for example, by modifying the Oakley RAZRWire to pair with an iPhone 4S and to enable the Siri function through the microphone and wireless chip of the RAZRWire. A POSITA also would have been motivated to combine them with Siri on the iPhone 4S because this would have been the combination of known prior art elements to yield predictable results. A POSITA would have also been

Claim Limitation	Claim Language	Prior Art Disclosure
		motivated to do so because this would have yielded an improved voice control functionality over the voice dial functions already present in the Oakley RAZRWire with a paired Motorola phone. A POSITA would have reasonably expected success in the combination at least because this was the use of existing electrical hardware and existing software according to their known functions.
[2]	The eyewear of claim 1, wherein the external device is a smart phone.	The Oakley RAZRWire manual states that it is an eyewear with wireless Bluetooth technology for pairing with a Motorola phone and for placing and making calls via the eyewear. Such a Motorola phone is a smartphone. OAKLEY® RAZRWIRE™ is the first eyewear to combine patented Oakley optics with wireless Bluetooth® technology. It frees you from wires by offering hands-free mobile communications anywhere and everywhere you want to be. Fully integrated electronics let you easily handle incoming and outgoing calls to your Bluetooth enabled cell phone from a range of up to thirty-three feet. Answer a call instantly without digging for your cell phone. Carry on a phone conversation without being tethered by a headset wire. The ultra-lightweight design offers the comfort, protection and clarity of Oakley optics combined with third-generation Motorola Bluetooth technology. RAZRWire Manual (LUX00013972) at 2. Alternatively, Claim 2 also would have been obvious in view of the Oakley RAZRWire combined with an iPhone 4S with Siri, as explained above. The iPhone 4S is a smartphone.
[6]	The eyewear of claim 1, wherein the application module further includes at least one electronic device.	The application module in the Oakley RAZRWire contains many electronic devices, including, for example, a Bluetooth module, buttons, a speaker, an indicator light, a mini-USB port.

Claim Limitation	Claim Language	Prior Art Disclosure
[7]	The eyewear of claim 6, wherein the application module is further configured to control at least one function of the at least one electronic device.	The Oakley RAZRWire application module is configured to control at least one function of the at least one electronic device. For example, the Oakley RAZRWire is configured to be paired with a Motorola phone to make and place calls. The RAZRWire has buttons, including a multifunction button for making and placing calls, including activating the microphone on the RAZRWire, and volume buttons for adjusting the volume of the attached ear speaker. The Oakley RAZRWire is also configured control the indicator light by activating and deactivating the indicator light.

Claim Limitation	Claim Language	Prior Art Disclosure
		 RAZRWire Manual at 3.
[8]	The eyewear of claim 7, wherein the at least one function includes providing audio power to the at least one external device.	At least under Plaintiffs' apparent interpretation of Claim 8, Claim 8 is anticipated by the RAZRWire or would have been obvious over the RAZRWire alone or in combination with an iPhone 4S with Siri, for the same reasons explained with respect to Claim 1.
[10]	The eyewear of claim 1, wherein the application module further comprises a voice recognition chip.	Claim 10 is anticipated by the RAZRWire or would have been obvious over the RAZRWire alone or in combination with an iPhone 4S for the same reasons explained above for Claim 1. The Oakley RAZRWire contains an application module that recognizes voice commands.

Claim Limitation	Claim Language	Prior Art Disclosure
		Advanced RAZRWIRE™ Making Calls While wearing the eyewear and module, make a call by: 1 On your phone, dial the phone number. 2 On your phone, press **Send**. You will hear the ringing while waiting for the recipient to answer the call. Voice Dialing While wearing the eyewear and module, make a voice-dial call by: **Note:** In order for this feature to work, your phone must have voice dial capabilities. See your phone's user's guide to set up voice dial recorded names in your phone book. Once voice dial names are set you can perform Voice Dialing with RAZRWIRE. 1 Press the **Multifunction Button** and listen for a tone. 2 Then when you hear a second tone, speak the voice dial name clearly. You will hear a low-pitch tone in the ear speaker when the call is sent. RAZRWire Manual at 6. Alternatively, Claim 10 also would have been obvious in view of the Oakley RAZRWire (with or without iPhone 4S with Siri) and Jannard-384. The Oakley RAZRWire was an electronic eyewear released at least as early as summer 2005. The Oakley RAZRWire featured a Bluetooth antenna and transceiver allowing users to answer and place calls from a Bluetooth-paired phone on the eyewear. The Oakley RAZRWire has an application module that is configured to answer a call and end a call from a Bluetooth-paired phone. Jannard-384 discloses electronic eyewear that "… include ASIC-based noise-canceling technology, such as is available in chips from Andrea Electronics Corporation (AEC), to enable voice recognition in ambient noise up to about 130 Db or more." Jannard-384 [0265]. Alternatively, a POSITA would have been motivated to incorporate a voice recognition chip in the Oakley RAZRWire

Claim Limitation	Claim Language	Prior Art Disclosure
		because the chip is an off-the-shelf solution for providing the RAZRWire's voice recognition functionality. *See also* Calderone at 1:9-13; Blum-612 at 19:28-20:1.

Exhibit E1 - Invalidity of U.S. Patent No. 10,613,355

1. Howell-719

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	An eyewear system comprising:	See IPR2024-01069 Petition § VII.A.1. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1A]	an eyewear frame;	See IPR2024-01069 Petition § VII.A.1. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1B]	an electronics assembly comprising electronic components configured to control an electrical functional member;	See IPR2024-01069 Petition § VII.A.2. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1C]	a capacitive touch switch coupled to at least one electronic component in the electronics assembly;	See IPR2024-01069 Petition § VII.A.3. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1D]	at least one electrical connective element electrically connected to the electronic assembly and the electrical functional member; and	See IPR2024-01069 Petition § VII.A.4. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1E]	a conformal layer over the electronic assembly to seal the electronic components;	See IPR2024-01069 Petition § VII.5. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following: Chemtronics Konform Conformal Coatings;

		Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC For example, Chemtroncis sold conformal coatings under the brand Konform since at least as early as 1980. *See also* Chemtronics Conformal Coatings Guide. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. The product literature for the QT1100A-ISG QTouch microchip also explains, "All capacitive sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also been motivated to add a conformal coating to the electronic components disposed on a capacitive touch sensor as recommended in the product literature. Thus, a POSITA would been motivated to apply a conformal coating as sold by Chemtronics or disclosed in the Chemtronics Conformal Coatings Guide to the electronic components in Howell-719. Because conformal coatings were commonplace with printed circuit boards as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying a conformal coating to the electronic components in Howell-719. Applying a conformal coating would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly would accomplish its intended function

		with the added benefit of keeping moisture and contaminants from interfering with the electronics.
[1F]	wherein the conformal layer is moisture proof and seals electrical connections of the electronic component;	See IPR2024-01069 Petition § VII.5. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following as discussed above for [1E]: Chemtronics Konform Conformal Coatings; Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC
[1G]	wherein the conformal layer is disposed in an enclosure of the eyewear frame;	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following as discussed above for [1E]: Chemtronics Konform Conformal Coatings; Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC
[1H]	wherein the eyewear frame comprises a temple; and	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[1I]	wherein the electronic assembly is enclosed in the temple.	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited

		therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[2]	The eyewear system of claim 1, wherein the electrical functional member comprises a lens.	See IPR2024-01069 Petition § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § X. and portions of Howell-719 cited therein.
[3]	The eyewear system of claim 1, wherein the electrical functional member includes at least one of an electro-active lens, an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function.	See IPR2024-01069 Petition § VII.B. and portions of Howell-719 and Sikonowiz cited therein, § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[5]	The eyewear system of claim 1, wherein the electronic assembly comprises a micro-processor.	See IPR2024-01069 Petition § VII.D. and portions of Howell-719 and Sikonowiz cited therein, § XI.D. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[6]	The eyewear system of claim 1, wherein the enclosure comprises at least one of an outer casing of the electronic assembly or a cavity of the eyewear frame.	See IPR2024-01069 Petition § VII.E. and portions of Howell-719 and Sikonowiz cited therein, § XI.E. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[7]	The eyewear system of claim 1, wherein the conformal layer comprises at least one of an encasing layer or an encapsulating layer.	See IPR2024-01069 Petition § VII.F. and portions of Howell-719 and Sikonowiz cited therein, § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.

		Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following as discussed above for [1E]: Chemtronics Konform Conformal Coatings; Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC A POSITA would have understood that a conformal coating as disclosed or as sold by the above references would comprise an encasing layer or an encapsulating layer.
[8]	The eyewear system of claim 1, wherein the conformal layer protects the electronic components from external environmental damage.	See IPR2024-01069 Petition § VII.G. and portions of Howell-719 and Sikonowiz cited therein, § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following as discussed above for [1E]: Chemtronics Konform Conformal Coatings; Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC
[13P]	A method of manufacturing an eyewear system comprising:	See IPR2024-01069 Petition § VII.L.1. and portions of Howell-719 and Sikonowiz cited therein, § IX.A. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § VIII. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[13A]	disposing a plurality of electronic components on a capacitive touch switch;	See IPR2024-01069 Petition § VII.L.2. and portions of Howell-719 and Sikonowiz cited therein, § IX.B. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited

		therein, § VIII. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[13B]	connecting the plurality of electronic components via electrical connections to form an electronic assembly;	See IPR2024-01069 Petition § VII.L.2. and portions of Howell-719 and Sikonowiz cited therein, § IX.C. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § VIII. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.
[13C]	depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch; and	See IPR2024-01069 Petition § VII.L.3. and portions of Howell-719 and Sikonowiz cited therein, § IX.D. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § VIII. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein. Additionally or alternatively, it would have been obvious to apply a conformal coating to the plurality of electronic components in Howell-719 in view of any of the following as discussed above for [1E]: Chemtronics Konform Conformal Coatings; Chemtronics Conformal Coatings Guide; IPC-2221A; and/or QT1100A-ISG 10 Key QTouch™ Sensor IC
[13D]	coupling the electronic assembly and the capacitive touch switch with the conformal layer to an enclosure of an eyewear frame.	See IPR2024-01069 Petition § VII.L.4. and portions of Howell-719 and Sikonowiz cited therein, § IX.E. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.I., § VI. and portions of Howell-719 cited therein, § VIII. and portions of Howell-719 cited therein, § X. and portions of Howell-719 cited therein.

2. Sikonowiz

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	An eyewear system comprising:	See IPR2024-01069 Petition § VII.A.1. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1A]	an eyewear frame;	See IPR2024-01069 Petition § VII.A.1. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1B]	an electronics assembly comprising electronic components configured to control an electrical functional member;	See IPR2024-01069 Petition § VII.A.2. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1C]	a capacitive touch switch coupled to at least one electronic component in the electronics assembly;	See IPR2024-01069 Petition § VII.A.3. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1D]	at least one electrical connective element electrically connected to the electronic assembly and the electrical functional member; and	See IPR2024-01069 Petition § VII.A.4. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1E]	a conformal layer over the electronic assembly to seal the electronic components;	See IPR2024-01069 Petition § VII.5. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.

[1F]	wherein the conformal layer is moisture proof and seals electrical connections of the electronic component;	See IPR2024-01069 Petition § VII.5. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1G]	wherein the conformal layer is disposed in an enclosure of the eyewear frame;	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1H]	wherein the eyewear frame comprises a temple; and	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[1I]	wherein the electronic assembly is enclosed in the temple.	See IPR2024-01069 Petition § VII.6. and portions of Howell-719 and Sikonowiz cited therein, § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[2]	The eyewear system of claim 1, wherein the electrical functional member comprises a lens.	See IPR2024-01069 Petition § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C.,.
[3]	The eyewear system of claim 1, wherein the electrical functional member includes at least one of an electro-active lens, an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output	See IPR2024-01069 Petition § VII.B. and portions of Howell-719 and Sikonowiz cited therein, § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.

	function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function.	
[5]	The eyewear system of claim 1, wherein the electronic assembly comprises a micro-processor.	See IPR2024-01069 Petition § VII.D. and portions of Howell-719 and Sikonowiz cited therein, § XI.D. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[6]	The eyewear system of claim 1, wherein the enclosure comprises at least one of an outer casing of the electronic assembly or a cavity of the eyewear frame.	See IPR2024-01069 Petition § VII.E. and portions of Howell-719 and Sikonowiz cited therein, § XI.E. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[7]	The eyewear system of claim 1, wherein the conformal layer comprises at least one of an encasing layer or an encapsulating layer.	See IPR2024-01069 Petition § VII.F. and portions of Howell-719 and Sikonowiz cited therein, § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[8]	The eyewear system of claim 1, wherein the conformal layer protects the electronic components from external environmental damage.	See IPR2024-01069 Petition § VII.G. and portions of Howell-719 and Sikonowiz cited therein, § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[13P]	A method of manufacturing an eyewear system comprising:	See IPR2024-01069 Petition § VII.L.1. and portions of Howell-719 and Sikonowiz cited therein, § IX.A. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § VIII. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[13A]	disposing a plurality of electronic components on a capacitive touch switch;	See IPR2024-01069 Petition § VII.L.2. and portions of Howell-719 and Sikonowiz cited therein, § IX.B. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited

		therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § VIII. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[13B]	connecting the plurality of electronic components via electrical connections to form an electronic assembly;	See IPR2024-01069 Petition § VII.L.2. and portions of Howell-719 and Sikonowiz cited therein, § IX.C. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § VIII. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[13C]	depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch; and	See IPR2024-01069 Petition § VII.L.3. and portions of Howell-719 and Sikonowiz cited therein, § IX.D. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § VIII. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.
[13D]	coupling the electronic assembly and the capacitive touch switch with the conformal layer to an enclosure of an eyewear frame.	See IPR2024-01069 Petition § VII.L.4. and portions of Howell-719 and Sikonowiz cited therein, § IX.E. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XI.G.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.C., § VI. and portions of Sikonowiz cited therein, § VIII. and portions of Sikonowiz cited therein, § X. and portions of Sikonowiz cited therein, § XI. and portions of Sikonowiz cited therein.

3. Blum-130

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	An eyewear system comprising:	See IPR2024-01069 Petition § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[1A]	an eyewear frame;	See IPR2024-01069 Petition § XI.A.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[1B]	an electronics assembly comprising electronic components configured to control an electrical functional member;	See IPR2024-01069 Petition § XI.A.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[1C]	a capacitive touch switch coupled to at least one electronic component in the electronics assembly;	See IPR2024-01069 Petition § XI.A.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, capacitive touch switches were well known in the art by the time of the ’355 Patent and it would have been obvious to a POSITA to substitute the manual switch disclosed in Blum-130 with a capacitive touch sensor. A POSITA would have been motivated to do so because this would have been the simple substitution of one known element for another to obtain predictable results. A POSITA would also have been motivated to do so because this would have been the use of a known technique to improve similar devices in the same way. For example, the substitution of a push button with a capacitive touch switch could make the device feel more premium to consumers and could also improve water resistance. A POSITA would have had a reasonable expectation of success at least because this would have been a simple substitution of conventional parts. Capacitive touch sensors were well known in the art, as evidenced by at least the following references: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005)

		• Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005) • Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005) • QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 • Howell-596 at ¶57 • Eichelberger at Figs. 1a-1b, 3:20-23, 3:43-47, 3:54-57; • QTouch Microchips including QT110, QT160, QT240, QT1080, QT1100A-ISG; • PSoC CapSense
[1D]	at least one electrical connective element electrically connected to the electronic assembly and the electrical functional member; and	See IPR2024-01069 Petition § XI.A.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[1E]	a conformal layer over the electronic assembly to seal the electronic components;	See IPR2024-01069 Petition § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, it also would have been obvious to combine Blum-130 with a conformal coating as disclosed in any of the following references for the same reasons as explained with respect to Sikonowiz: • Chemtronics Konform Conformal Coatings; • Chemtronics Conformal Coatings Guide; • 1100A-ISG 10 Key QTouch™ Sensor IC; and/or • IPC-2221A Conformal coatings were also well-known in the industry and widely available. For example, Chemtronics sold conformal coatings under the brand Konform since at least as early as 1980. *See also* Chemtronics Conformal Coatings Guide.

		Additionally, Quantum Research Group sold QTouch microchips including QT110, QT160, QT240, QT1080, and QT1100A-ISG which, on information and belief, were integrated circuits used for capacitive touch sensors. *See, e.g.*, "Secrets of a Successful QTouch™ Design"; QT1100A-ISG 10 Key QTouch™ Sensor IC. The product literature for the QT1100A-ISG QTouch microchip explains, "All capacitive sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also been motivated to add a conformal coating to the electronic components as recommended in the product literature.
[1F]	wherein the conformal layer is moisture proof and seals electrical connections of the electronic component;	See IPR2024-01069 Petition § XI.A.5. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, it also would have been obvious to combine Blum-130 with a conformal coating as disclosed in any of the following references for the same reasons as explained in [1E]: • Chemtronics Konform Conformal Coatings; • Chemtronics Conformal Coatings Guide; • 1100A-ISG 10 Key QTouch™ Sensor IC; and/or • IPC-2221A
[1G]	wherein the conformal layer is disposed in an enclosure of the eyewear frame;	See IPR2024-01069 Petition § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, it also would have been obvious to combine Blum-130 with a conformal coating as disclosed in any of the following references for the same reasons as explained in [1E]: • Chemtronics Konform Conformal Coatings;

		• Chemtronics Conformal Coatings Guide; • 1100A-ISG 10 Key QTouch™ Sensor IC; and/or • IPC-2221A
[1H]	wherein the eyewear frame comprises a temple; and	See IPR2024-01069 Petition § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[1I]	wherein the electronic assembly is enclosed in the temple.	See IPR2024-01069 Petition § XI.A.6. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[2]	The eyewear system of claim 1, wherein the electrical functional member comprises a lens.	See IPR2024-01069 Petition § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[3]	The eyewear system of claim 1, wherein the electrical functional member includes at least one of an electro-active lens, an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function.	See IPR2024-01069 Petition § XI.B. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[5]	The eyewear system of claim 1, wherein the electronic assembly comprises a micro-processor.	See IPR2024-01069 Petition § XI.D. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.
[6]	The eyewear system of claim 1, wherein the enclosure comprises at least one of an outer casing of	See IPR2024-01069 Petition § XI.E. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein.

	the electronic assembly or a cavity of the eyewear frame.	
[7]	The eyewear system of claim 1, wherein the conformal layer comprises at least one of an encasing layer or an encapsulating layer.	See IPR2024-01069 Petition § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, it also would have been obvious to combine Blum-130 with a conformal coating as disclosed in any of the following references for the same reasons as explained in [1E]: • Chemtronics Konform Conformal Coatings; • Chemtronics Conformal Coatings Guide; • 1100A-ISG 10 Key QTouch™ Sensor IC; and/or • IPC-2221A A POSITA would have understood that a conformal coating would comprise an encasing layer or an encapsulating layer.
[8]	The eyewear system of claim 1, wherein the conformal layer protects the electronic components from external environmental damage.	See IPR2024-01069 Petition § XI.F. and portions of Blum-130, Howell-719, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein. Additionally or alternatively, it also would have been obvious to combine Blum-130 with a conformal coating as disclosed in any of the following references for the same reasons as explained in [1E]: • Chemtronics Konform Conformal Coatings; • Chemtronics Conformal Coatings Guide; • 1100A-ISG 10 Key QTouch™ Sensor IC; and/or • IPC-2221A A POSITA would have understood the purpose of a conformal coating is to protect electronic components from external environmental damage.
[13P]	A method of manufacturing an eyewear system comprising:	See IPR2024-01069 Petition § XI.G.1. and portions of Blum-130, Howell-719, and Sikonowiz cited therein, § XII.A.1. and portions of Blum-130, Eichelberger, and

		Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein, § XI. and portions of Blum-130 cited therein.
[13A]	disposing a plurality of electronic components on a capacitive touch switch;	See IPR2024-01069 Petition § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein, § XII.A.2. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein, § XI. and portions of Blum-130 cited therein.
[13B]	connecting the plurality of electronic components via electrical connections to form an electronic assembly;	See IPR2024-01069 Petition § XI.G.2. and portions of Blum-130, Howell-719, and Sikonowiz cited therein, § XII.A.3. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein, § XI. and portions of Blum-130 cited therein.
[13C]	depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch; and	See IPR2024-01069 Petition § XI.G.3. and portions of Blum-130, Howell-719, and Sikonowiz cited therein, § XII.A.4. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein, § XI. and portions of Blum-130 cited therein.
[13D]	coupling the electronic assembly and the capacitive touch switch with the conformal layer to an enclosure of an eyewear frame.	See IPR2024-01069 Petition § XI.G.4. and portions of Blum-130, Howell-719, and Sikonowiz cited therein, § XII.A.5. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § IV.H., § X. and portions of Blum-130 cited therein, § XI. and portions of Blum-130 cited therein.

4. Eichelberger

Claim Limitation	Claim Language	Prior Art Disclosure
[13P]	A method of manufacturing an eyewear system comprising:	See IPR2024-01069 Petition § IX.A. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XII.A.1. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § VIII. and portions of Eichelberger cited therein, § XI. and portions of Eichelberger cited therein.
[13A]	disposing a plurality of electronic components on a capacitive touch switch;	See IPR2024-01069 Petition § IX.B. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XII.A.2. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § VIII. and portions of Eichelberger cited therein, § XI. and portions of Eichelberger cited therein.
[13B]	connecting the plurality of electronic components via electrical connections to form an electronic assembly;	See IPR2024-01069 Petition § IX.C. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XII.A.3. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § VIII. and portions of Eichelberger cited therein, § XI. and portions of Eichelberger cited therein.
[13C]	depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch; and	See IPR2024-01069 Petition § IX.D. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XII.A.4. and portions of Blum-130, Eichelberger, and Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § VIII. and portions of Eichelberger cited therein, § XI. and portions of Eichelberger cited therein. Additionally, a POSITA would have been further motivated to deposite a conformal layer over the electronic assembly because, as disclosed in the product literature QT1100A-ISG QTouch microchip explains, "All capacitive sensors should be treated as highly sensitive analog circuits which can be influenced by stray conductive leakage paths…. The designer should specify ultrasonic cleaning as part of the manufacturing process, and in cases where a high level of humidity is anticipated, the use of conformal coatings after cleaning to keep out moisture." QT1100A-ISG 10 Key QTouch™ Sensor IC at 12. Thus, a POSITA would have also been motivated to add a conformal coating to the electronic components disposed on a capacitive touch sensor as recommended by a manufacturer of capacitive touch sensor chips.
[13D]	coupling the electronic assembly and the capacitive touch switch	See IPR2024-01069 Petition § IX.E. and portions of Howell-719, Sikonowiz, and Eichelberger cited therein, § XII.A.5. and portions of Blum-130, Eichelberger, and

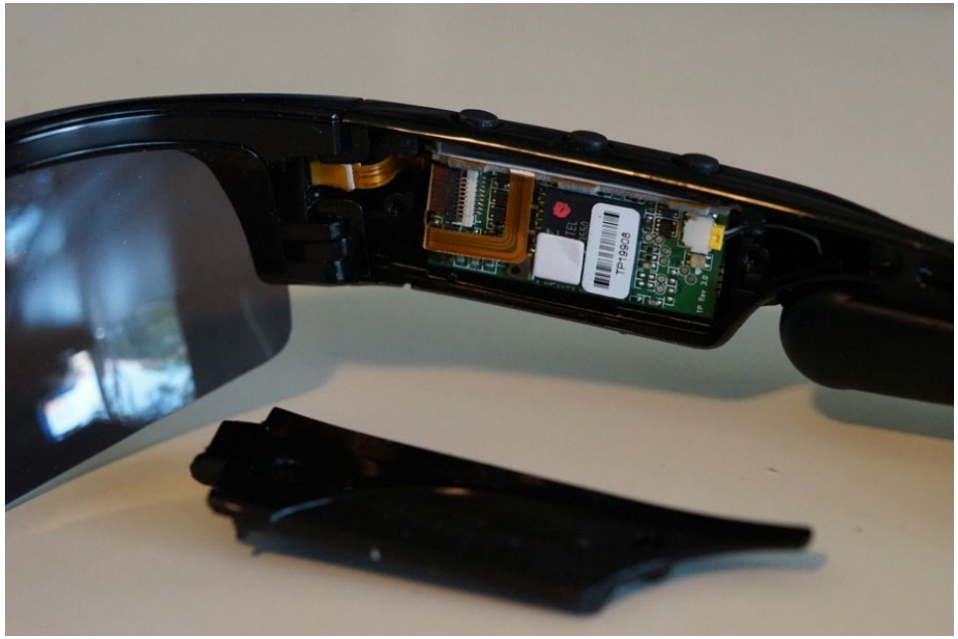
	with the conformal layer to an enclosure of an eyewear frame.	Sikonowiz cited therein; See IPR2024-01069 Ex. 1002 § VIII. and portions of Eichelberger cited therein, § XI. and portions of Eichelberger cited therein.

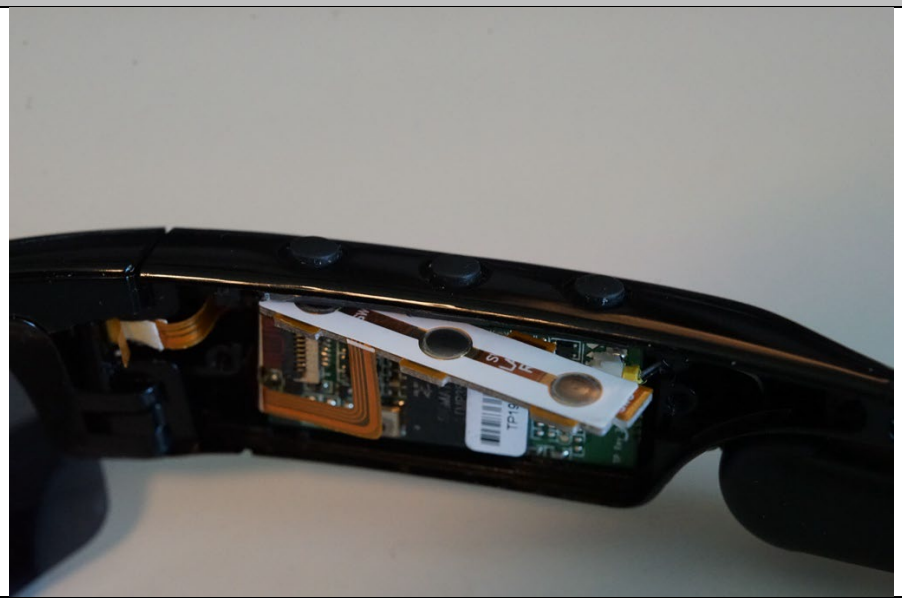
Exhibit E2 - Invalidity of U.S. Patent No. 10,613,355 Based on Oakley Thump Pro

Upon information and belief, the Oakley Thump and Thump 2 had similar structures to the Oakley Thump Pro. Luxottica reserves the right to rely upon the Oakley Thump and/or the Thump 2 in addition to the Thump Pro.

Claim Limitation	Claim Language	Prior Art Disclosure
[1P]	An eyewear system comprising:	To the extent the preamble is limiting, the Oakley Thump Pro is an eyewear system.

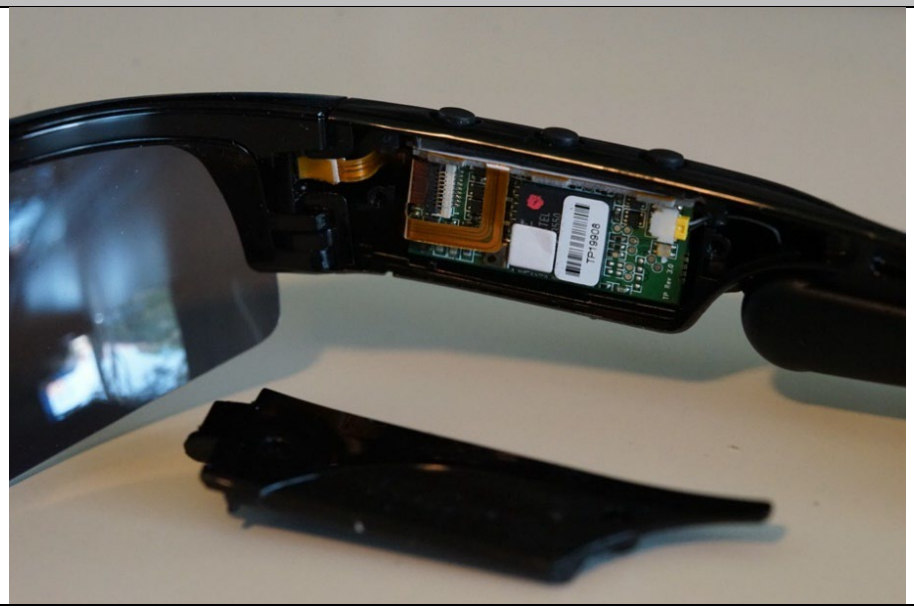
Claim Limitation	Claim Language	Prior Art Disclosure
[1A]	an eyewear frame;	The Oakley Thump Pro has an eyewear frame.
[1B]	an electronics assembly comprising electronic components	The Oakley Thump Pro has an electronics assembly comprising electronic components configured to control an electrical functional member. The Oakley Thump Pro electronics

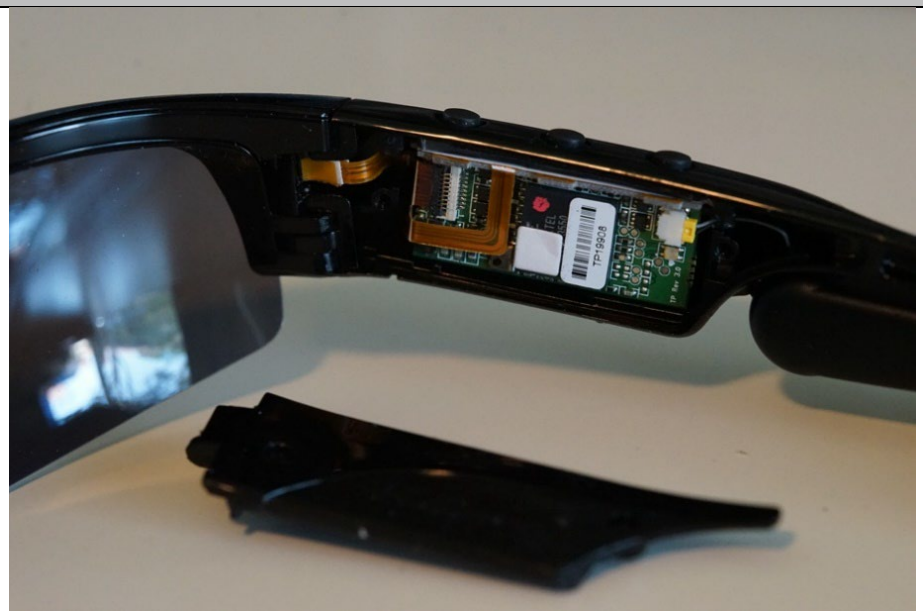
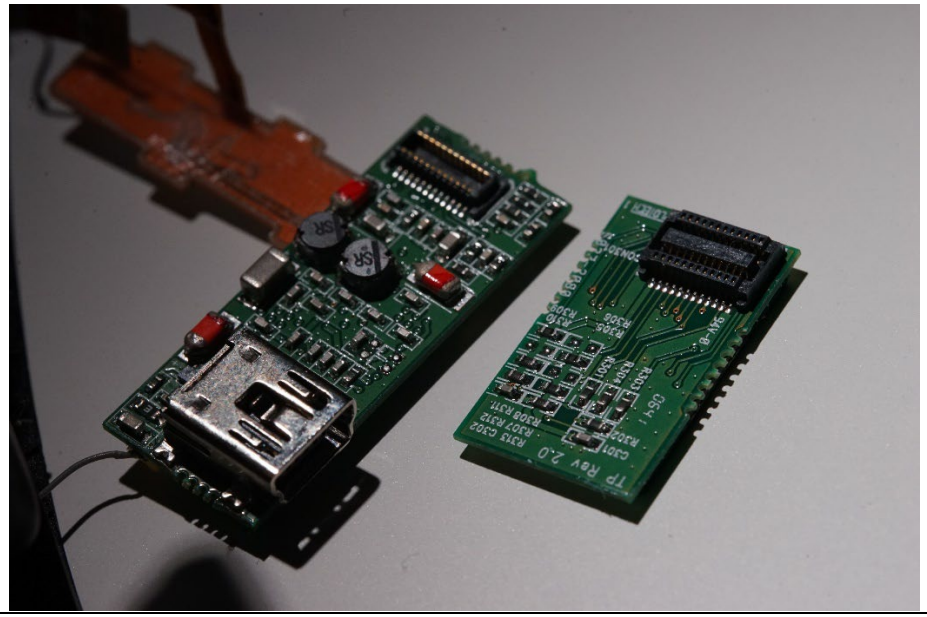
Claim Limitation	Claim Language	Prior Art Disclosure
	configured to control an electrical functional member;	assembly includes a circuit board with a controller, namely, the Sigmatel STMP3550, which is configured to control an electrical functional member, the speakers.  The Oakley Thump Pro also has other electronic components configured to control an electrical functional member, including the three playback buttons which control an electrical functional member such as the speakers.

Claim Limitation	Claim Language	Prior Art Disclosure
		
[1C]	a capacitive touch switch coupled to at least one electronic component in the electronics assembly;	It would have been obvious to a POSITA to modify the Oakley Thump Pro to substitute the three playback control switches in the right temple with capacitive touch switches. Capacitive touch switches were well known in the art at the time of the ’355 Patent. For example, Howell-719 discloses glasses with audio components, a printed circuit board, a processor, a memory, a transceiver, and a capacitive touch sensor embedded in a temple. Howell-719’s glasses include a switch that “can be used to turn the speaker on, or to tune the frequency of a radio” and “can be coupled to a printed circuit board.” Howel-719 at ¶¶28, 74, 97. Howell-719 discloses that the switch is operably coupled to the audio electronics that control the speaker and is coupled to at least one electronic component in the electronics assembly. *Id*. at ¶70. Howell-719 discloses that its switch can be a capacitive touch switch. *Id*. Howell-719 discloses a capacitive touch switch that “can be activated depending on electrical forces,” including where “the electrical force depends on capacitive effect.” *Id*. at ¶82. “By changing the capacitance,” such as “by placing one’s finger over a metallic pad,” one turns the switch on and off. *Id.*

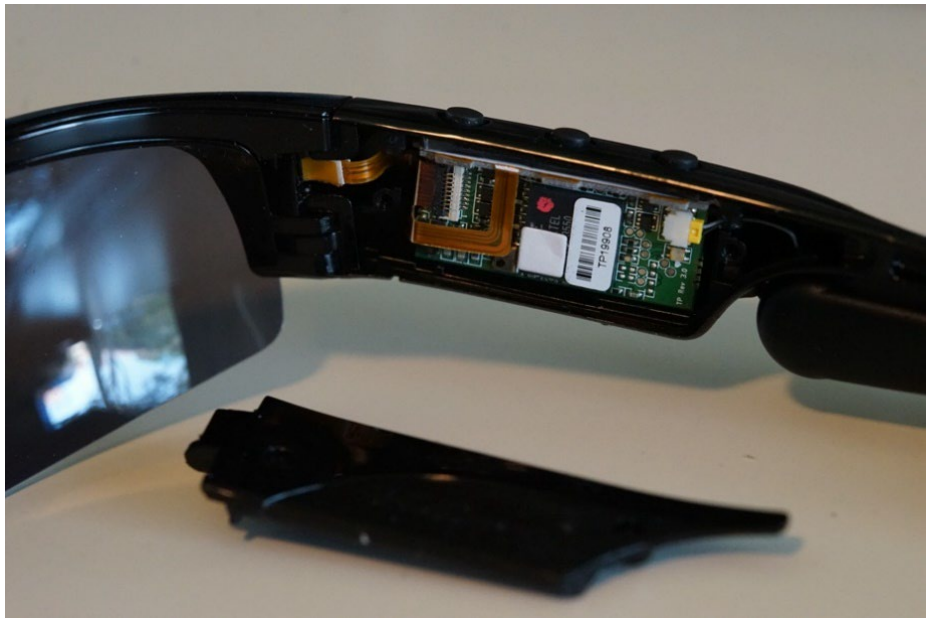
Claim Limitation	Claim Language	Prior Art Disclosure
		As another example, Eichelberger discloses a capacitive touch switch that includes a double-sided printed circuit board 16 on which electrodes 18b and 18c are fabricated. Eichelberger at 3:20–23, 3:43–47, 3:54–57. Eichelberger's electrodes are coupled to additional circuitry and electronic components (including the components the switch controls). *E.g.*, Eichelberger at 4:3–4, 4:26–34. Additional examples of capacitive touch sensors that were known in the art at the time of the '355 Patent include: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005) • Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005) • Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005) • QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 A POSITA would have been motivated to improve the Oakley Thump Pro's three sensors corresponding to the three playback control buttons by replacing them with capacitive touch switches as disclosed in any of the above-identified references and/or the knowledge of a POSITA, as evidenced by the above-identified references. A POSITA would have been motivated to do so as this would have been the simple substitution of one known element (a capacitive touch switch) for another (a button switch) to obtain predictable results. This also would have been the use of a known technique to improve similar devices in the same way. For example, manual switches relying on mechanical movement to close a circuit are susceptible to wear, fatigue, and loosening, which, over the course of repeated switching operations, can lead to eventual failure. Capacitive touch switches do not rely on mechanical movement, eliminating this source of failure. The substitution of a push button switch with a capacitive switch also could improve the water resistance of a device. Moreover, using a capacitive touch switch permits the glasses to have a switch without a protruding button. A

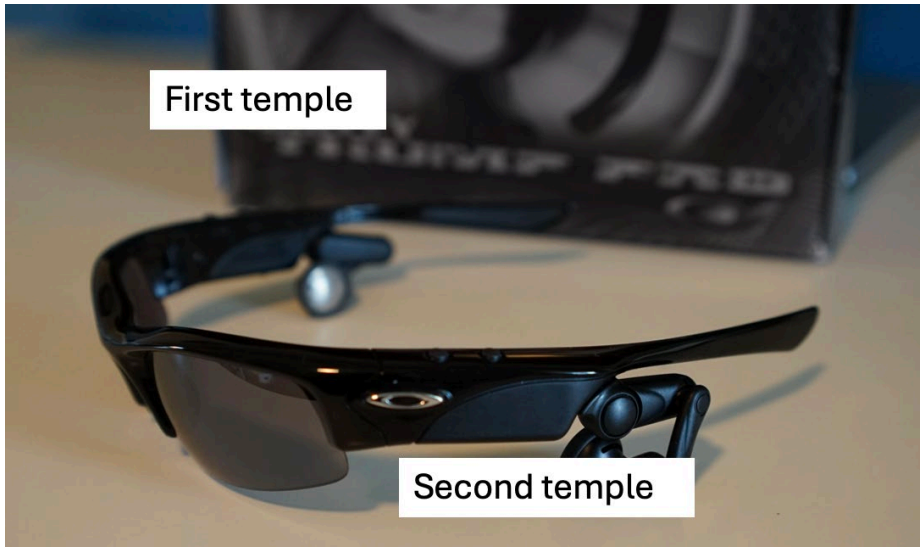
Claim Limitation	Claim Language	Prior Art Disclosure
		capacitive touch switch would therefore have been a design choice for a switch in eyewear in the early 2000s. Capacitive touch switches had been known for decades and, by the 2000s, were commonplace in consumer electronics. A POSITA would therefore have a reasonable expectation of success incorporating a capacitive touch switch, as disclosed in any of the above-identified references, into the Oakley Thump Pro. The ’355 patent’s brief, generic reference to capacitive touch switches, without identifying components or any specific type of capacitive touch switch needed for the claimed invention, further demonstrates that capacitive touch switches were well known and understood and that a POSITA would have had a reasonable expectation of success.
[1D]	at least one electrical connective element electrically connected to the electronic assembly and the electrical functional member; and	The Oakley Thump Pro has an electronics assembly comprising at least one electrical connective element electrically connected to the electronic assembly and the electrical functional member. The Oakley Thump Pro electronics assembly has an orange ribbon cable that extends to the left temple and electrically connects with the battery and left speaker. The Oakley Thump Pro electronics assembly also has wires that electrically connect to the right speaker.

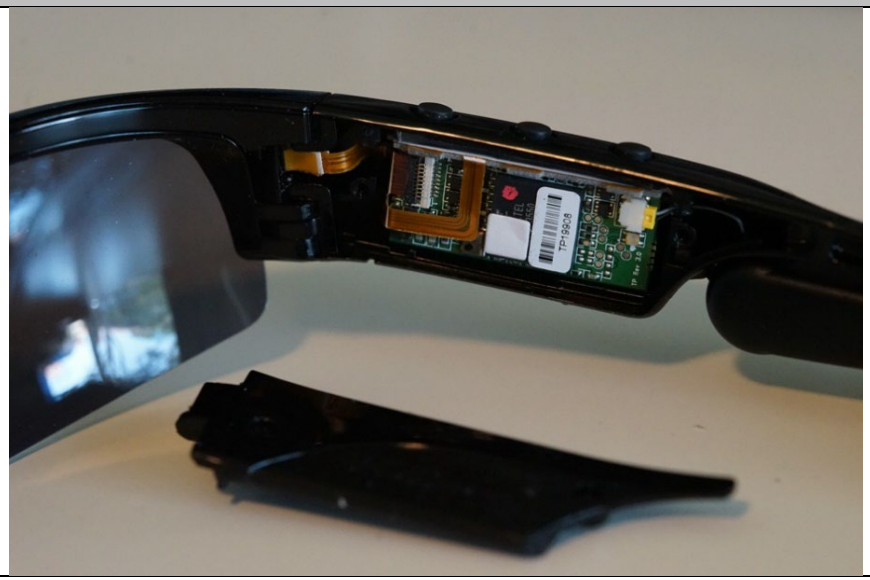
Claim Limitation	Claim Language	Prior Art Disclosure
		
[1E]	a conformal layer over the electronic assembly to seal the electronic components;	Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer over the electronic assembly to seal the electronic components. Upon information and belief, the printed circuit board has a transparent conformal coating over at least a portion of the printed circuit board.

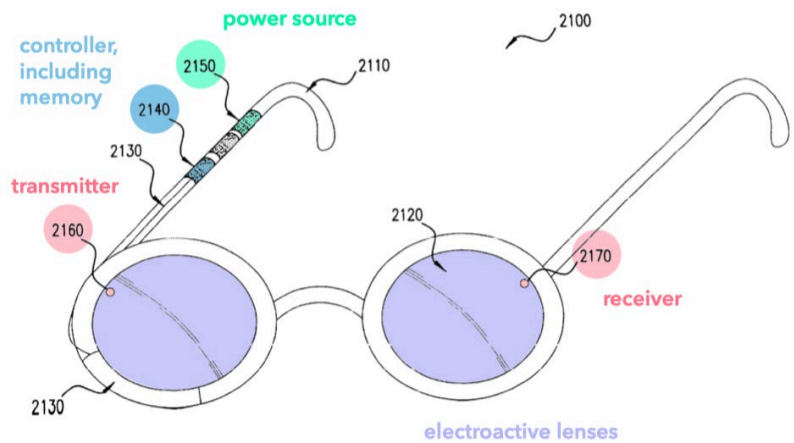
Claim Limitation	Claim Language	Prior Art Disclosure
		 

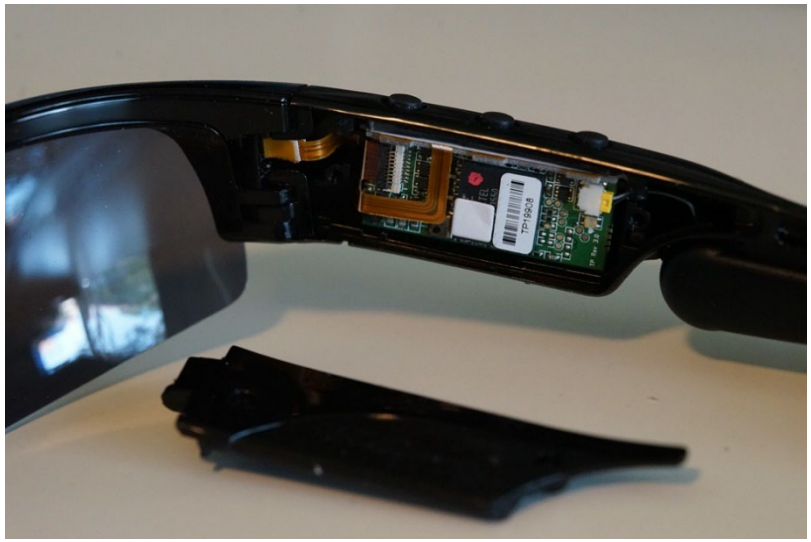
Claim Limitation	Claim Language	Prior Art Disclosure
		The user manual for the Oakley Thump Pro indicates that the Thump Pro is "water resistant." *See* Oakley Thump Pro User Manual (LUX00013972) at 21. Alternatively, it would have been obvious to coat the electronics assembly with a conformal coating as described in Sikonowiz. Designing and Creating Printed Circuits, published in 1981 and authored by Walter Sikonowiz, devotes an entire section to the step of "Conformal Coating." Sikonowiz at 135. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." *Id.* at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. This principle known to a POSITA would have provided further motivation to apply a conformal coating as taught in Sikonowiz to the Oakley Thump Pro. Because conformal coatings were commonplace with printed circuit boards as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying Sikonowiz's teachings to the Oakley Thump Pro. Applying a conformal coating as Sikonowiz teaches would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly would accomplish its intended function with the added benefit of keeping moisture and contaminants from interfering with the electronics.
[1F]	wherein the conformal layer is moisture proof and seals electrical connections of the electronic component;	Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer that is moisture proof and seals electrical connections of the electronic component. Upon information and belief, the conformal layer identified in Limitation [1E] is moisture proof and seals electrical connections of the electronic component.

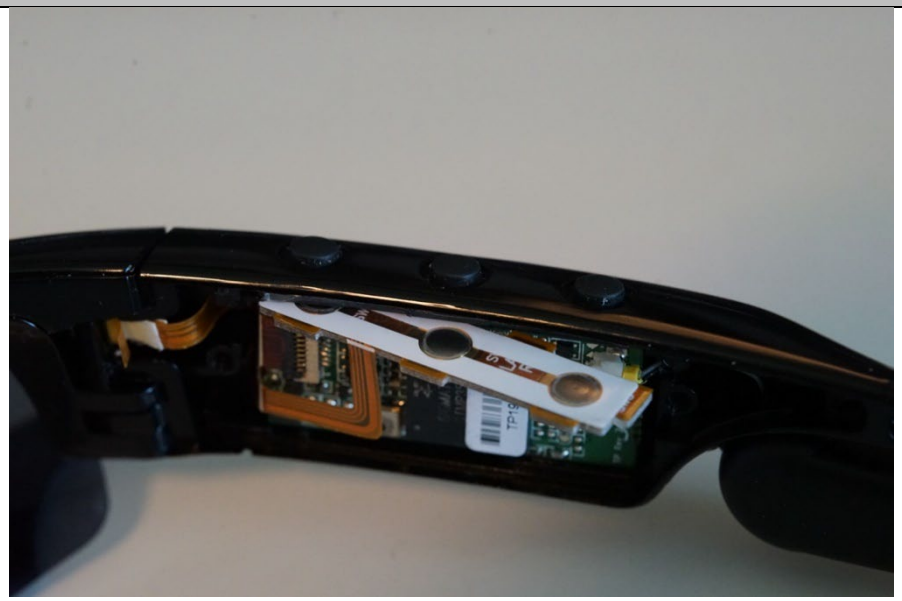
Claim Limitation	Claim Language	Prior Art Disclosure
		Alternatively, it would have been obvious to apply a conformal layer that is moisture proof and seals electrical connections of the electronic component as described with respect to Limitation [1E]. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." Sikonowiz at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136.
[1G]	wherein the conformal layer is disposed in an enclosure of the eyewear frame;	Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer that is disposed in an enclosure of the eyewear frame. Upon information and belief, the conformal layer identified in Limitation [1E] is disposed in an enclosure of the eyewear frame.  Alternatively, it would have been obvious to apply a conformal layer that is disposed in an enclosure of the eyewear frame as described with respect to Limitation [1E]. Applying a conformal coating as taught in Sikonowiz to the electronics assembly of the Oakley Thump Pro results in an electronics assembly comprising a conformal layer that is disposed in an enclosure of the eyewear frame.

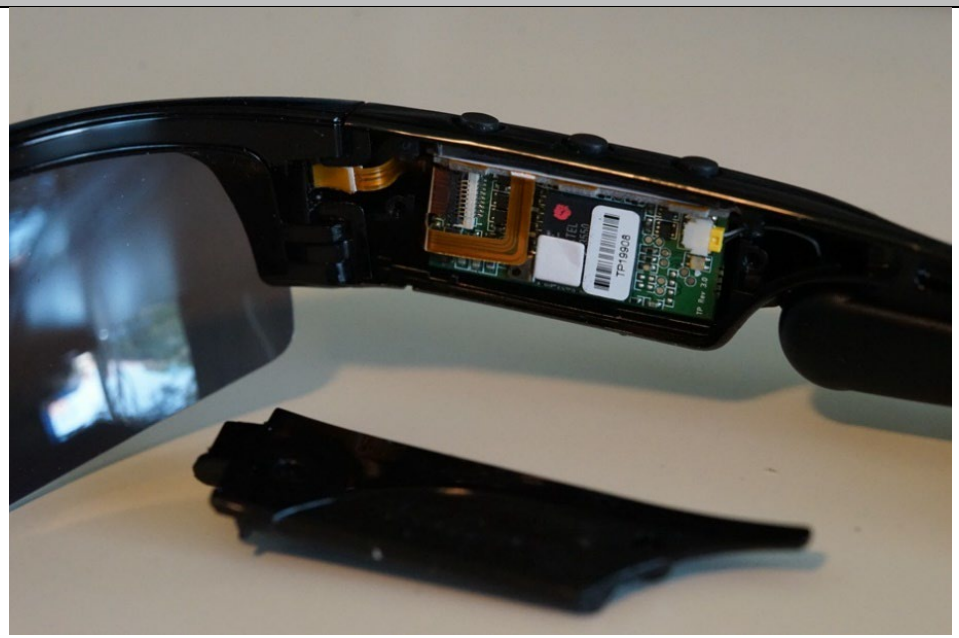
Claim Limitation	Claim Language	Prior Art Disclosure
[1H]	wherein the eyewear frame comprises a temple; and	The Oakley Thump Pro has an eyewear frame that comprises two temples.  Luxottica notes that the identification of the right and left temples as the first and second temples, respectively, is arbitrary, and Luxottica reserves all rights to rely on the left and right temples, as the first and second temples, respectively.
[1I]	wherein the electronic assembly is enclosed in the temple.	The Oakley Thump Pro has an electronics assembly that is enclosed in the right temple.

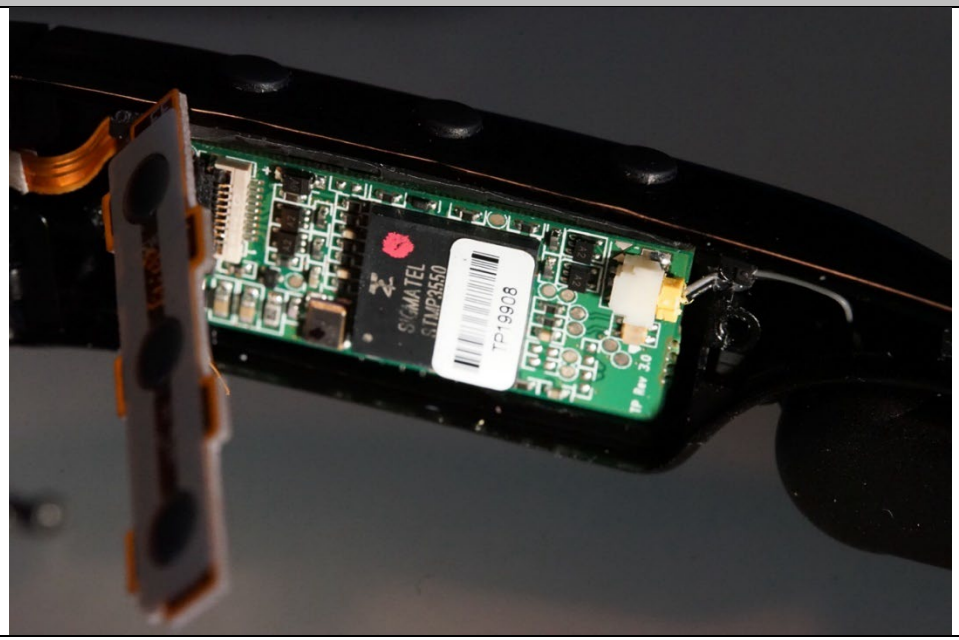
Claim Limitation	Claim Language	Prior Art Disclosure
		
[2]	The eyewear system of claim 1, wherein the electrical functional member comprises a lens.	At least under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, Ex. A-05 at 24-25, the Oakley Thump Pro has an electrical functional member that comprises a lens. The Oakley Thump Pro has two lenses supported by a lens housing. The lens were available in grey, black iridium, and dark bronze. (https://www.cnet.com/reviews/oakley-thump-pro-review/). Alternatively, it also would have been obvious to a POSITA to modify the Oakley Thump Pro in view of Blum-130. Blum-130 discloses "frames 2110 contain electro-active lenses 2120 that are connected by connecting wires 2130 to controller 2140 (integrated circuit) and power source 2150." Blum-130 at 30:1-3.

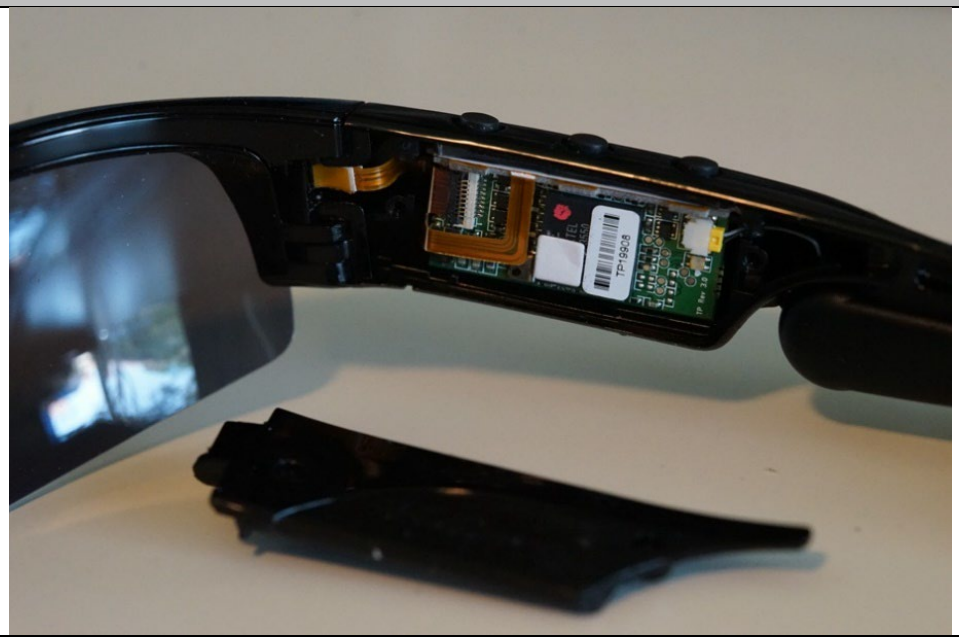
Claim Limitation	Claim Language	Prior Art Disclosure
		 FIG.21 Blum-130 at Fig. 21 (annotated). A POSITA would have been motivated to combine the Oakley Thump Pro with the electro-active lenses disclosed in Blum-130 because this would have been the combination of known prior art elements according to known methods to yield predictable results and/or the use of a known technique (the use of electroactive lenses) to a known device (electronic eyewear such as the Oakley Thump Pro) to yield predictable results. The Oakley Thump Pro was a pair of electronic sunglasses and thus, the use of electroactive lenses would have been obvious to a POSITA and a POSITA would have had a reasonable expectation of success at least because this would have been a straightforward modification.
[3]	The eyewear system of claim 1, wherein the electrical functional member includes at least one of an electro-active lens, an electro-chromic lens, an electronic display, a sensor, an imager, a	The Oakley Thump Pro has an electrical functional member that includes at least one of an electro-active lens, an electro-chromic lens, an electronic display, a sensor, an imager, a GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function. The Oakley Thump Pro has an electronics assembly within the right temple that includes a printed circuit board and three switches and/or

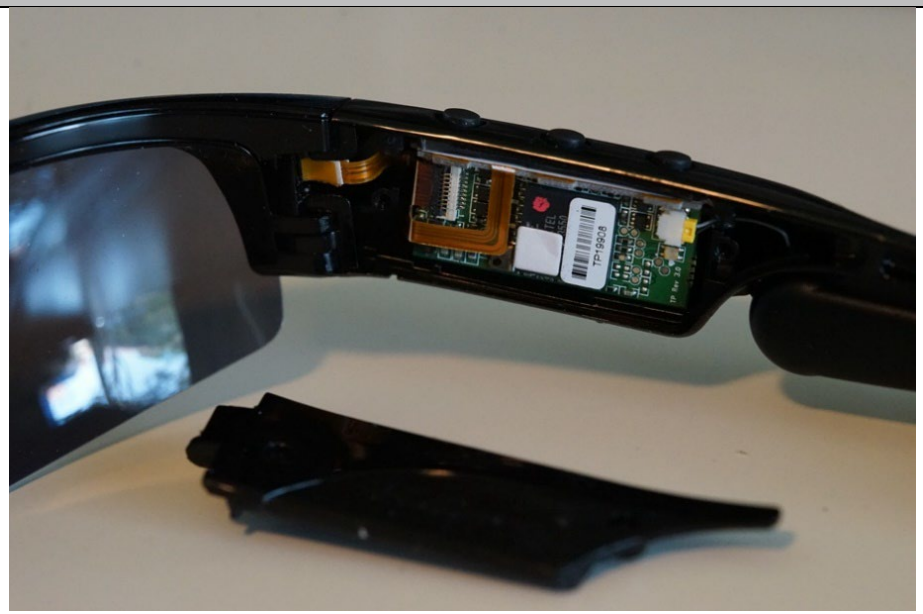
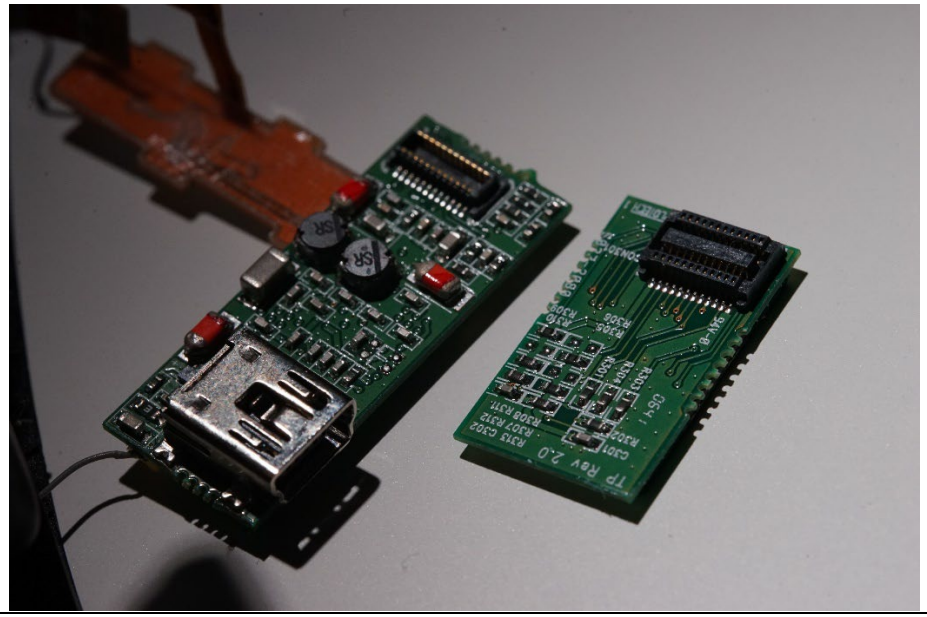
Claim Limitation	Claim Language	Prior Art Disclosure
	GPS, an alarm, a hearing aid, a virtual reality function, an augmented reality function, a gaming function, an audio output function, a microphone function, a recording function, a transmitter function, a pedometer, and an active 3D function.	sensors corresponding to the three push buttons. The printed circuit board includes a processor and a drive circuit that connects to the electrical functional member, speaker, which has an audio output function. 

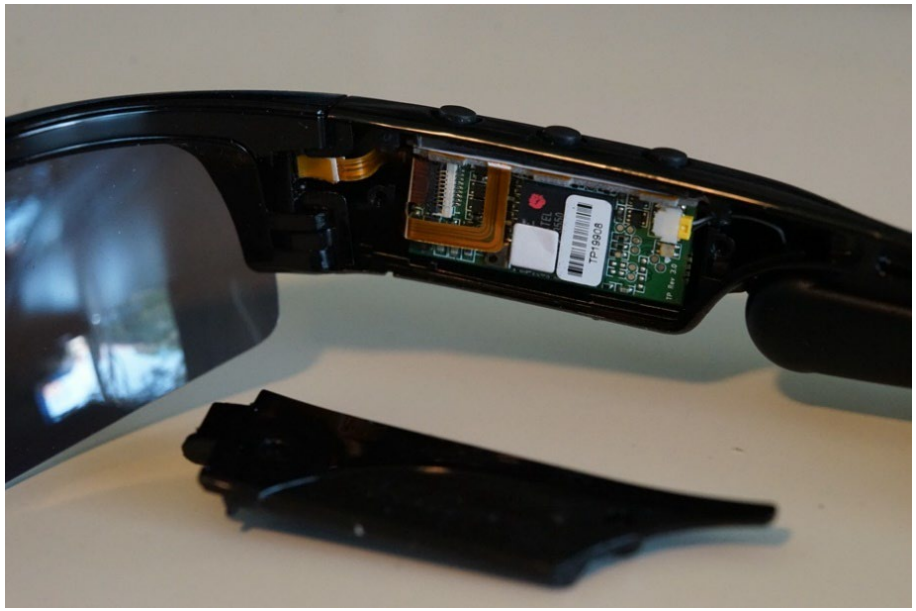
Claim Limitation	Claim Language	Prior Art Disclosure
		 Above: Three switches and/or sensors corresponding to the three push buttons (previous track, play/pause, next track).
[5]	The eyewear system of claim 1, wherein the electronic assembly comprises a micro-processor.	The Oakley Thump Pro has an electronics assembly that comprises a micro-processor. The electronics assembly comprises a Sigmatel STMP3550 micro-processor.

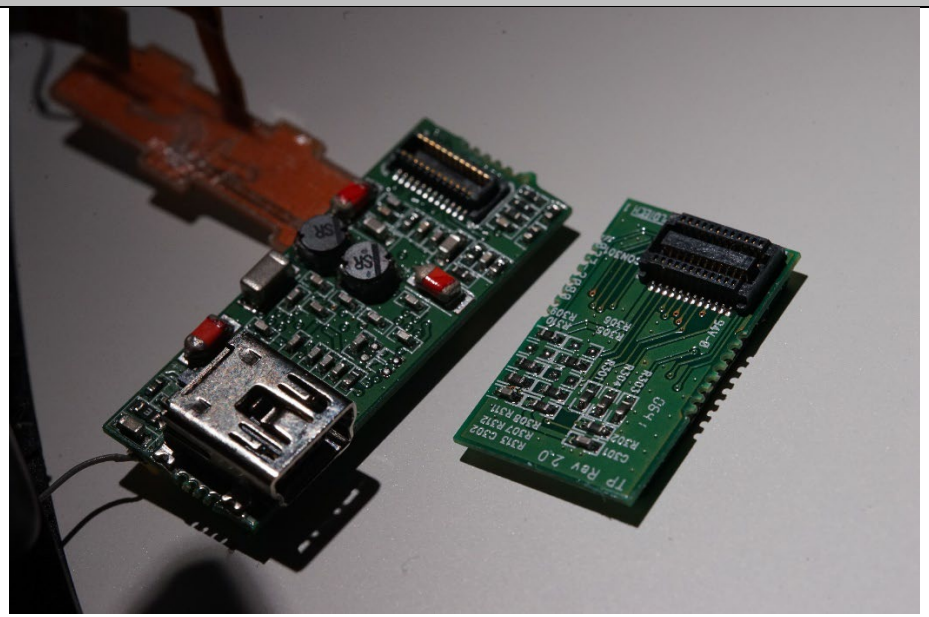
Claim Limitation	Claim Language	Prior Art Disclosure
		

Claim Limitation	Claim Language	Prior Art Disclosure
		
[6]	The eyewear system of claim 1, wherein the enclosure comprises at least one of an outer casing of the electronic assembly or a cavity of the eyewear frame.	The Oakley Thump Pro has an enclosure that comprises at least one of an outer casing of the electronic assembly or a cavity of the eyewear frame. The electronics assembly is located within a cavity of the Oakley Thump Pro's right temple.

Claim Limitation	Claim Language	Prior Art Disclosure
		
[7]	The eyewear system of claim 1, wherein the conformal layer comprises at least one of an encasing layer or an encapsulating layer.	Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer wherein the conformal layer comprises at least one of an encasing layer or an encapsulating layer. Upon information and belief, the printed circuit board has a transparent conformal coating over at least a portion the printed circuit board.

Claim Limitation	Claim Language	Prior Art Disclosure
		 

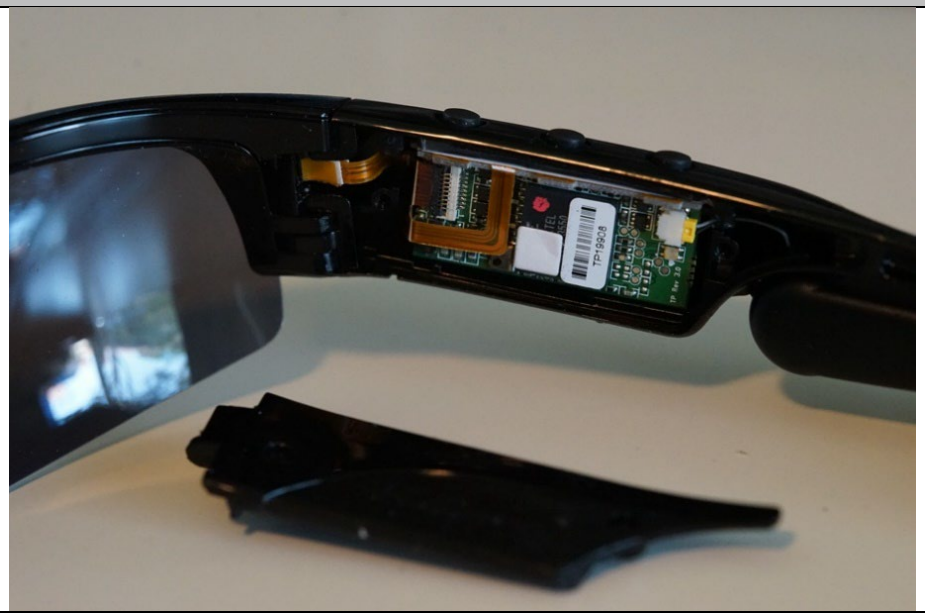
Claim Limitation	Claim Language	Prior Art Disclosure
		Alternatively, it would have been obvious to apply a conformal layer that comprises at least one of an encasing layer or an encapsulating layer as described with respect to Limitation [1E]. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." Sikonowiz at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. Applying a conformal coating as taught in Sikonowiz to the electronics assembly of the Oakley Thump Pro results in an electronics assembly comprising a conformal layer that comprises at least one of an encasing layer or an encapsulating layer.
[8]	The eyewear system of claim 1, wherein the conformal layer protects the electronic components from external environmental damage.	Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer. The conformal layer protects the electronic components from external environmental damage such as water damage. 

Claim Limitation	Claim Language	Prior Art Disclosure
		 Alternatively, it would have been obvious to apply a conformal layer that protects the electronic components from external environmental damage as described with respect to Limitation [1E]. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." Sikonowiz at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. Applying a conformal coating as taught in Sikonowiz to the electronics assembly of the Oakley Thump Pro results in an electronics assembly comprising a conformal layer that protects the electronic components from external environmental damage.
[13P]	A method of manufacturing an eyewear system comprising:	To the extent the preamble is limiting, manufacturing the Oakley Thump Pro performs a method of manufacturing an eyewear system.

Claim Limitation	Claim Language	Prior Art Disclosure
[13A]	disposing a plurality of electronic components on a capacitive touch switch;	Under Plaintiffs' apparent interpretation of this claim limitation, as evidenced by Plaintiffs' May 17, 2024 Preliminary Infringement Contentions, EX. A-05 at 47-51, replacing the Oakley Thump Pro's three sensors corresponding to the three playback control buttons with capacitive

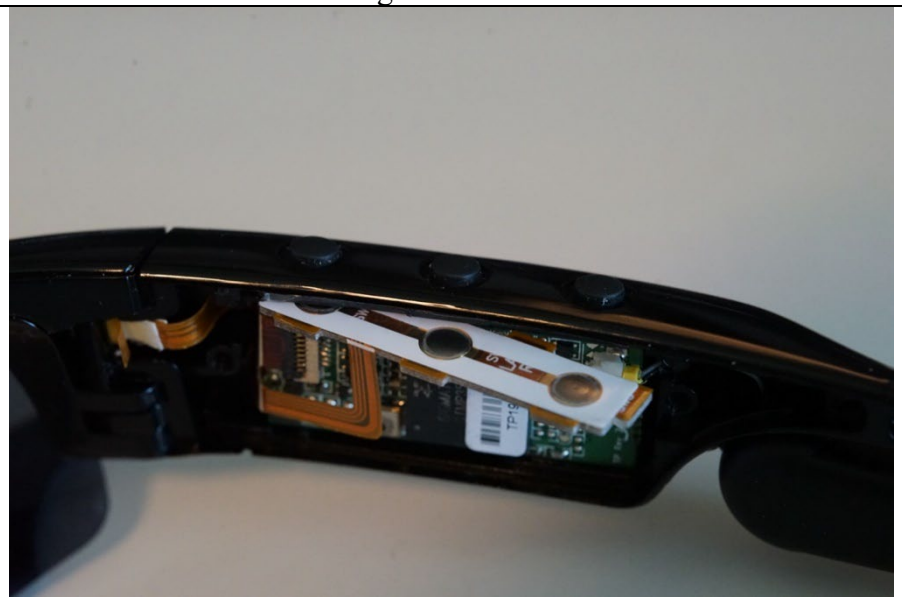
Claim Limitation	Claim Language	Prior Art Disclosure
		touch switches as disclosed in Howell-719 and/or Eichelberger or other capacitive touch switch references identified above performs the limitation disposing a plurality of electronic components on a capacitive touch switch. By replacing the Oakley Thump Pro's three sensors with capacitive touch switches, the electronic components on the printed circuit board are coupled to the capacitive touch switches and disposed on a capacitive touch switch under Plaintiff's apparent interpretation. Howell-719 discloses glasses with audio components, a printed circuit board, a processor, a memory, a transceiver, and a capacitive touch sensor embedded in a temple. Howell-719's glasses include a switch that "can be used to turn the speaker on, or to tune the frequency of a radio" and "can be coupled to a printed circuit board." Howel-719 at ¶¶28, 74, 97. Howell-719 discloses that the switch is operably coupled to the audio electronics that control the speaker and is coupled to at least one electronic component in the electronics assembly. *Id*. at ¶70. Howell-719 discloses that its switch can be a capacitive touch switch. *Id*. Howell-719 discloses a capacitive touch switch that "can be activated depending on electrical forces," including where "the electrical force depends on capacitive effect." *Id*. at ¶82. "By changing the capacitance," such as "by placing one's finger over a metallic pad," one turns the switch on and off. *Id.* Eichelberger discloses a capacitive touch switch that includes a double-sided printed circuit board 16 on which electrodes 18b and 18c are fabricated. Eichelberger at 3:20–23, 3:43–47, 3:54–57. Eichelberger's electrodes are coupled to additional circuitry and electronic components (including the components the switch controls). *E.g.*, Eichelberger at 4:3–4, 4:26–34. Additional examples of capacitive touch sensors that were known in the art at the time of the '355 Patent include: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005) • Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005)

Claim Limitation	Claim Language	Prior Art Disclosure
		• Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005) • QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 A POSITA would have been motivated to improve the Oakley Thump Pro's three sensors corresponding to the three playback control buttons by replacing them with capacitive touch switches as disclosed in Howell-719 and/or Eichelberger and/or any of the other capacitive touch switch references identified above. Manual switches relying on mechanical movement to close a circuit are susceptible to wear, fatigue, and loosening, which, over the course of repeated switching operations, can lead to eventual failure. Capacitive touch switches do not rely on mechanical movement, eliminating this source of failure. Moreover, using a capacitive touch switch permits the glasses to have a switch without a protruding button that would disrupt the typical smooth, slim profile of glasses. A capacitive touch switch would therefore have been an ideal choice for a switch in eyewear in the early 2000s, when glasses were often marketed as fashion accessories. Incorporating a capacitive touch switch into the Oakley Thump Pro would constitute a simple substitution or addition of a specific known type of switch (Howell-719's capacitive touch switch or Eichelberger's capacitive touch switch or a capacitive touch switch from any of the other capacitive touch switch references) for or to a genus of switches disclosed in the Oakley Thump Pro. Capacitive touch switches had been known for decades and, by the 2000s, were commonplace in consumer electronics. A POSITA would therefore have a reasonable expectation of success incorporating a capacitive touch switch into the Oakley Thump Pro.
[13B]	connecting the plurality of electronic components via electrical connections to form an electronic assembly;	Manufacturing the Oakley Thump Pro performs the step of connecting the plurality of electronic components via electrical connections to form an electronic assembly. The electronics assembly in the Oakley Thump Pro was manufactured by connecting electrical components via electrical connections to form the electronics assembly.

Claim Limitation	Claim Language	Prior Art Disclosure
		
[13C]	depositing a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch; and	Howell-719 discloses glasses with audio components, a printed circuit board, a processor, a memory, a transceiver, and a capacitive touch sensor embedded in a temple. Howell-719's glasses include a switch that "can be used to turn the speaker on, or to tune the frequency of a radio" and "can be coupled to a printed circuit board." Howel-719 at ¶¶28, 74, 97. Howell-719 discloses that the switch is operably coupled to the audio electronics that control the speaker and is coupled to at least one electronic component in the electronics assembly. *Id*. at ¶70. Howell-719 discloses that its switch can be a capacitive touch switch. *Id*. Howell-719 discloses a capacitive touch switch that "can be activated depending on electrical forces," including where "the electrical force depends on capacitive effect." *Id*. at ¶82. "By changing the capacitance," such as "by placing one's finger over a metallic pad," one turns the switch on and off. *Id.* As another example, Eichelberger discloses a capacitive touch switch that includes a double-sided printed circuit board 16 on which electrodes 18b and 18c are fabricated. Eichelberger at 3:20–23, 3:43–47, 3:54–57. Eichelberger's electrodes are coupled to additional circuitry and electronic components (including the components the switch controls). *E.g.*, Eichelberger at 4:3–4, 4:26–34.

Claim Limitation	Claim Language	Prior Art Disclosure
		Additional examples of capacitive touch sensors that were known in the art at the time of the ’355 Patent include: • Secrets of a Successful QTouch™ Design, Quantum Research Group (2005) • Mark Lee, Application Note AN2394: CapSense Best Practices, Cypress Perform (2007) • Louis Bokma et al., Application Note AN2277: Capacitive Front Panel Display Demonstration, Cypress Perform (2005) • Ryan Seguine et al., Application Note AN2292: Layout Guidelines for PSoC™ CapSense™, Cypress Perform (2005) • QT1100A-ISG 10 Key QTouch™ Sensor IC • Kokonaski-999 at ¶¶ [0047], [0056], Claims 24, 28 A POSITA would have been motivated to improve the Oakley Thump Pro’s three sensors corresponding to the three playback control buttons by replacing them with capacitive touch switches as disclosed in any of the above-identified references and/or the knowledge of a POSITA, as evidenced by the above-identified references. A POSITA would have been motivated to do so as this would have been the simple substitution of one known element (a capacitive touch switch) for another (a button switch) to obtain predictable results. This also would have been the use of a known technique to improve similar devices in the same way. For example, manual switches relying on mechanical movement to close a circuit are susceptible to wear, fatigue, and loosening, which, over the course of repeated switching operations, can lead to eventual failure. Capacitive touch switches do not rely on mechanical movement, eliminating this source of failure. The substitution of a push button switch with a capacitive switch also could improve the water resistance of a device. Moreover, using a capacitive touch switch permits the glasses to have a switch without a protruding button. A capacitive touch switch would therefore have been a design choice for a switch in eyewear in the early 2000s. Capacitive touch switches had been known for decades and, by the 2000s, were commonplace in consumer electronics. A POSITA would therefore have a reasonable expectation of success

Claim Limitation	Claim Language	Prior Art Disclosure
		incorporating a capacitive touch switch, as disclosed in any of the above-identified references, into the Oakley Thump Pro. It would have been obvious to deposit a conformal layer over at least a portion of the electronic assembly and at least a portion of the capacitive touch switch as disclosed by the Oakly Thump Pro and Sikonowiz. Upon information and belief, the Oakley Thump Pro has an electronics assembly comprising a conformal layer over the electronic assembly to seal the electronic components. Upon information and belief, the printed circuit board has a transparent conformal coating over at least a portion of the printed circuit board. The user manual for the Oakley Thump Pro indicates that the Thump Pro is "water resistant." *See* Oakley Thump Pro Manual (LUX00013972) at 21. Designing and Creating Printed Circuits, published in 1981 and authored by Walter Sikonowiz, devotes an entire section to the step of "Conformal Coating." Sikonowiz at 135. Sikonowiz discloses that the "purpose of a conformal coating is to cover a printed-circuit assembly and protect it from environmental hazards such as moisture, dirt, and chemicals." *Id.* at 135–36. "Of these, moisture protection is probably of the greatest general significance." *Id*. at 136. A POSITA would have been motivated to apply a conformal coating to prevent moisture and contaminants from damaging the electronics assembly and capacitive touch switch. As the documentation for an industry standard (IPC-2221A) evidences, a POSITA would have recognized that, "due to the tight spacing of leads and land traces," "[m]any surface mount technologies cannot perform adequately without the use of a conformal coating." IPC-2221A at 25. This principle known to a POSITA would have provided further motivation to apply a conformal coating as taught by Sikonowiz and the Oakley Thump Pro. Because conformal coatings were commonplace with printed circuit boards and consumer electronics as far back as the 1980s and continuing into the 2000s, a POSITA would have had a reasonable expectation of success in applying the teachings of Sikonowiz and the Oakly Thump Pro. Applying a conformal coating as Sikonowiz and the Oakley Thump Pro teaches would represent using a known technique (conformal coating) with a known device ready for improvement (uncoated electronics assembly and uncoated capacitive touch switch); and the result would have been predictable because decades of experience would have told a POSITA that the conformal layer coated electronics assembly and capacitive touch switch would

Claim Limitation	Claim Language	Prior Art Disclosure
		accomplish their intended functions with the added benefit of keeping moisture and contaminants from interfering with the electronics.
[13D]	coupling the electronic assembly and the capacitive touch switch with the conformal layer to an enclosure of an eyewear frame.	 As shown above with respect to Limitation [13C], it would have been obvious to replace the Oakley Thump Pro's three sensors with capacitive touch switches and deposit a conformal layer over at least a portion of the capacitive touch switch. Thus, the Oakley Thump Pro in combination with the capacitive touch switch references and conformal coating references identified above discloses coupling the electronic assembly and the capacitive touch switch with the conformal layer to an enclosure of an eyewear frame.