Clement S. Roberts (SBN 209203)
croberts@orrick.com
ORRICK HERRINGTON & SUTCLIFFE LLP
405 Howard Street
San Francisco, CA 94105
Tel: (415) 773-5700 -- Fax: (415) 773-5759

Alyssa Caridis (SBN 260103)
acaridis@orrick.com
ORRICK HERRINGTON & SUTCLIFFE LLP
777 South Figueroa Street, Suite 3200
Los Angeles, CA 90017
Tel: (213) 629-2020 -- Fax: (213) 612-2499

George I. Lee (*pro hac vice* forthcoming)
lee@ls3ip.com
Sean M. Sullivan (*pro hac vice* forthcoming)
sullivan@ls3ip.com
Rory P. Shea (*pro hac vice* forthcoming)
shea@ls3ip.com
J. Dan Smith (*pro hac vice* forthcoming)
smith@ls3ip.com
LEE SULLIVAN SHEA & SMITH LLP
656 W Randolph St, Floor 5W
Chicago, IL 60661
Tel: (312) 754-0002 -- Fax: (312) 754-0003

Attorneys for Plaintiff Sonos, Inc.

UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

SONOS, INC.,	Case No. 2:19-cv-5411
Plaintiff,	_____
v.	
LENBROOK INDUSTRIES LIMITED and LENBROOK AMERICA CORP.	**COMPLAINT FOR PATENT INFRINGEMENT**
Defendants.	**JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff Sonos, Inc. ("Sonos" or "Plaintiff") hereby asserts the following claims for patent infringement of United States Patent Nos. 8,588,949, 9,195,258, 9,219,959, 8,868,698, 9,883,234, 8,938,312, and 9,252,721 ("patents-in-suit"; attached hereto as Exhibits 1-7, respectively) against Defendants Lenbrook Industries Limited and Lenbrook America Corp. ("Defendants"), doing business as Bluesound International ("Bluesound"), and alleges as follows:

INTRODUCTION

2. Sonos was founded in 2002 and is an innovator and industry leader in the field of wireless audio technology. In contrast to conventional home audio systems that required a centralized receiver tied to speakers with a maze of wires, Sonos invented a multi-room wireless home audio system with intelligent, networked playback devices that did not require wired connections to a centralized receiver.

3. In this respect, as acknowledged by the media, Sonos reinvented home audio for the digital age. *See, e.g.*, Ex. 8 (2005 *PC Magazine*: describing one of Sonos's first products as "the iPod of digital audio" for the home and contrasting Sonos with conventional home audio systems that required "dedicated wiring"); Ex. 9 (2013 *NBC News*: "If you're not familiar with Sonos, this company revolutionized the home audio world a decade ago . . . ."); Ex. 10 (2014 *Consumer Reports*: "Sonos not only helped to invent the wireless speaker category, the company also set the bar for performance, ease of use, and flexibility."); Ex. 11 (2015 *Men's Journal*: "Sonos almost singlehandedly established the stand-alone wireless home speaker system category . . . .").

4. Since its first product launch in 2005, Sonos has released a wide variety of wireless audio products, including, *inter alia*, the ONE (Gen 1 and Gen 2), PLAY:1, PLAY:3, PLAY:5 (Gen 1 and Gen 2), BEAM, PLAYBAR, PLAYBASE, SUB, CONNECT, CONNECT:AMP, and AMP, all of which can be

1   controlled by the Sonos app for iOS, Android, PC, or Mac. *See, e.g.*, Ex. 12-14.

2   Sonos's products have been widely regarded as the best in the industry. *See, e.g.*,

3   Ex. 15 (2018 *What Hi-Fi*: "Sonos is king, but there are pretenders . . . ."); Ex. 16

4   (2018 *Digital Trends*: "Sonos is the king of multiroom audio . . . ."); Ex. 17 (2019

5   *What Hi-Fi*: "It's facing more competition than ever, but no multi-room offering is

6   as complete or as pleasurable to live with as Sonos.").

7   5.   As a pioneer in wireless audio, Sonos has been at the forefront of

8   technological innovation and has diligently worked to protect its inventions.

9   Sonos's patent efforts have earned Sonos a spot on the IPO list of "Top 300

10   Organizations Granted U.S. Patents." *See* Ex. 18. Currently, Sonos is the owner

11   of more than 630 United States Patents related to audio technology, as well as more

12   than 370 pending United States Patent Applications. Many of these patents are

13   identified on the "Patents" webpage of Sonos's website, which includes a table

14   correlating Sonos's patents to its products. *See* Ex. 19. In addition, Sonos encloses

15   notices of its patents with its product inserts/manuals, which state that "[o]ur patent-

16   to-product information can be found here: sonos.com/legal/patents." *See, e.g.*, Ex.

17   12, 20. Sonos also provides a link in the Sonos app to sonos.com/legal through

18   which the "Patents" webpage of Sonos's website can be accessed. *See* Ex. 21.

19   6.   Sonos's patents have been recognized as being of the highest quality

20   and utility. For instance, in its analysis of "[t]he technology world's most valuable

21   patent portfolios," IEEE ranked Sonos's patent portfolio second in electronics,

22   behind only Apple. *See* Ex. 22. Moreover, as explained below, the patented

23   inventions embodied in Sonos's products help shape the Sonos experience and have

24   been recognized and praised by the press, Defendants, and other competitors in the

25   wireless audio industry.

26   7.   In 2013, more than 10 years after Sonos was founded, Defendants

27   launched their own wireless audio system, called "Bluesound." Defendants'

28   Bluesound system is a line of wireless audio products that includes the PULSE

FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, NODE, NODE 2, NODE 2i, POWERNODE, POWERNODE 2, POWERNODE 2i, VAULT, VAULT 2, VAULT 2i, and any other "BluOS Enabled" or "BluOS Ready" audio player (e.g., the NPM-1) (individually or collectively, "Bluesound Player(s)"), all of which can be controlled by the BluOS Controller app (formerly known as the Bluesound Controller app) for iOS, Android, Kindle, PC, or Mac (individually or collectively, "BluOS Controller App(s)"). *See, e.g.*, Ex. 23-24. Herein, the "Bluesound System" refers to one or more "Bluesound Players" and/or one or more "BluOS Controller Apps."

8.   Prior to launching its Bluesound System in 2013, Defendants served as a distributor of Sonos's wireless audio products in Canada from 2007-2008. Thus, Defendants have had intimate knowledge of Sonos's wireless audio products and technology since at least 2007, more than six years before Defendants released their first Bluesound products. Moreover, pursuant to Fed. R. Civ. P. 11(b)(3), Defendants' experience as a Sonos distributor was a catalyst for Defendants' decision to launch the Bluesound System in 2013 and to target the wireless audio market that Sonos created.

9.   Since its launch, Defendants' Bluesound System has competed directly with Sonos for the sale of wireless audio products. As correctly observed by *Digital Trends*, the Bluesound System is "aimed squarely at audio fans who like the Sonos model." *See* Ex. 16. Bluesound's targeting of Sonos led *Sound and Vision* to issue an article entitled "Is Bluesound an Audiophile Sonos Killer?," which stated that "Bluesound looks to have an array of products that might be the first true high-end challenger to Sonos' wireless music dominance." *See* Ex. 25. Echoing this sentiment, *What Hi Fi?* recently stated that "[t]he first genuine threat to Sonos was Bluesound . . . ." (*see* Ex. 15), and *T3* reported that Bluesound was a "[v]ery strong Sonos rival" (*see* Ex. 26).

3

10.   Instead of innovating to compete fairly with Sonos, however, Defendants have merely copied Sonos. For example, as *Digital Trends* explained: "Bluesound has gone out of its way to mimic Sonos's product line up." Ex. 16. In comparing/testing the Sonos and Bluesound products, *Digital Trends* "matched up a pair of [Sonos] Play:1s, a [Sonos] Play:5, a [Sonos] Play:3, and a [Sonos] PlayBar, against a pair of [Bluesound] Pulse Flexs, a [Bluesound] Pulse 2, a [Bluesound] Pulse Mini, and a [Bluesound] Pulse Soundbar. *Id*. *Digital Trends'* "match[] up" is illustrated in the images below:

11.   Like *Digital Trends*, other media outlets have also "matched up" various Sonos and Bluesound products due to their similarities. For example, in 2013, shortly after the launch of Bluesound, *Electronic House* stated that "[t]he Pulse ($699) is Bluesound's all-in-one speaker unit, similar to the Sonos PLAY:5 or PLAY:3." *See* Ex. 27.

12.   In addition to copying Sonos's product lineup, Defendants have also imitated the look and feel of Sonos's products and marketing style, which is

1   illustrated in the following marketing images:

2
3   SONOS

4

5

6

7

8

9

10

11

12

13   BLUESOUND

14

15

16

17

18

19

20

21

22

23   13.   Pursuant to Fed. R. Civ. P. 11(b)(3), Defendants' copying extended

24   beyond Sonos's product lineup and product/marketing aesthetics, and also included

25   the incorporation of Sonos's patented innovations into the Bluesound System. It is

26   Defendants' copying of Sonos's patented innovations that forms the basis for the

27   present patent infringement claims, as set forth below.

28   14.   Moreover, Defendants have had actual and/or constructive knowledge

5

1   of Sonos's patents prior to the filing of this action. For instance, on November 1,

2   2018, Sonos sent Defendants a letter providing them with notice of infringement of

3   70 Sonos patents, including all 7 of the patents-in-suit. *See* Ex. 28. Likewise, on

4   June 7, 2019, Sonos sent Defendants another letter providing Defendants notice of

5   infringement of another 45 Sonos patents. *See* Ex. 29.

6   15.   In addition, Defendants have been aware (or should have been aware)

7   of Sonos's patents well before November 1, 2018 in view of Sonos's previously-

8   filed patent litigation against D&M (another direct competitor of Sonos and

9   Defendants) and its infringing Denon HEOS system – *Sonos Inc. v. D&M Holdings,*

10   *Inc.*, C.A. No. 14-1330-RGA (D. Del.). *See* Ex. 30. This prior litigation lasted over

11   three years, garnered media attention across the industry, and resulted in a jury

12   verdict for Sonos on all counts, including, *inter alia*, willful infringement of two of

13   the patents-in-suit asserted here against Defendants – United States Patent Nos.

14   8,588,949 and 9,195,258. *See*, *e.g.*, Ex. 31 (2014 *VentureBeat* article entitled

15   "Sonos sues Denon, alleging wireless speaker patent infringement"); Ex. 32 (2014

16   *CNET* article entitled "Sonos sues Denon for 'copying' its wireless products"); Ex.

17   33. In addition, Defendants have studied Sonos's litigation against D&M, which,

18   in addition to United States Patent Nos. 8,588,949 and 9,195,258, involved two

19   more of the patents-in-suit asserted here against Defendants – United States Patent

20   Nos. 8,938,312 and 9,219,959 (which were not adjudicated due to settlement).

21   16.   Further, Defendants have also been aware (or should have been aware)

22   of Sonos's patents well before Sonos's November 1, 2018 letter in view of Sonos's

23   leading position in the wireless audio industry since its first commercial launch in

24   2005, Defendants' relationship with Sonos from 2007-2008 as a Canadian

25   distributor of Sonos's products, Defendants' direct competition with Sonos since

26   the Bluesound launch in 2013, Sonos's prominent display of its patents on Sonos's

27   website, and Sonos's inclusion of a notice of its patents in Sonos's product

28   inserts/manuals and the Sonos app.

THE PARTIES

17.   Plaintiff Sonos, Inc. is a Delaware corporation with its principal place of business at 614 Chapala Street, Santa Barbara, California 93101. Sonos is the owner of the patents-in-suit.

18.   Defendant Lenbrook Industries Limited is a Canadian corporation with a principal place of business at 633 Granite Court, Pickering, Ontario Canada, L1W 3K1. Lenbrook Industries Limited does business in the United States, including in the Central District of California, as Bluesound International, and describes Bluesound International as a division of Lenbrook Industries Limited.

19.   Defendant Lenbrook America Corp. is a Delaware corporation that is registered to do business in California, and has a principal place of business in the Central District of California at 20300 S. Vermont Avenue, Suite 265, Torrance, California, 90502. Lenbrook America Corp. is a subsidiary of Lenbrook Industries Limited and does business in the United States, including in the Central District of California, as Bluesound International.

20.   Lenbrook Industries Limited and Lenbrook America Corp. directly and/or indirectly develop, design, manufacture, distribute, market, offer to sell, sell, and/or import the Bluesound System in/into the United States, including in the Central District of California, and otherwise purposefully direct infringing activities to this District in connection with the Bluesound System.

JURISDICTION AND VENUE

21.   As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, this Court has subject matter jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

22.   This Court has personal jurisdiction over Defendants Lenbrook Industries Limited and Lenbrook America Corp. because, pursuant to Fed. R. Civ. P. 11(b)(3), Defendants have (1) availed themselves of the rights and benefits of the laws of the State of California, (2) transacted, conducted, and/or solicited business

1   and engaged in a persistent course of conduct in the State of California (and in this

2   District), (3) derived substantial revenue from the sales and/or use of products, such

3   as the Bluesound System, in the State of California (and in this District), (4)

4   purposefully directed activities (directly and/or through intermediaries), such as

5   shipping, distributing, offering for sale, selling, and/or advertising their infringing

6   Bluesound System, at residents of the State of California (and residents in this

7   District), (5) delivered their infringing Bluesound System into the stream of

8   commerce with the expectation that the Bluesound System will be used and/or

9   purchased by consumers, and (6) committed acts of patent infringement in the State

10   of California (and in this District).

11   23.   This Court also has personal jurisdiction over Lenbrook America

12   Corp. because it is registered to do business in California and has a regular and

13   established place of business in the Central District of California.

14   24.   Venue is proper in this District under the provisions of 28 U.S.C. §§

15   1391(b) and (c) and 28 U.S.C. § 1400(b).

<div align="center">

PATENTS-IN-SUIT

Background

</div>

18   25.   Sonos was founded on a recognition of various shortcomings of

19   existing conventional audio technology. At the time, a "conventional multi-zone

20   audio system" was based on a "centralized" device that was "hard-wired" to "audio

21   players" in different rooms with dedicated speaker wire. *See, e.g.*, '949 Patent at

22   1:41-47, 1:57-60; *see also, e.g.*, '959 Patent at 6:54-61. These "audio players" were

23   basic "speakers" that passively received and outputted audio signals but lacked

24   processing capabilities. *See, e.g.*, '949 Patent at 1:41-60.

25   26.   In this conventional "hard-wired" configuration, each audio player

26   relied on a "centralized" device that managed and controlled the multi-zone audio

27   system with audio sources either hard-wired to the "centralized" device, which

28   made playing different audio sources at different audio players difficult (if not

1   impossible), or hard-wired locally at a given audio player, which "[made] source

2   sharing difficult." *See, e.g.*, '949 Patent at 1:45-56. For example, before an audio

3   player could play audio from a source, a user had to configure the centralized device

4   to route audio to the audio player from the common source. *See, e.g., id*. at 1:50-

5   60.

6   27.   Thus, in these conventional "hard-wired" systems, it was difficult (or

7   impossible) to play different audio sources on different audio players, "group" and

8   control audio players, access and play networked-based audio sources (e.g., Internet

9   radio), and install and configure the system in the first instance, which required

10   physically connecting every device to the "centralized" device. *See, e.g.*, '949

11   Patent at 1:34-2:13; '959 Patent at 6:52-61.

12   28.   As recognized in 2005 when Sonos released its first products, Sonos

13   revolutionized the field of home audio by developing new technological solutions

14   to various problems with conventional audio systems. Moreover, Sonos's own

15   introduction of paradigm-shifting technology created new technological challenges

16   that Sonos further solved.

17   29.   For starters, Sonos provided an unconventional system architecture

18   comprising "zone players" (also referred to as "playback devices") on a computer

19   data network and controlled by physical "controller" devices. *See, e.g.*, '949 Patent

20   at FIG. 1; '258 Patent at FIG 1. The following figure illustrates a simplified

21   diagram of an exemplary Sonos audio system in accordance with this new system

22   architecture, which comprises "zone players" 102-106 and "controllers" 140-42

23   coupled to one another by a local data network 108 and two local audio sources

24   110-12 along with a connection to the Internet:

25

26

27

28

1
2
3
4
5
6
7
8
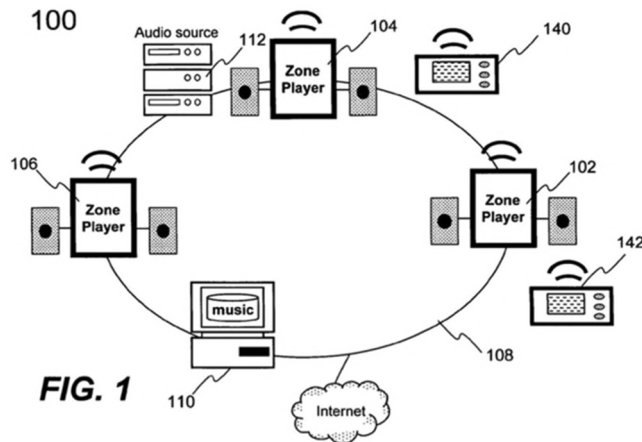
FIG. 1

9   '949 Patent at FIG. 1; *see also, e.g.*, '258 Patent at FIG. 1.

10   30.   Unlike audio players in conventional "centralized," "hard-wired"
11   multi-zone audio systems, Sonos's "zone players" were "independent playback
12   devices" with a data network interface and processing intelligence enabling each
13   "zone player" to independently access and play back any audio source available on
14   a local data network or another data network coupled thereto (e.g., the Internet)
15   without a centralized device. *See, e.g.*, '949 Patent at 4:60-64, 5:2-36, 9:50-52,
16   Claims 1, 8, 15; '258 Patent at 1:33-44, 2:40-3:22, Claims 1, 11, 17.

17   31.   The new, unconventional nature of Sonos's "zone players" introduced
18   additional technological challenges to Sonos's system, which required Sonos's
19   "zone players" to need new intelligence enabling the "zone players" to "share
20   information" with one another so that they can "reproduce audio information
21   synchronously," among other unconventional capabilities. *See, e.g.*, '258 Patent at
22   31:34-41.   Thus, Sonos's new system featured "zone players" that could
23   simultaneously play different audio from different sources or be "grouped" together
24   to play the same audio source in a synchronized manner. *See, e.g.*, '258 Patent at
25   FIG. 1, 3:50-61, 4:22-50, 5:10-6:64, Claims 1, 11, 17; '949 Patent at 2:28-48, 9:49-
26   59, Claims 1, 8, 15.

27   32.   Further,   unlike   the   "pre-configured   and   pre-programmed
28

controller[s]" used to control conventional "centralized," "hard-wired" audio systems, Sonos's "controller" devices were capable of remotely controlling any "zone player" in a Sonos audio system from anywhere in a user's house via a data network. *See, e.g.*, '949 Patent at 6:43-60; *see also, e.g.*, '258 Patent at 5:27-29, 5:38-40, 6:37-46. Building on the intelligence of Sonos's new "zone players," Sonos's "controllers" had new capabilities, including dynamically "grouping the zone players" and "control[ling] the volume of each of the zone players in a zone group individually or together." '949 Patent at 6:43-60; *see also, e.g.*, '258 Patent at FIG. 1, 3:50-61, 4:22-50, 5:10-6:64, 9:17-26, Claims 1, 11, 17.

33.   Thus, Sonos's audio system comprising networked "zone players" controlled by physical "controllers" over a data network provided an entirely new paradigm in home audio that improved upon the technological deficiencies of conventional audio systems.   Moreover, Sonos's unconventional system architecture created new technological challenges that Sonos also provided solutions for. As discussed in further detail below, Sonos's patents-in-suit are directed to solutions to these technological challenges.

U.S. Patent No. 8,588,949

34.   Sonos is the owner of U.S. Patent No. 8,588,949 (the "'949 Patent"), entitled "Method and Apparatus for Adjusting Volume Levels in a Multi-Zone System," which was duly and legally issued by the United States Patent and Trademark Office ("USPTO") on November 19, 2013.   A Reexamination Certificate for the '949 Patent was duly and legally issued by the USPTO on November 5, 2015. A copy of the '949 Patent, including the Reexamination Certificate, is attached hereto as Exhibit 1.

35.   The '949 Patent is directed to devices, computer-readable media, and methods for controlling a plurality of players on a local area network.

36.   The '949 Patent recognized problems with conventional multi-zone audio systems. For instance, the '949 Patent recognized that "conventional multi-

1   zone audio system[s]" were undesirably based on a "centralized" device that was

2   "hard-wired" to "audio players" in different rooms with dedicated speaker wire.

3   *See, e.g.*, '949 Patent at 1:41-47, 1:57-60. Moreover, because these "conventional

4   multi-zone audio system[s]" were "either hard-wired or controlled by a pre-

5   configured and pre-programmed controller," it was "difficult for [a conventional]

6   system to accommodate the requirement of dynamically managing the ad hoc

7   creation and deletion of groups," among other disadvantages of conventional multi-

8   zone audio systems. *See, e.g.*, *id.* at 1:57-2:12.

9   37.   In this regard, the '949 Patent recognized "a need for dynamic control

10 of [] audio players as a group" and a solution that allowed "audio players [to] be

11 readily grouped" with "minimum manipulation." *See, e.g.*, *id.* at 2:13-15.   In

12 particular, the '949 Patent recognized "a need for user interfaces that may be readily

13 utilized to group and control [] audio players." *See, e.g.*, *id.* at 1:15-18. The claimed

14 inventions of the '949 Patent are directed to technology that provides a solution to

15 such needs. *See, e.g.*, *id.* at 2:65-3:3.

16 **The Inventions Claimed in U.S. Patent No. 8,588,949 Improved Technology**

17 **& Were Not Well-Understood, Routine, or Conventional**

18   38.   Given the state of the art at the time of the inventions of the '949

19 Patent, including the deficiencies in "centralized," "hard-wired" multi-zone audio

20 systems of the time, the inventive concepts of the '949 Patent cannot be considered

21 to be conventional, well-understood, or routine. *See, e.g.*, '949 Patent at 1:26-2:12.

22 The '949 Patent provides an unconventional solution to problems that arose in the

23 context of "centralized," "hard-wired" multi-zone audio systems – namely, that

24 such systems made it difficult (or impossible) to dynamically group audio players

25 for synchronous playback and dynamically control such grouped audio players.

26 *See, e.g.*, *id.* at 1:57-2:12.

27   39.   At the core of the '949 Patent are aspects of Sonos's unconventional

28 system architecture – a "controller" and a plurality of "independent playback

12

devices" (e.g., "zone players") communicating over a "local area network" (LAN). Further, unlike the "pre-configured and pre-programmed controller[s]" used to control conventional "centralized," "hard-wired" multi-zone audio systems, the '949 Patent's "controller" devices were unconventionally capable of controlling any "zone player" in the system from anywhere in a user's house via the LAN, such as by dynamically "grouping the zone players" and "control[ling] the volume of each of the zone players in a zone group individually or together." *See, e.g., '*949 Patent at 6:43-60.

40.   In this respect, it was not well-understood, routine, or conventional at the time of the inventions of the '949 Patent to have a "controller" configured to (i) provide a user interface for a "player group" that includes a plurality of "players," each being an "independent playback device," and (ii) accept an input to facilitate formation of the "player group" for synchronized playback of a multimedia output from the same multimedia source." *See, e.g.*, '949 Patent at Claims 1, 8, 15.

41.   Moreover, it was not well-understood, routine, or conventional at the time of the inventions of the '949 Patent to have a "controller" configured to (i) accept, for any individual "player" in a "player group," a player-specific input to adjust the volume of that individual "player," where the player-specific input causes that individual "player" to adjust its volume and (ii) accept a "group-level" input to adjust a volume associated with the "player group," where the player-specific input causes each of the "players" in the "player group" to adjust its respective volume. *See '*949 Patent at Claims 1, 8, 15.

42.   These are just exemplary reasons why the inventions claimed in the '949 Patent were not well-understood, routine, or conventional at the time of their invention.

43.   The unconventional nature of the '949 Patent has also been confirmed by wide-spread industry praise for the patented technology of the '949 Patent as an

1   advancement in the field of home audio, as set forth below.

2   44.   Notably, the District Court of Delaware held that the claimed

3   inventions of the '949 Patent are "patent-eligible subject matter under § 101." *See*

4   Ex. 34 at p. 13.   In particular, the district court recognized that the claimed

5   inventions of the '949 Patent "represent[] a substantial improvement over the

6   existing technology" that "provides for capabilities far beyond what a traditional

7   hardwired system offers." *Id.* at p. 12.

8   45.   The district court also recognized that the '949 Patent's solutions

9   cannot be performed solely by a human. *See, e.g.*, *id.* at pp. 11-12 ("Defendants'

10   arguments that a human could perform the actions the [controller] device is said to

11   perform is at best illogical.").   Indeed, at least because the '949 Patent's claimed

12   solutions address problems rooted in multi-zone audio systems, these solutions are

13   not merely drawn to longstanding human activities. *See, e.g.*, *id.* at p. 12 ("This is

14   not simply a 'more efficient' method of doing something already done by

15   humans.").

16   **The Inventions Claimed in U.S. Patent No. 8,588,949 Provide Important**

17   **Advantages to Wireless Audio Systems**

18   46.   The group volume control technology of the '949 Patent provides

19   significant advantages that are important to wireless audio systems. The advantages

20   of Sonos's group volume control technology are reflected in the recognition and

21   praise it has received from the press. For example, shortly after Sonos launched its

22   first commercial product in 2005, *PC Magazine* exclaimed: "[Sonos] is the first

23   digital audio hub we can recommend without reservation . . . . Once you're back

24   to using the master volume control, the volume rises or falls relative to each room's

25   existing setting.   These are the brilliant touches . . . ." *See* Ex. 8. As another

26   example, in 2005, *Playlist* lauded Sonos's "Controller" for its "stand[] out"

27   interface that enables dynamic grouping of Sonos players and volume control. *See*

28   Ex. 35. Likewise, in 2008, *Gizmodo* praised Sonos for the ability to "[c]hange the

1   volume in a single room, or in all your rooms at once, all from the Sonos

2   Controller." *See* Ex. 36. A few years later, in 2012, *Pocket-lint* touted Sonos's

3   patented group volume technology as "simple but clever." *See* Ex. 37.

4   47.   Recognizing the advantages of Sonos's patented group volume control

5   technology, competitors in the industry, including Defendants, have incorporated

6   Sonos's technology into their products and marketed the features that the

7   technology enables to their customers. For example, Defendants' website includes

8   a webpage entitled "How Do I Adjust the Volume for My Selected Bluesound

9   Player?," which touts the ability to control the volume of "individual players and

10   groups of players" in the Bluesound System using "Volume Sliders" provided on

11   the BluOS Controller Apps. *See* Ex. 38 ("There are 4 easy ways to adjust the

12   Volume for your players. . . . For other individual players and groups of players,

13   the Volume Sliders are located in your Players Drawer . . . .").

14   **U.S. Patent No. 9,195,258**

15   48.   Sonos is the owner U.S. Patent No. 9,195,258 (the "'258 Patent"),

16   entitled "System and Method for Synchronizing Operations Among a Plurality of

17   Independently Clocked Digital Data Processing Devices," which was duly and

18   legally issued by the USPTO on November 24, 2015. A copy of the '258 Patent is

19   attached hereto as Exhibit 2.

20   49.   The '258 Patent is directed to devices, systems, and methods for

21   synchronizing audio playback.

22   50.   As discussed above, Sonos recognized problems with conventional

23   multi-zone audio systems and introduced a paradigm-shifting system architecture

24   comprising "zone players" that communicated over a data network. The

25   unconventional nature of Sonos's "zone players" introduced additional

26   technological challenges to Sonos's system. *See, e.g.*, '258 Patent at 1:55-2:36.

27   51.   For instance, the '258 Patent recognized the technological challenge

28   of "ensur[ing] that, if two or more audio playback devices are contemporaneously

attempting to play back the same audio program, they do so simultaneously." '258 Patent at 2:17-36. In this respect, the '258 Patent recognized that "audio playback devices that are being developed have independent clocks, and, if they are not clocking at precisely the same rate, the audio playback provided by the various [playback] devices can get out of synchronization." *Id.* at 2:32-36. Moreover, the '258 Patent recognized that "differences in the audio playback devices' start times and/or playback speeds" "can arise . . . for a number of reasons, including delays in the transfer of audio information over the network," and that "[s]uch delays can differ as among the various audio playback devices for a variety of reasons, including where they are connected into the network, message traffic, and other reasons . . . ." *Id.* at 2:20-27. Consequently, the '258 Patent recognized that "[s]mall differences in the audio playback devices' start times and/or playback speeds can be perceived by a listener as an echo effect, and larger differences can be very annoying." *Id*. at 2:20-22.

52.   In this regard, the '258 Patent recognized a need for "a new and improved system and method for synchronizing operations among a number of digital data processing devices that are regulated by independent clocking devices." *See, e.g.*, '258 Patent at 2:40-43. The claimed inventions of the '258 Patent are directed to technology that provides a solution to such needs. *See, e.g.*, *id.*

The Inventions Claimed in U.S. Patent No. 9,195,258 Improved Technology

& Were Not Well-Understood, Routine, or Conventional

53.   Given the state of the art at the time of the inventions of the '258 Patent, including the deficiencies in centralized, hard-wired multi-zone audio systems of the time, the inventive concepts of the '258 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, '258 Patent at 1:26-2:12. The '258 Patent provides an unconventional solution to problems that arose in Sonos's unconventional system architecture comprising "zone players" that communicated over a data network – namely, that such "zone players" have

1   "independent clocks" which makes ensuring synchronized audio playback difficult.

2   *See, e.g.*, *id.* at 2:17-36.

3   54.   At the core of the '258 Patent are aspects of Sonos's unconventional

4   system architecture – "zone players" and at least one "controller" communicating

5   over a "local area network." Each "zone player" was unconventionally equipped

6   with a data network interface and intelligence enabling the "zone player" to

7   independently access and play back audio from a variety of network-accessible

8   audio sources and dynamically enter a "group" with one or more other "zone

9   players" for synchronized audio playback based on an instruction from a

10   "controller." *See, e.g.*, '258 Patent at FIG. 1, 3:50-61, 4:22-50, 5:10-6:64, Claims

11   1, 11, 17. While "grouped," the "zone players" were unconventionally capable of

12   sharing particular information over a LAN to facilitate "reproduc[ing] audio

13   information synchronously" despite the fact that the "zone players operate with

14   independent clocks" and exchange packets over a network with "differing delays."

15   '258 Patent at 31:34-41.

16   55.   In this respect, it was not well-understood, routine, or conventional at

17   the time of the invention of the '258 Patent to have a "zone player" configured to

18   interface with a LAN and receive from a "controller" over the LAN a direction for

19   the "zone player" to enter into a synchrony group with at least one other zone

20   player. *See, e.g.*, '258 Patent at Claims 1, 11, 17.

21   56.   Moreover, it was not well-understood, routine, or conventional at the

22   time of the inventions of the '258 Patent to have a "zone player" configured to enter

23   into a synchrony group with another "zone player" in which the "zone players" are

24   configured to playback audio in synchrony based at least on (i) audio content,

25   (ii) playback timing information associated with the audio content, and (iii) clock

26   time information for one of the "zone players." *See, e.g.*, '258 Patent at Claims 1,

27   11, 17.

28   57.   These are just exemplary reasons why the inventions claimed in the

1   '258 Patent were not well-understood, routine, or conventional at the time of their

2   invention.

3   58.   Notably, the Patent Trial and Appeal Board recently confirmed that

4   the '258 Patent is directed not just to unconventional implementations but to truly

5   innovative audio technology when the PTAB found that inventions claimed in

6   Sonos's Patent No. 9,213,357 – which cover similar subject matter as the inventions

7   claimed in the '258 Patent – would not have been obvious at the time of their

8   invention. *See* Ex. 39 at pp. 6-7.

9   59.   The unconventional nature of the '258 Patent has also been confirmed

10   by wide-spread industry praise for the patented technology of the '258 Patent as an

11   advancement in the field of home audio, as set forth below.

12   **The Inventions Claimed in U.S. Patent No. 9,195,258 Provide Important**

13   **Advantages to Wireless Audio Systems**

14   60.   The synchronization technology of the '258 Patent provides

15   significant advantages that are important to wireless audio systems. The advantages

16   of Sonos's patented synchronization technology are reflected in the recognition and

17   praise it has received from the press. For example, in 2005, shortly after Sonos

18   released its first commercial products, *PC Magazine* touted the Sonos system for

19   its ability to "play the same music throughout the house, perfectly synchronized."

20   *See* Ex. 8. Similarly, in 2005, *The Wall Street Journal* praised Sonos's system for

21   the ability to "play . . . the same songs, in each room simultaneously." *See* Ex. 40.

22   As another example, in 2013, *Macworld* exclaimed: "Sonos is the gold standard

23   when it comes to multi-room audio . . . you can drive the system from any computer

24   or handheld device, playing music in sync throughout the house . . . ." *See* Ex. 41.

25   Likewise, in 2013, *NBC News* praised Sonos's patented synchronization technology

26   as "mind blowing." *See* Ex. 9 ("If you're not familiar with Sonos, this company

27   revolutionized the home audio world a decade ago when it launched the first (rather

28   expensive) Sonos kits . . . . If you wanted the same song in every room, no problem,

18

1   the tracks would be perfectly in sync . . . . At the time, this was mind blowing.

2   Never before could you get music in every room without drilling a bunch of holes

3   for wires . . . .").

4   　　　61.　　Recognizing the advantages of Sonos's patented synchronization

5   technology, competitors in the industry, including Defendants, have incorporated

6   Sonos's patented technology into their products and marketed the features that the

7   technology enables to their customers. For example, in marketing the Bluesound

8   System on Defendants' website, Defendants have touted on their website that you

9   can "[e]asily group . . . Bluesound Players [together] to stream music across

10   different rooms in perfect sync . . . ." *See* Ex. 42. Similarly, Defendants' website

11   touts that you can "group multiple Players together and listen to the same track in

12   different rooms." *See* Ex. 43; *see also* Ex. 44 ("[G]roup your Players together and

13   play your music in perfect sync throughout the house. . . . Listen to your music in

14   perfect sync as you walk room-to-room.").

15   　　　　　　　　　　　**U.S. Patent No. 9,219,959**

16   　　　62.　　Sonos is the owner U.S. Patent No. 9,219,959 (the "'959 Patent"),

17   entitled "Multi Channel Pairing in a Media System," which was duly and legally

18   issued by the USPTO on December 22, 2015. A Reexamination Certificate for the

19   '959 Patent was duly and legally issued by the USPTO on April 5, 2017. A copy

20   of the '959 Patent, including the Reexamination Certificate, is attached hereto as

21   Exhibit 3.

22   　　　63.　　The '959 Patent is directed to devices and methods for providing audio

23   in a multi-channel listening environment.

24   　　　64.　　As with other of the patents-in-suit, the '959 Patent recognized

25   problems with conventional multi-zone audio systems. For instance, the '959

26   Patent recognized that conventional multi-zone audio systems were based on a

27   centralized device that was hard-wired to "individual, discrete speakers" in

28   different rooms that required "physically connecting and re-connecting speaker

19

1   wire, for example, to individual, discrete speakers to create different

2   configurations." *See, e.g.*, '959 Patent at 6:54-58. Because these conventional

3   multi-zone audio systems were hard-wired to "individual, discrete speakers," it was

4   difficult (if not impossible) to "group, consolidate, and pair" the speakers into

5   different "desired configurations" without "connecting and re-connecting speaker

6   wire." *See, e.g.*, *id.*

7   65.   Thus, the '959 Patent recognized a need for technology that could

8   "provide a more flexible and dynamic platform through which sound reproduction

9   can be offered to the end-user." '959 Patent at 6:58-61. The claimed inventions of

10   the '959 Patent are directed to technology that provides a solution to such needs,

11   thereby providing technology that helps "to achieve or enhance a multi-channel

12   listening environment." *Id.* at 2:17-19.

13   **The Inventions Claimed in U.S. Patent No. 9,219,959 Improved Technology**

14   **& Were Not Well-Understood, Routine, or Conventional**

15   66.   Given the state of the art at the time of the inventions of the '959

16   Patent, including the deficiencies in centralized, hard-wired multi-zone audio

17   systems of the time that required "physically connecting and re-connecting speaker

18   wire . . . to create different configurations," the inventive concepts of the '959

19   Patent cannot be considered to be conventional, well-understood, or routine. *See,*

20   *e.g.*, '959 Patent at 6:54-58. The '959 Patent provides an unconventional solution

21   to problems that arose in the context of centralized, hard-wired multi-zone audio

22   systems – namely, that the technology of such systems made it difficult (if not

23   impossible) to "group, consolidate, and pair" "individual, discrete speakers" into

24   different "desired configurations." *See, e.g., id.* In this respect, unlike conventional

25   hard-wired multi-zone audio systems, the '959 Patent provided unconventional

26   technology including a "controller" with a "control interface" through which

27   "actions of grouping, consolidation, and pairing [were] performed," and a

28   "playback device" with processing intelligence capable of being dynamically

1   "pair[ed]" with another playback device to simulate "a multi-channel listening

2   environment." *Id*. at 6:54-58, 22:14-38.

3   67.   In this respect, it was not well-understood, routine, or conventional at

4   the time of the invention of the '959 Patent to have a "playback device" comprising

5   a network interface and configured to operate in at least both a first and second

6   "type of pairing." *See, e.g.*, '959 Patent at Claims 4-7, 9-11, 17-20.

7   68.   Moreover, it was not well-understood, routine, or conventional at the

8   time of the invention of the '959 Patent to have a "playback device" configured to

9   (i) process audio data before the "playback device" outputs audio, (ii) determine

10   that a type of pairing of the "playback device" comprises one of at least a first type

11   of pairing or a second type of pairing, (iii) perform a first equalization of the audio

12   data before outputting audio based on the audio data when the type of pairing is

13   determined to comprise the first type of pairing, and (iv) perform a second

14   equalization of the audio data before outputting audio when the type of pairing is

15   determined to comprise the second type of pairing. *See, e.g.*, '959 Patent at Claims

16   4-7, 9-11, 17-20. It was also not well-understood, routine, or conventional at the

17   time of the invention of the '959 Patent to have a "playback device" configured to

18   perform the aforementioned functions as well as being configured to receive an

19   instruction from a "controller" over a network for the "playback device to "pair"

20   with one or more other "playback devices." *See, e.g.*, *id*. at Claim 10.

21   69.   These are just exemplary reasons why the inventions claimed in the

22   '959 Patent were not well-understood, routine, or conventional at the time of their

23   invention.

24   70.   The unconventional nature of the '959 Patent has also been confirmed

25   by wide-spread industry praise for the patented technology of the '959 Patent as an

26   advancement in the field of home audio, as set forth below.

27   71.   Notably, the District Court of Delaware held that the claimed

28   inventions of the '959 Patent are "patent-eligible subject matter under § 101." Ex.

34 at p. 16. In particular, the district court recognized that the claimed inventions of the '959 Patent represent a "substantial improvement" over the existing technology. *Id*. at p. 15.

72.   The district court also recognized that the '959 Patent's solutions cannot be performed solely by a human. *See, e.g., id*. at p. 15 ("In order to perform this method manually . . . a person would have to manually rewire the devices each time a new selection is made for which devices are to output which channels."). Indeed, at least because the '959 Patent's claimed solutions address problems rooted in multi-zone audio systems and facilitate a "pairing" process with functions not previously performed by humans, these solutions are not merely drawn to longstanding human activities. *See, e.g.*, id*. at p. 15 ("This simply is not the kind of method that could be performed manually and, even if it were, automating the method as claimed represents a substantial improvement to the functionality of a specific device.").

The Inventions Claimed in U.S. Patent No. 9,219,959 Provide Important Advantages to Wireless Audio Systems

73.   The multi-channel pairing technology of the '959 Patent provides significant advantages that are important to wireless audio systems. The advantages of Sonos's multi-channel pairing technology are reflected in the recognition and praise it has received from the press. For example, in 2010, around the time that Sonos released its multi-channel pairing technology, *SlashGear* praised Sonos's technology as "a slick way for users . . . to combine two speakers when they want better sound." *See* Ex. 45. Similarly, in 2015, *Trusted Reviews* described Sonos's multi-channel pairing technology as "[o]ne particularly nifty feature," and explained that it allows you to "[p]air up multiple speakers for better sound." *See* Ex. 46; *see also* Ex. 10 (2014 *Consumer Reports*: praising Sonos's multi-channel pairing technology as providing "a richer, more detailed sound with wider soundstage."); Ex. 47 (2014 *Businessweek*: recognizing Sonos's pairing

1   technology as appealing to the "audiophile"); Ex. 48 (2013 *What Hi-Fi*: praising

2   Sonos's pairing technology because "performance is bolstered significantly. Bass

3   is even more solid, instrument separation improves, smaller details are picked up

4   with more confidence and sound can go noticeably louder without distortion.").

5   74.   Recognizing the advantages of Sonos's patented multi-channel pairing

6   technology, competitors in the industry, including Defendants, have incorporated

7   Sonos's technology into their products and marketed the features that the

8   technology enables to their customers. For example, in marketing the Bluesound

9   PULSE FLEX 2i on Defendants' website, Defendants have touted that you can

10   "[p]lace a pair in any room [and] pair them together for stereo sound" or "combine

11   a pair of PULSE FLEX 2i speakers with the PULSE SOUNDBAR 2i and SUB to

12   create a completely immersive Dolby Digital Surround system, for every lush

13   cinematic detail." *See* Ex. 42. Similarly, in marketing the Bluesound PULSE

14   SOUNDBAR 2i, Defendants have touted that you can "[c]reate the most advanced

15   Dolby Digital Surround system by adding a PULSE SUB and a pair of PULSE

16   FLEX 2i speakers as dedicated rears and hear every lush cinematic detail of your

17   favorite movies and TV shows." *See* Ex. 49. As another example, Defendants'

18   website also includes a webpage entitled "FIXED GROUPS MAKES STEREO

19   PAIRING EASIER," which includes detailed instructions on how to "set two

20   Players as a Stereo Pair such as two PULSE family speakers act as a Left Speaker

21   and Right Speaker on opposite sides of a wall unit or room." *See* Ex. 50.

U.S. Patent No. 8,868,698

23   75.   Sonos is the owner U.S. Patent No. 8,868,698 (the "'698 Patent"),

24   entitled "Establishing a Secure Wireless Network with Minimum Human

25   Intervention," which was duly and legally issued by the USPTO on October 21,

26   2014. A copy of the '698 Patent is attached hereto as Exhibit 4.

27   76.   The '698 Patent is directed to methods and computer-readable media

28   for connecting a playback device to a network.

77.   The '698 Patent recognized problems with conventional device-setup technology for connecting "consumer electronic devices" (e.g., "home entertainment products") to a network. *See, e.g.*, '698 Patent at 1:27-56. For instance, the '698 Patent recognized that "[c]onsumer electronic devices that operate using wireless or wired Ethernet standards are often subject to the same complicated set-up process as a wireless computer network." *Id*. at 1:27-29.

78.   Indeed, a conventional setup process typically required "the person who sets up the wireless network [to] have at least some knowledge about IP (Internet Protocol) networking and Ethernet (e.g., 802.3, 802.11), such as addressing, security, broadcast, unicast, etc." *Id.* at 1:30-33. At the time of the inventions of the '698 Patent, typically only "IT professionals" possessed such knowledge. *Id.* at 1:33-35. Indeed, to connect a computer to a wireless network, "the user has to know what type of network the computer is going to be connected to," which was a "difficult question [for] the average consumers" to answer. *Id.* at 1:47-51. Moreover, there were additional "questions or options related to [] security settings [] which evidently require[d] some good understanding about the network security over the wireless network." *Id.* at 1:53-56. Thus, the '698 Patent recognized that it was "impractical to require average consumers to have such knowledge to hook up consumer electronic devices, such as home entertainment products that use wireless/wired Ethernet connectivity." *Id*. at 1:36-39.

79.   In this regard, the '698 Patent recognized that there was "a clear need to create simple methods of setting up and maintaining a secure wireless/wired in-home network with minimum human interventions." *Id.* at 1:57-60. The claimed inventions of the '698 Patent are directed to technology that provides a solution to such needs.

The Inventions Claimed in U.S. Patent No. 8,868,698 Improved Technology & Were Not Well-Understood, Routine, or Conventional

80.   Given the state of the art at the time of the inventions of the '698

24

Patent, including the deficiencies in conventional device-setup technology of the time, the inventive concepts of the '698 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, '698 Patent at 1:27-60. The '698 Patent provides an unconventional solution to problems arising in the context of connecting "consumer electronic devices" (e.g., "home entertainment products") to a network – namely, that such devices typically operated "using wireless or wired Ethernet standards [that were] often subject to the same complicated set-up process as a wireless computer network." *Id.* In this respect, unlike conventional device-setup technology whose complexity made it "impractical" for "average consumers to . . . hook up consumer electronic devices" to a requisite data network, the '698 Patent provided a technological solution that made it easier for consumers to connect a consumer electronic device to a data network. *See, e.g.*, *id.* at 1:27-56.

81.   In this regard, it was not well-understood, routine, or conventional at the time of the invention of the '698 Patent to have a "controller" configured to perform the specific combination of (i) in response to receiving a manual user input, entering a mode to listen for a message from a "playback device" over a first network indicating that the "playback device" is available for configuration, (ii) in response to receiving the first message, transmitting a message to the "playback device" over the first network that requests the "playback device's" network configuration information, (iii) receiving another message from the "playback device" over the first network that includes the "playback device's" network configuration information, (iv) determining whether the "playback device" is configured for a secure playback network, and (v) send another message to the "playback device" over the first network that instructs the "playback device" to reconfigure its network configuration information according to network configuration parameters provided by the "controller" such that the reconfigured "playback device" is to join the secure playback network without further user input. *See, e.g.*, '698 Patent at Claims 1, 9, 17.

25

82.   This is just an exemplary reason why the inventions claimed in the '698 Patent were not well-understood, routine, or conventional at the time of their invention.

83.   The unconventional nature of the '698 Patent has also been confirmed by wide-spread industry praise for the patented technology of the '698 Patent as an advancement in the field of home audio, as set forth below.

84.   Moreover, the '698 Patent's solutions are naturally rooted in consumer device-setup technology and cannot be performed solely by a human. Indeed, the '698 Patent's claimed solutions provide a device-setup process comprising functions not previously performed by humans, and therefore, are not merely drawn to longstanding human activities.

The Inventions Claimed in U.S. Patent No. 8,868,698 Provide Important Advantages to Wireless Audio Systems

85.   The playback-device-setup technology of the '698 Patent provides significant advantages that are important to wireless audio systems. The advantages of Sonos's patented device-setup technology are reflected in the recognition and praise it has received from the press. For example, in 2005, shortly after Sonos released its first commercial products, *PC Magazine* exclaimed that Sonos's "[s]etup is simple." *See* Ex. 8. As another example, in 2005, *The Wall Street Journal* praised Sonos because "Sonos can be setup quickly, without any technical knowledge," and contrasted Sonos's patented setup technology to other existing audio systems that "are too hard to set up on a typical wireless network." *See* Ex. 40.

86.   Recognizing the advantages of Sonos's patented playback-device-setup technology, competitors in the industry, including Defendants, have incorporated Sonos's patented technology into their products and marketed the features that the technology enables to their customers. For example, Defendants' website includes a webpage entitled "HOW DO I CONNECT MY BLUESOUND

1 PLAYER TO THE NETWORK?," which includes detailed instructions on how to

2 setup and "connect your Bluesound Player to your home network." *See* Ex. 51.

3 **U.S. Patent No. 9,883,234**

4 87.   Sonos is the owner U.S. Patent No. 9,883,234 (the "'234 Patent"),

5 entitled "Systems and Methods for Networked Music Playback," which was duly

6 and legally issued by the USPTO on January 30, 2018. A copy of the '234 Patent

7 is attached hereto as Exhibit 5.

8 88.   The '234 Patent is directed to devices, methods, and computer-

9 readable media for transferring playback of multimedia content from a control

10 device to a zone group.

11 89.   The '234 Patent recognized that "[t]echnological advancements have

12 increased the accessibility of music content," and while "[d]emand for such . . .

13 content continue[d] to surge," technology for transferring content from "music-

14 playing applications" to networked audio devices was limited (if not non-existent).

15 *See, e.g.*, '234 Patent at 1:23-32, 2:14-21. For instance, existing audio technology

16 typically did not permit a third-party music-playing application to transfer music

17 content to networked audio devices; rather, the networked audio devices' music

18 playback was typically controlled by dedicated "controller" devices. *See, e.g.*, *id*.

19 at 12:50-54, 13:1-9, 15:38-16:18.

20 90.   In this respect, the '234 Patent recognized the need for technology to

21 "facilitate streaming or otherwise providing music from a music-playing

22 application (e.g., browser-based application, native music player, other multimedia

23 application, and so on) to a multimedia playback (e.g., Sonos™) system." *See* '234

24 Patent at 2:14-21. In other words, the '234 Patent recognized the need for

25 technology to enable a "third party application" to "pass music to [a] household

26 playback system without [a] tight coupling to that household playback system." *Id*.

27 at 12:50-54. The claimed inventions of the '234 Patent are directed to technology

28 that provides a solution to such needs. *See, e.g.*, *id*. at 2:14-21, 12:31-54, 13:1-9,

27

1   15:38-16:18.

2   **The Inventions Claimed in U.S. Patent No. 9,883,234 Improved Technology**

3   **& Were Not Well-Understood, Routine, or Conventional**

4   91.   Given the state of the art at the time of the inventions of the '234

5   Patent, including the deficiencies in existing technology for transferring content

6   from third-party music-playing applications to networked audio devices, the

7   inventive concepts of the '234 Patent cannot be considered to be conventional, well-

8   understood, or routine. *See, e.g.*, '234 Patent at 1:23-32, 2:14-21. The '234 Patent

9   provides an unconventional solution to problems arising in the context of

10 transferring audio content from a third-party music-playing application to

11 networked audio devices – namely, that such technology was limited (if not non-

12 existent). *See, e.g.*, *id*. at 12:50-54, 13:1-9, 15:38-16:18.

13 92.   In this regard, the '234 Patent discloses unconventional technology for

14 transferring multimedia playback responsibilities from a control device running a

15 music-playing application to a "playback device" that is not dependent on a "local

16 playback controller application['s]" involvement. *See, e.g.*, '234 Patent at 15:38-

17 54. As one example to illustrate this unconventional technology, the '234 Patent

18 discloses that "a user [who] listens to a third party music application (e.g.,

19 Pandora™, Rhapsody™, Spotify™, and so on) on her smart phone" can "select[]

20 an option to continue playing that channel on her household music playback system

21 (e.g., Sonos™)," where the playback system "picks up from the same spot on the

22 selected channel that was on her phone and outputs that content (e.g., that song) on

23 speakers and/or other playback devices connected to the household playback

24 system." *Id*. at 12:31-40.

25 93.   In this respect, it was not well-understood, routine, or conventional at

26 the time of the inventions of the '234 Patent to have a "playback device" configured

27 to receive, from one or more first cloud servers, an instruction to (i) add a particular

28 multimedia content to a local playback queue on the "playback device" and (ii) play

28

back the multimedia content from the local playback queue beginning at a particular play position within the multimedia content corresponding to when a set of inputs for transferring playback of the multimedia content from a "control device" to a "zone group" comprising the "playback device" was detected at a control interface of the "control device," where the instruction includes a resource locator indicating a particular source of the multimedia content at one or more second cloud servers of a streaming content service. *See, e.g.*, '234 Patent at Claims 1, 6, 11.

94.   Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '234 Patent to have a "playback device" configured to, in response to receiving the aforementioned instruction, (i) add the particular multimedia content to a local playback queue on the "playback device" and (ii) play back the particular multimedia content beginning at the particular play position within the multimedia content in synchrony with at least one additional "playback device" by obtaining the multimedia content from a particular source of the multimedia content at the one or more second cloud servers of the streaming content service using a resource locator. *See, e.g.*, '234 Patent at Claims 1, 6, 11.

95.   These are just exemplary reasons why the inventions claimed in the '234 Patent were not well-understood, routine, or conventional at the time of their invention.

96.   The unconventional nature of the '234 Patent has also been confirmed by wide-spread industry praise for the patented technology of the '234 Patent as an advancement in the field of home audio, as set forth below.

The Inventions Claimed in U.S. Patent No. 9,883,234 Provide Important Advantages to Wireless Audio Systems

97.   The direct control technology of the '234 Patent provides significant advantages that are important to wireless multi-room audio systems.   The advantages of Sonos's patented direct control technology are reflected in the recognition and praise it has received from the press.   For example, in 2016, when

1   direct control of Sonos's players from the Spotify app was enabled, *The Verge*

2   released an article entitled "You can finally control your Sonos speakers directly

3   from Spotify," and touted the direct control technology for "mak[ing] it much easier

4   to go from listening to music on your phone or laptop to listening on a Sonos

5   speaker." *See* Ex. 52. *The Verge* also explained: "Sonos and Spotify are releasing

6   an update today allowing Spotify to directly play to Sonos speakers to all users.

7   The update essentially makes any Sonos device into a Spotify Connect speaker,

8   with the added bonus of Sonos' signature multi-room functionality built in." *Id*.

9   Likewise, *Pocket-lint* released a similar article on the same day entitled "Now all

10   Sonos users can now control their systems from Spotify," which touted the direct

11   control feature for "the ability to send whatever you're playing on Spotify to any

12   Sonos speaker in your home, instantly." *See* Ex. 53.

13   98.   Recognizing the advantages of Sonos's patented direct control

14   technology, competitors in the industry, including Defendants, have incorporated

15   Sonos's patented technology into their products and marketed the features that the

16   technology enables to their customers. For example, Defendants' website includes

17   a webpage entitled "IS MY BLUESOUND PLAYER A SPOTIFY® CONNECT

18   DEVICE?," which includes detailed instructions on how the Bluesound System

19   "can be easily controlled by using the . . . Spotify App for iOS or Android." *See*

20   Ex. 54.

21   **U.S. Patent No. 8,938,312**

22   99.   Sonos is the owner of U.S. Patent No. 8,938,312 (the "'312 Patent"),

23   entitled "Smart Line-In Processing," which was duly and legally issued by the

24   USPTO on January 20, 2015. A copy of the '312 Patent is attached hereto as

25   Exhibit 6.

26   100.   The '312 Patent is directed to devices, methods, and computer-

27   readable media for smart line-in processing.

28   101.   The '312 Patent recognized problems with existing technology for

1   switching between sources of media content. In this regard, the '312 Patent

2   recognized that existing multi-source media systems at the time of the inventions

3   of the '312 Patent lacked intelligent source-switching technology and therefore,

4   were cumbersome to use from a user's perspective. *See, e.g.*, '312 Patent at 2:12-

5   31, 6:11-20, 6:49-64.

6   102. For instance, in order for an existing audio system to switch from

7   playing audio from a first source to playing audio from a second source connected

8   to the audio system by a line-in connector, a user would first instruct the second

9   source to begin playing audio and then instruct the audio system to switch its input

10   to the second source. *See, e.g.*, '312 Patent at 2:13-24, 6:11-20, 6:49-56. Moreover,

11   in order for an existing audio system to then switch from playing audio from the

12   second source provided to the audio system through the line-in connector to another

13   source, a user would first need to instruct the second source to stop providing the

14   audio system with audio through the line-in connector. *See, e.g.*, *id.* at 2:24-27,

15   6:57-60.

16   103. The claimed inventions of the '312 Patent are directed to technology

17   that improved upon these deficiencies of existing multi-source media systems.

18   **The Inventions Claimed in U.S. Patent No. 8,938,312 Improved Technology**

19   **& Were Not Well-Understood, Routine, or Conventional**

20   104. Given the state of the art at the time of the inventions of the '312

21   Patent, including the deficiencies in existing technology for switching between

22   sources of media content, the inventive concepts of the '312 Patent cannot be

23   considered to be conventional, well-understood, or routine. *See, e.g.*, '312 Patent

24   at 2:12-31, 6:49-64. Indeed, the '312 Patent provides an unconventional solution

25   to problems that arose in multi-source media systems of the time – namely, that

26   such systems were reliant on a user to perform specific sequences of operations in

27   order for such systems to switch from playing one media source to another. *See,*

28   *e.g.*, *id.* at 2:13-27, 6:11-20, 6:49-60.

31

105.   In this respect, the '312 Patent improved the technological capabilities of multi-source media systems by providing a solution for multi-source "playback devices" to intelligently switch between media sources based on specific criteria, thereby changing how multi-source media systems of the time previously operated to switch between media sources. *See, e.g.*, *id.* at 2:17-31, 6:11-20, 6:49-64. For instance, instead of a media system relying on a user to first instruct a given source to begin playing audio and then receiving an instruction to switch the media system's input source to the given source, the claimed inventions of the '312 Patent allow a user to merely instruct a given line-in connected source to begin playing audio and the claimed "playback device" is equipped with technological capabilities to intelligently switch to that given source for playback. *See, e.g.*, *id.*

106.   In this regard, it was not well-understood, routine, or conventional at the time of the inventions of the '312 Patent to have a "playback device" configured to, in response to determining that a first audio signal is present at a line-in connector, (i) cease playback of a second audio signal being played by the "playback device" that is not present at the line-in connector and (ii) cause the "playback device" to play the first audio signal. *See, e.g.*, '312 Patent at Claim 1.

107.   Likewise, it was not well-understood, routine, or conventional at the time of the inventions of the '312 Patent to have a "playback device" configured to (i) receive an instruction to stop the "playback device" from playing a first audio signal while the first audio signal is still present at the "playback device's" line-in connector, (ii) determine that the first audio signal is no longer present at the line-in connector, and (iii) in response to determining that the first audio signal is no longer present at the line-in connector, arm itself such that a subsequent presence of the first audio signal at the line-in connector causes the "playback device" to play the first audio signal. *See, e.g.*, '312 Patent at Claim 1.

108.   These are just exemplary reasons why the inventions claimed in the '312 Patent were not well-understood, routine, or conventional at the time of their

1   invention.

2   109.   The unconventional nature of the '312 Patent has also been confirmed

3   by wide-spread industry praise for the patented technology of the '312 Patent as an

4   advancement in the field of home audio, as set forth below.

5   **The Inventions Claimed in U.S. Patent No. 8,938,312 Provide Important**

6   **Advantages to Wireless Audio Systems**

7   110.   The smart line-in processing technology of the '312 Patent provides

8   significant advantages that are important to wireless multi-room audio systems.

9   The advantages of Sonos's patented smart line-in processing technology are

10 reflected in the recognition and praise it has received from the press. For example,

11 in 2013, shortly after Sonos released its PLAYBAR soundbar, *the Mac Observer*

12 praised Sonos's patented smart line-in processing technology as "automated magic"

13 and explained that unlike the reviewer's "home theater system [that] would require

14 [the reviewer] to power it on and then select the appropriate input," the Sonos

15 PLAYBAR "just works automatically, turning itself on and off when needed . . . ."

16 *See* Ex. 55. Likewise, in 2013, *Big Picture Big Sound* explained that the Sonos

17 PLAYBAR "keep[s] things as simple as possible" so that "if you're streaming

18 music from Rhapsody, but then flip on the TV to watch a movie, the PlayBar

19 automatically switches over to the TV input so you can enjoy sound that matches

20 the picture." *See* Ex. 56. More recently, in 2017, *Pocket-lint* praised Sonos's

21 patented smart line-in processing technology as "handy because it means you don't

22 get that frustrating moment of 'Why isn't there any sound?'," and the reviewer went

23 on to explain that "[i]n the time we've been using the PlayBar, the [automatic]

24 handshake has worked perfectly every time." *See* Ex. 57.

25   111. Recognizing the advantages of Sonos's patented smart line-in

26 processing technology, competitors in the industry, including Defendants, have

27 incorporated Sonos's patented technology into their products and marketed the

28 features that the technology enables to their customers. For example, Defendants'

33

1   website includes a webpage entitled "HOW DO I ENABLE SOUND TO PLAY

2   AUTOMATICALLY FROM MY TV?," which explains how "BluOS Players can

3   automatically switch to Optical Input if signal is detected from a TV, CD Player or

4   other digital audio input device" – a feature Defendants appear to refer to as "Auto

5   Sense." *See* Ex. 58.

6   **U.S. Patent No. 9,252,721**

7   112.   Sonos is the owner U.S. Patent No. 9,252,721 (the "'721 Patent"),

8   entitled "Power Decrease Based On Packet Type," which was duly and legally

9   issued by the USPTO on February 2, 2016. A copy of the '721 Patent is attached

10 hereto as Exhibit 7.

11   113.   The '721 Patent is directed to devices, methods, and computer-

12 readable media for controlling an audio amplifier.

13   114.   The '721 Patent recognized that, at the time of the inventions of the

14 '721 Patent, many consumer electronics wastefully consumed power.   In this

15 regard, the '721 Patent recognized that an audio amplifier of an audio device is "a

16 primary source to draw most of the power to drive the [audio device]." *See, e.g*.,

17 '721 Patent at 5:28-30. As such, the '721 Patent recognized that it is "not desirable"

18 to leave an audio amplifier on, "even if it is not actually in use, [because it]

19 consumes [] power, shortens the operating life thereof, and may generate excessive

20 heat that can cause damage to nearby parts." *Id.* at 5:30-36.

21   115.   Although manufacturers of electrical appliances recognized that

22 "[a]utomatic power shutdown [was] an important feature" at the time of the

23 inventions of the '721 Patent, existing automatic-power-shutdown technology was

24 "not effective when used in a distributed system comprising multiple devices . . . ."

25 '721 Patent at 1:22-23, 1:52-59.   Indeed, existing automatic-power-shutdown

26 technology of the time was "largely based upon special circuitry or analog control

27 circuits," that lacked "control flexibility" and "would increase the cost and

28 complexity" if added to a networked audio device. *Id.* at 1:38-40, 1:59-60, 7:22-

1   26.

2   116.   Thus, the '721 Patent recognized "a need for solutions of automatic

3   shutdown suitable for [a distributed] system without adding extra hardware." '721

4   Patent at 1:60-62.   The claimed inventions of the '721 Patent are directed to

5   technology that provides such a solution, which helps to "achieve a longer operating

6   lifespan of [] amplifiers and save more power," among other technological

7   advantages. *Id.* at 8:19-21.

8   **The Inventions Claimed in U.S. Patent No. 9,252,721 Improved Technology**

9   **& Were Not Well-Understood, Routine, or Conventional**

10   117.   Given the state of the art at the time of the inventions of the '721

11   Patent, including the deficiencies in automatic-power-shutdown technology of the

12   time, the inventive concepts of the '721 Patent cannot be considered to be

13   conventional, well-understood, or routine. *See, e.g.*, '721 Patent at 1:52-62, 7:22-

14   26, 8:6-37.   Indeed, the '721 Patent provides an unconventional solution to

15   problems that arose in automatic-power-shutdown technology of the time – namely,

16   that such technology was ineffective in certain distributed system contexts, largely

17   reliant on analog circuitry, and costly and complex to integrate into devices. *See,*

18   *e.g.*, *id.*   In this respect, the '721 Patent improved automatic-power-shutdown

19   technology by providing a solution for distributed audio devices involving a

20   software-based approach that was more flexible, and less complex and cheaper to

21   implement, than existing hardware-based approaches at the time of the inventions

22   of the '721 Patent. *See, e.g.*, *id.*

23   118.   In this regard, it was not well-understood, routine, or conventional at

24   the time of the inventions of the '721 Patent to have a "playback device" comprising

25   a network interface and configured to implement power-mode transitions for the

26   "playback device's" amplifier utilizing a software-based technique. *See, e.g.*, '721

27   Patent at 1:52-62, 7:22-26, 8:6-37.

28   119.   Likewise, it was not well-understood, routine, or conventional at the

35

1 time of the inventions of the '721 Patent to have a "playback device" configured to

2 (i) while operating in a first power mode in which the "playback device's" amplifier

3 consumes a first amount of power, receive one or more packets addressed to the

4 "playback device" and (ii) after determining that a defined time has passed since

5 receiving a specified type of data packet, transition from operating in the first power

6 mode to operate in a second power mode in which the "playback device's" amplifier

7 consumes a second, lower amount of power. *See, e.g.*, '721 Patent at Claims 1, 13,

8 and 19.

9   120.   These are just exemplary reasons why the inventions claimed in the

10 '721 Patent were not well-understood, routine, or conventional at the time of their

11 invention.

12   121.   The unconventional nature of the '721 Patent has also been confirmed

13 by industry praise for the patented technology of the '721 Patent as an advancement

14 in the field of home audio, as set forth below.

15   **The Inventions Claimed in U.S. Patent No. 9,252,721 Provide Important**

16   **Advantages to Wireless Audio Systems**

17   122.   The power save technology of the '721 Patent provides significant

18 advantages that are important to wireless multi-room audio systems.   The

19 advantages of Sonos's patented power save technology are reflected in the

20 recognition and praise it has received from the press.   For example, *Good*

21 *Housekeeping* praised Sonos's "standby mode" as "us[ing] very little power." *See*

22 Ex. 59.

23   123.   Recognizing the advantages of Sonos's patented power save

24 technology, competitors in the industry, including Defendants, have incorporated

25 Sonos's patented technology into their products and marketed the features that the

26 technology enables to their customers.   For example, Defendants' website includes

27 a webpage entitled "HOW DO I TURN OFF MY BLUESOUND PLAYER?,"

28 which explains that "[w]hile it idles and waits to receive a command, a Bluesound

Player will consume very little power," and that Bluesound's "Gen2 Players will automatically enter Power Save mode (less than 6.0W of power) after 15 minutes of idle . . . [to] conserve energy but [the Player] is [still] responsive to App commands and available on the network." *See* Ex. 60.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 8,588,949

124. Sonos incorporates by reference and re-alleges paragraphs 25-47 of this Complaint as if fully set forth herein.

125. Defendants and/or users of the Bluesound System have directly infringed (either literally or under the doctrine of equivalents) and continue to directly infringe one or more of the claims of the '949 Patent, in violation of 35 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound System within the United States and/or importing the Bluesound System into the United States without authority or license.

126. As just one non-limiting example, set forth below is an exemplary infringement claim chart for claim 1 of the '949 Patent in connection with the Bluesound System. This claim chart is based on publicly available information. Sonos reserves the right to modify this claim chart, including, for example, on the basis of information about the Bluesound System that it obtains during discovery.

Claim: 1	Bluesound
1. A multimedia controller including a processor, the controller configured to:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, NODE, NODE 2, NODE 2i, POWERNODE, POWERNODE 2, POWERNODE 2i, VAULT, VAULT 2, VAULT 2i, and any other "BluOS Enabled" or "BluOS Ready" audio player (e.g., the NPM-1) comprises an "independent playback device" as recited in claim 1, and any device installed with a BluOS Controller App comprises a "multimedia controller" including a

|	processor that is configured to perform the functions recited in claim 1. *See, e.g.*, Ex. 24, 44, 61.
provide a user interface for a player group, wherein the player group includes a plurality of players in a local area network, and wherein each player is an independent playback device configured to playback a multimedia output from a multimedia source;	A device installed with the BluOS Controller App is a multimedia controller configured to provide a user interface for a player group that includes a plurality of Bluesound Players in a local area network (LAN), each of which is an independent playback device configured to playback a multimedia output from a multimedia source (e.g., an audio output from an audio source). For instance, a device installed with the BluOS Controller App is configured to provide a user interface that facilitates forming and controlling one or more groups of Bluesound Players. Some exemplary screenshots of aspects of the user interface provided by a device installed with the BluOS Controller App are illustrated below. In these screenshots, the player group "PULSE FLEX1+PULSE FLEX2" includes a plurality of players (e.g., PULSE FLEX1 and PULSE FLEX2), each of which is an independent playback device configured to playback a multimedia output from a multimedia source: *See also, e.g.*, Ex. 24, 61-62.
accept via the user interface an input to	A device installed with the BluOS Controller App is a multimedia controller configured to accept via the user

38

facilitate formation of the player group, wherein the input to facilitate formation of the player group indicates that at least two of the plurality of players in the local area network are to be included in the player group for synchronized playback of a multimedia output from the same multimedia source;	interface an input to facilitate formation of the player group, where the input indicates that at least two Bluesound Players are to be included in the player group for synchronized playback of a multimedia output from the same multimedia source.

For instance, the user interface provided by a device installed with the BluOS Controller App includes a "Players Drawer" through which the device accepts an input to facilitate formation of a group of two or more Bluesound Players that are configured to play back audio in synchrony. One example of this functionality is illustrated in the following sequence of screenshots:
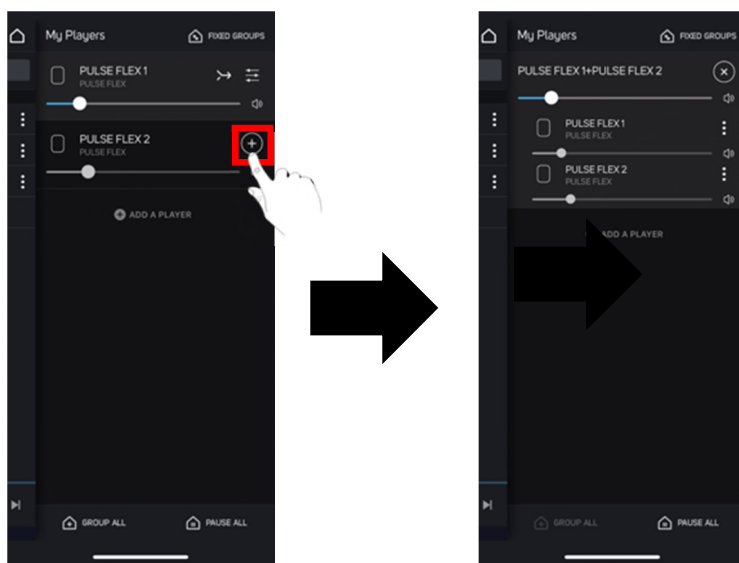
See also, e.g., Ex. 62-64. |
| for any individual player in the player group, accept via the user interface a player-specific input to adjust a volume of that individual player, wherein the player-specific input to adjust the volume of that individual player | A device installed with the BluOS Controller App is a multimedia controller configured to, for any individual Bluesound Player in the player group, accept via the user interface a player-specific input to adjust a volume of that individual Bluesound Player, where the player-specific input to adjust the volume of that individual Bluesound Player causes that individual Bluesound Player to adjust its volume.

For instance, the user interface provided by a device installed with the BluOS Controller App includes a |

39

causes that individual player to adjust its volume; and	player-specific volume slider for each individual Bluesound Player in a group through which the device accepts a player-specific input to adjust a volume of an individual Bluesound Player, which in turn causes the individual Bluesound Player to adjust its volume. Examples of this functionality are illustrated in the following sequences of screenshots:
	See also, e.g., Ex. 38, 62.
accept via the user interface a group-level	A device installed with the BluOS Controller App is a multimedia controller configured to accept via the user
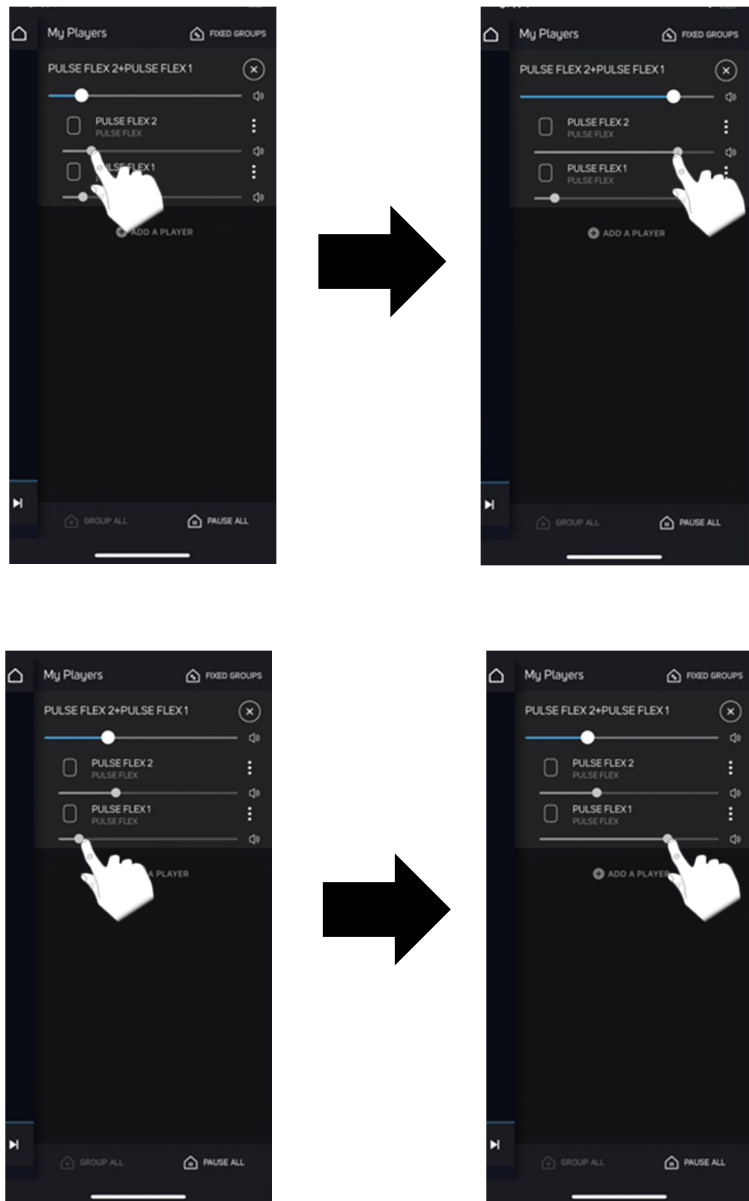
input to adjust a volume associated with the player group, wherein the group-level input to adjust the volume associated with the player group causes each of the players in the player group to adjust its respective volume.	interface a group-level input to adjust a volume associated with the player group, where the group-level input to adjust the volume associated with the player group causes each of the Bluesound Players in the player group to adjust its respective volume.

For instance, the user interface provided by a device installed with the BluOS Controller App includes a group-level volume slider for a group of Bluesound Players through which the device accepts a group-level input to adjust a volume associated with the group of Bluesound Players, which in turn causes each Bluesound Player in the group to adjust its respective volume. One example of this functionality is illustrated in the following sequence of screenshots:
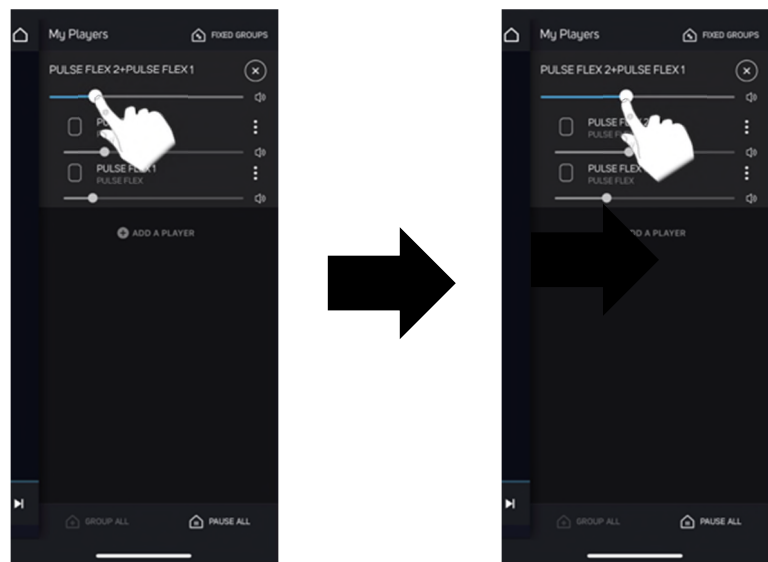
See also, e.g., Ex. 38, 62.

127. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '949 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '949 Patent. In particular, (a) Defendants had actual knowledge of the '949 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and

1 no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants

2 intentionally cause, urge, or encourage users of the Bluesound System to directly

3 infringe one or more claims of the '949 Patent by promoting, advertising, and

4 instructing customers and potential customers about the Bluesound System and uses

5 of the system, including infringing uses (*see* Ex. 24, 38, 62-64), and (c) Defendants

6 know (or should know) that their actions will induce users of the Bluesound System

7 to directly infringe one or more claims the '949 Patent, and (d) users of the

8 Bluesound System directly infringe one or more claims of the '949 Patent. For

9 instance, at a minimum, Defendants have supplied and continue to supply the

10 BluOS Controller Apps to customers while knowing that installation and use of the

11 BluOS Controller Apps will infringe one or more claims of the '949 Patent, and

12 that Defendants' customers then directly infringe one or more claims of the '949

13 Patent by installing and using the BluOS Controller Apps in accordance with

14 Defendants' product literature. *See, e.g.*, Ex. 65.

15   128.   Additionally   and/or   alternatively,   Defendants   have   indirectly

16 infringed and continue to indirectly infringe one or more of the claims of the '949

17 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the

18 United States, and/or importing into the United States, components in connection

19 with the Bluesound System that contribute to the direct infringement of the '949

20 Patent by users of the Bluesound System. In particular, (a) Defendants had actual

21 knowledge of the '949 Patent or were willfully blind to its existence prior to (at

22 least as early as November 1, 2018), and no later than, the filing of this action (*see*

23 ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection

24 with the Bluesound System, one or more material components of the invention of

25 the '949 Patent that are not staple articles of commerce suitable for substantial

26 noninfringing use, (c) Defendants know (or should know) that such component(s)

27 were especially made or especially adapted for use in an infringement of the '949

28 Patent, and (d) users of devices that comprise such material component(s) directly

1   infringe one or more claims of the '949 Patent. For instance, at a minimum,

2   Defendants offer for sale, sell, and/or import BluOS Controller Apps for installation

3   on user devices that meet one or more claims of the '949 Patent. *See, e.g.*, Ex. 65.

4   These BluOS Controller Apps are material components of the user devices that

5   meet the one or more claims of the '949 Patent. Further, Defendants especially

6   made and/or adapted the BluOS Controller Apps for use in the user devices that

7   meet the one or more claims of the '949 Patent, and the BluOS Controller Apps are

8   not a staple article of commerce suitable for substantial noninfringing use.

9   Defendants' customers then directly infringe the one or more claims of the '949

10   Patent by installing and using the BluOS Controller Apps on the customers' user

11   devices.

12   129.   Defendants' infringement of the '949 Patent is also willful because

13   Defendants (a) had actual knowledge of the '949 Patent or were willfully blind to

14   its existence prior to (at least as early as November 1, 2018), and no later than, the

15   filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity

16   despite an objectively high likelihood that Defendants' actions constituted

17   infringement of the '949 Patent, and (c) this objectively-defined risk was either

18   known or so obvious that it should have been known to Defendants.

19   130.   Additional allegations regarding Defendants' pre-suit knowledge of

20   the '949 Patent and willful infringement will likely have evidentiary support after

21   a reasonable opportunity for discovery.

22   131.   Sonos is in compliance with any applicable marking and/or notice

23   provisions of 35 U.S.C. § 287 with respect to the '949 Patent.

24   132.   Sonos is entitled to recover from Defendants all damages that Sonos

25   has sustained as a result of Defendants' infringement of the '949 Patent, including,

26   without limitation, a reasonable royalty and lost profits.

27   133.   Defendants' infringement of the '949 Patent was and continues to be

28   willful and deliberate, entitling Sonos to enhanced damages.

1   134.   Defendants' infringement of the '949 Patent is exceptional and entitles

2   Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

3   U.S.C. § 285.

4   135.   Defendants' infringement of the '949 Patent has caused irreparable

5   harm (including the loss of market share) to Sonos and will continue to do so unless

6   enjoined by this Court.

7   **COUNT II: INFRINGEMENT OF U.S. PATENT NO. 9,195,258**

8   136.   Sonos incorporates by reference and re-alleges paragraphs 25-33 and

9   48-61 of this Complaint as if fully set forth herein.

10   137.   Defendants and/or users of the Bluesound System have directly

11   infringed (either literally or under the doctrine of equivalents) and continue to

12   directly infringe one or more of the claims of the '258 Patent, in violation of 35

13   U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound

14   System within the United States and/or importing the Bluesound System into the

15   United States without authority or license.

16   138.   As just one non-limiting example, set forth below is an exemplary

17   infringement claim chart for claim 17 of the '258 Patent in connection with the

18   Bluesound System. This claim chart is based on publicly available information.

19   Sonos reserves the right to modify this claim chart, including, for example, on the

20   basis of information about the Bluesound System that it obtains during discovery.

21

Claim: 17	Bluesound
17. A first zone player comprising:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, NODE, NODE 2, NODE 2i, POWERNODE, POWERNODE 2, POWERNODE 2i, VAULT, VAULT 2, VAULT 2i, and any other "BluOS Enabled" or "BluOS Ready" audio player (e.g., the NPM-1) comprises a "zone player" as recited in claim 17, and a computing device installed with a BluOS

22

23

24

25

26

27

28

	Controller App comprises a "controller" as recited in claim 17. *See, e.g.*, Ex. 24, 43, 61.
a network interface configured to interface the first zone player with at least a local area network (LAN);	Each of the foregoing Bluesound Players includes a network interface configured to interface the Bluesound Player with at least a LAN, such as a WiFi interface and/or an Ethernet interface. *See, e.g.*, Ex. 43, 61, 66.
a device clock configured to generate clock time information for the first zone player;	Each of the foregoing Bluesound Players includes a device clock configured to generate clock time information for the Bluesound Player. *See, e.g.,* Ex. 61.
one or more processors; and	Each of the foregoing Bluesound Players includes one or more processors. *See*, *e.g.*, Ex. 61.
a tangible, non-transitory computer-readable memory having instructions stored thereon that, when executed by the one or more processors, cause the first zone player to:	Each of the foregoing Bluesound Players includes a tangible, non-transitory computer-readable memory comprising executable program instructions that enable the Bluesound Player to perform the functions identified below. *See, e.g.,* Ex. 61.
receive control information from any one of a plurality of controllers over the LAN via the network interface, wherein the received control information comprises a direction for the first zone player to enter into a synchrony group with at least a second zone player;	Each of the foregoing Bluesound Players comprise program instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to receive control information from any one of a plurality of devices installed with a BluOS Controller App over the LAN via the network interface, where the received control information comprises a direction for the Bluesound Player to enter into a synchrony group with at least a second Bluesound Player. For instance, each of the foregoing Bluesound Players is programmed with the capability to receive over a LAN, from any of a plurality of devices installed with the

	BluOS Controller App, a direction to enter into a dynamic or fixed group of two or more Bluesound Players that are configured to play back audio in synchrony with one another. One example of such a direction takes the form of an HTTP "AddSlave" command. *See also, e.g.*, Ex. 61, 67.
in response to the direction, enter into the synchrony group with the second zone player,	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to, in response to the direction, enter into the synchrony group with the second Bluesound Player. For instance, each of the foregoing Bluesound Players is programmed such that, in response to receiving a direction to enter into a group of Bluesound Players, the Bluesound Player functions to enter into a group with one or more other Bluesound Players, which involves an exchange of data packets with the one or more other Bluesound Players in the group (e.g., "SetMaster" packets). *See also, e.g.*, Ex. 61-62, 67. In such a group, the Bluesound Player that receives the direction to enter into the synchrony group may be referred to as the "master" or "primary" of the group and every other Bluesound Player in the group may be referred to as a "slave." *See, e.g.,* Ex. 68.
wherein in the synchrony group, the first and second zone players are configured to playback audio in synchrony based at least in part on (i) audio content, (ii) playback timing information associated with the	Once grouped, Bluesound Players are configured to play back audio in synchrony based at least in part on (i) audio content, (ii) playback timing information associated with the audio content that is generated by the master Bluesound Player in the group, and (iii) clock time information for the master Bluesound Player in the group, where the generated playback timing information and the clock time information are transmitted from the master Bluesound Player to the slave Bluesound Player(s), and where the Bluesound Players in the group remain independently clocked while playing back audio in synchrony.

46

audio content, wherein the playback timing information is generated by one of the first or second zone players, and (iii) clock time information for the one of the first or second zone players, and wherein the generated playback timing information and the clock time information are transmitted from the one of the first or second zone players to the other of the first or second zone players, wherein the first and second zone players remain independently clocked while playing back audio in synchrony; and	For instance, Bluesound states that once Bluesound Players have been grouped, the Bluesound Players are configured to play audio in "perfect sync." *See, e.g.*, Ex. 43-44, 61. Further, while in a group, the Bluesound Players in the group are configured to play back audio in synchrony based on clock time information for the "master" Bluesound Player, playback timing information generated by the "master" Bluesound Player, and audio information that is sent from the "master" Bluesound Player to each "slave" Bluesound Player in the group via data packets – including but not limited to "playPoint" data packets, "gotNextTrack" data packets, and TCP packets. Further yet, while playing back audio in synchrony as part of a group, each Bluesound Player in the group continues to operate in accordance with its own respective clock. *See, e.g.*, Ex. 61.
transmit status information to at least one of the plurality of controllers over the LAN via the network interface, wherein the status information comprises an indication of a status of the synchrony group.	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause the Bluesound Player to transmit status information to at least one of the plurality of devices installed with the BluOS Controller App over the LAN via the network interface, where the status information comprises an indication of a status of the synchrony group. For instance, while a Bluesound Player is serving as a master of a Bluesound group, the Bluesound Player is configured to send status information to any device running the BluOS Controller App on the same LAN that provides an indication of the status of the group,

	including but not limited to status information that provides an indication of the existence of the group, the current membership of the group, and/or the current playback status of the group.

139.   Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '258 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '258 Patent. In particular, (a) Defendants had actual knowledge of the '258 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants intentionally cause, urge, or encourage users of the Bluesound System to directly infringe one or more claims of the '258 Patent by promoting, advertising, and instructing customers and potential customers about the Bluesound System and uses of the system, including infringing uses (*see* Ex. 24, 44, 62-64, 67-68), and (c) Defendants know (or should know) that their actions will induce users of the Bluesound System to directly infringe one or more claims the '258 Patent, and (d) users of the Bluesound System directly infringe one or more claims of the '258 Patent.   For instance, at a minimum, Defendants have supplied and continue to supply Bluesound Players to customers while knowing that use of these products will infringe one or more claims of the '258 Patent, and that Defendants' customers then directly infringe one or more claims of the '258 Patent by using these Bluesound Players in accordance with Defendants' product literature.

140.   Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '258 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States, and/or importing into the United States, components in connection

1 with the Bluesound System that contribute to the direct infringement of the '258

2 Patent by users of the Bluesound System. In particular, (a) Defendants had actual

3 knowledge of the '258 Patent or were willfully blind to its existence prior to (at

4 least as early as November 1, 2018), and no later than, the filing of this action (*see*

5 ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection

6 with the Bluesound System, one or more material components of the invention of

7 the '258 Patent that are not staple articles of commerce suitable for substantial

8 noninfringing use, (c) Defendants know (or should know) that such component(s)

9 were especially made or especially adapted for use in an infringement of the '258

10 Patent, and (d) users of devices that comprise such material component(s) directly

11 infringe one or more claims of the '258 Patent. For instance, at a minimum,

12 Defendants offer for sale, sell, and/or import software updates for Bluesound

13 Players that meet one or more claims of the '258 Patent. *See, e.g.*, Ex. 65. These

14 software updates are material components of the Bluesound Players that meet the

15 one or more claims of the '258 Patent. Further, Defendants especially made and/or

16 adapted these software updates for use in the Bluesound Players that meet the one

17 or more claims of the '258 Patent, and these software updates are not staple articles

18 of commerce suitable for substantial noninfringing use. Defendants' customers

19 then directly infringe the one or more claims of the '258 Patent by installing and

20 using software updates on the Bluesound Players.

21   141. Defendants' infringement of the '258 Patent is also willful because

22 Defendants (a) had actual knowledge of the '258 Patent or were willfully blind to

23 its existence prior to (at least as early as November 1, 2018), and no later than, the

24 filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity

25 despite an objectively high likelihood that Defendants' actions constituted

26 infringement of the '258 Patent, and (c) this objectively-defined risk was either

27 known or so obvious that it should have been known to Defendants.

28   142. Additional allegations regarding Defendants' pre-suit knowledge of

1   the '258 Patent and willful infringement will likely have evidentiary support after

2   a reasonable opportunity for discovery.

3   143.   Sonos is in compliance with any applicable marking and/or notice

4   provisions of 35 U.S.C. § 287 with respect to the '258 Patent.

5   144.   Sonos is entitled to recover from Defendants all damages that Sonos

6   has sustained as a result of Defendants' infringement of the '258 Patent, including,

7   without limitation, a reasonable royalty and lost profits.

8   145.   Defendants' infringement of the '258 Patent was and continues to be

9   willful and deliberate, entitling Sonos to enhanced damages.

10   146.   Defendants' infringement of the '258 Patent is exceptional and entitles

11   Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

12   U.S.C. § 285.

13   147.   Defendants' infringement of the '258 Patent has caused irreparable

14   harm (including the loss of market share) to Sonos and will continue to do so unless

15   enjoined by this Court.

16   **COUNT III: INFRINGEMENT OF U.S. PATENT NO. 9,219,959**

17   148.   Sonos incorporates by reference and re-alleges paragraphs 25-33 and

18   62-74 of this Complaint as if fully set forth herein.

19   149.   Defendants and/or users of the Bluesound System have directly

20   infringed (either literally or under the doctrine of equivalents) and continue to

21   directly infringe one or more of the claims of the '959 Patent, in violation of 35

22   U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound

23   System (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i,

24   PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, and

25   PULSE SUB) within the United States and/or importing the Bluesound System into

26   the United States without authority or license.

27   150.   As just one non-limiting example, set forth below is an infringement

28   claim chart of exemplary claim 10 of the '959 Patent in connection with the

Bluesound System. This claim chart is based on publicly available information. Sonos reserves the right to modify this claim chart, including, for example, on the basis of information about the Bluesound System that it obtains during discovery.

Claim: 10	Bluesound
10. A playback device configured to output audio in a multi-channel listening environment, the playback device comprising:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, and PULSE SUB players comprises a "playback device" as recited in claim 10, and a computing device installed with a BluOS Controller App comprises a "controller" as recited in claim 10. *See, e.g.*, Ex. 24, 43-44, 61.
a network interface configured to receive audio data over a network;	Each of the foregoing Bluesound Players includes a network interface configured to receive audio data over a network, such as a WiFi interface and/or an Ethernet interface. *See, e.g.*, Ex. 24, 43-44, 61.
a plurality of speaker drivers configured to output audio based on the audio data;	Each of the foregoing Bluesound Players includes a plurality of speaker drivers configured to output audio based on the audio data. *See, e.g.*, Ex. 61.
one or more processors; and	Each of the foregoing Bluesound Players includes one or more processors. *See, e.g.*, Ex. 61.
tangible, non-transitory, computer readable memory comprising instructions encoded therein, wherein the instructions, when executed by the one or more processors, cause the playback device to	Each of the foregoing Bluesound Players includes a tangible, non-transitory computer readable memory encoded with program instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to perform the functions identified below. *See, e.g.*, Ex. 61.
(i) receive a signal from a controller over	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the

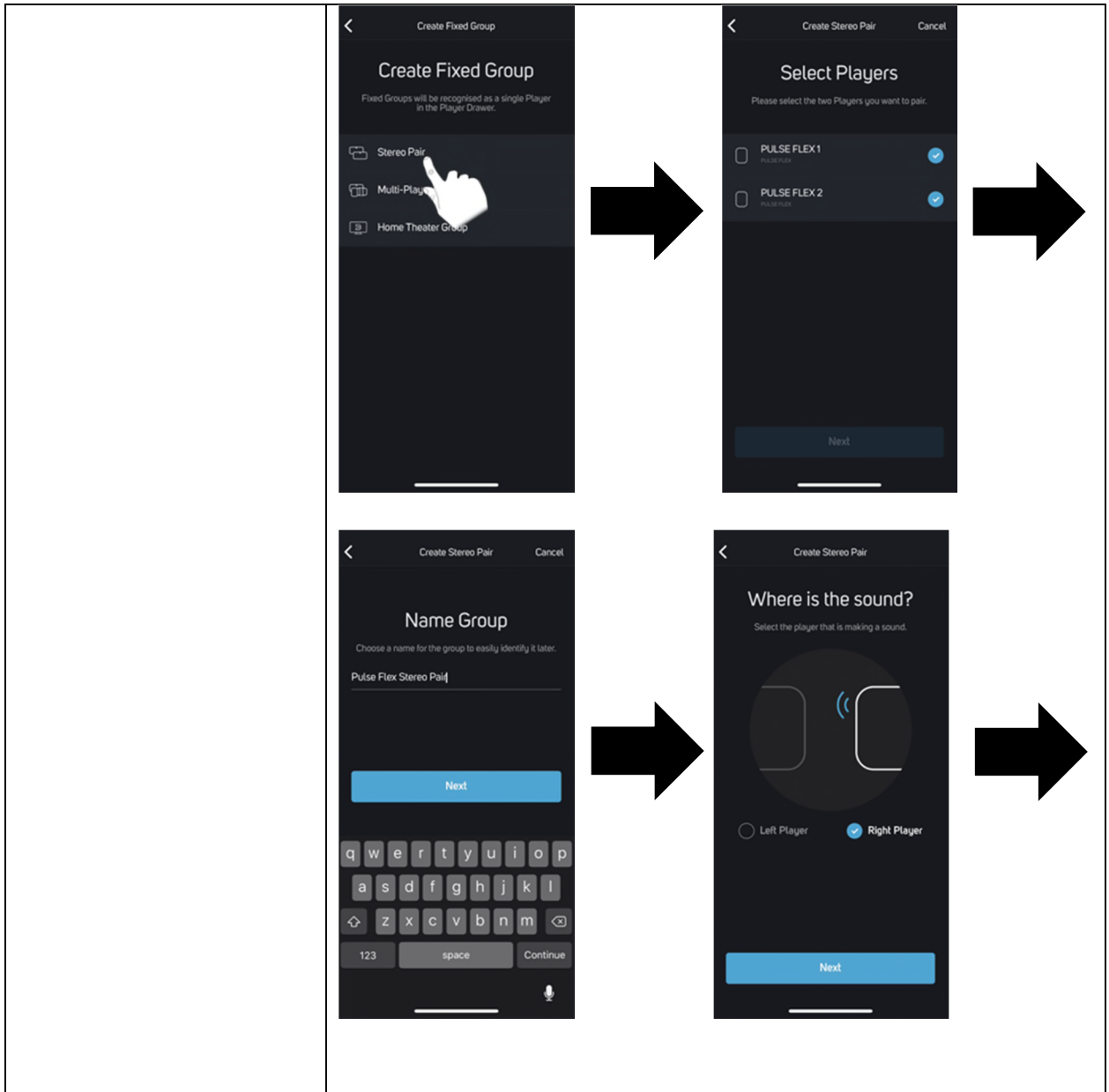|	
the network, wherein the signal comprises an instruction for the playback device to pair with one or more playback devices,	Bluesound Player's one or more processors, cause the Bluesound Player to receive a signal from a device installed with a BluOS Controller App over the network, where the signal comprises an instruction for the Bluesound Player to enter into a pair with one or more Bluesound Players – which is a "configuration involving two or more playback devices that have different playback roles." *See* Ex. 69. For instance, each of the foregoing Bluesound Players is programmed with the capability to receive, from a device installed with the BluOS controller app, an instruction to enter into a "Fixed Group" with one or more other Bluesound Players that can take the form of a "Stereo Pair" or a "Home Theatre Group," which are configurations involving two or more Bluesound Players that have different playback roles. *See, e.g.,* Ex. 50, 70-71. This functionality is illustrated by the following sequence of screenshots:
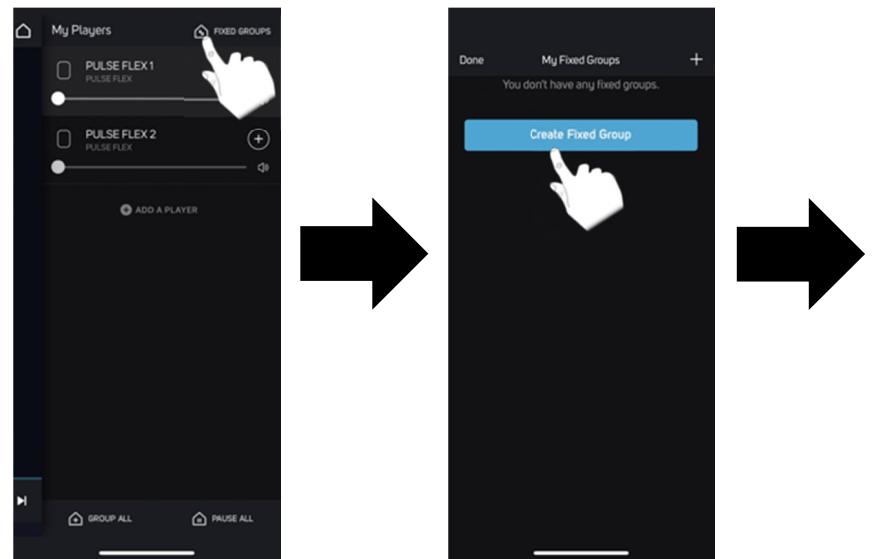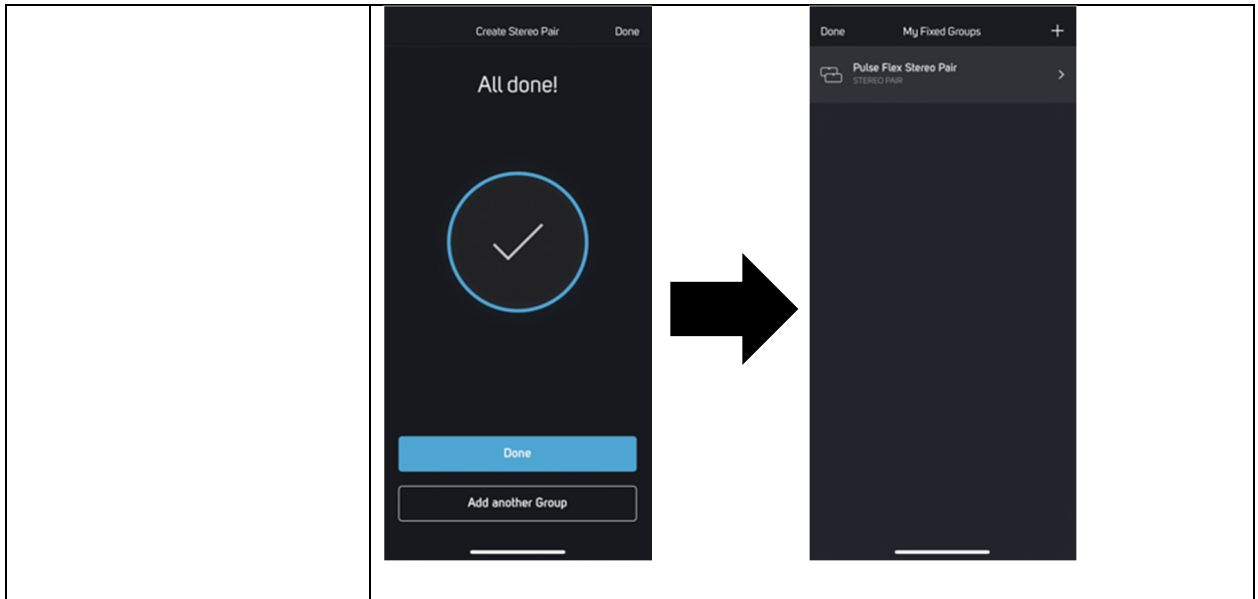
| (ii) process the audio data before the playback device outputs audio from the plurality of speaker drivers, | Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause the Bluesound Player to process the audio data before the Bluesound Player outputs audio from the plurality of speaker drivers.

For instance, the foregoing Bluesound Players are programmed with the capability to perform various types of audio processing on received audio data before outputting audio based on that audio data. *See, e.g.,* Ex. 43, 50, 61, 70-71. |
| (iii) determine that a type of pairing of the playback device comprises one of at least a first type of pairing or a second type of pairing, | Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause the Bluesound Player to determine that a type of pairing of the Bluesound Player comprises one of at least a first type of pairing or a second type of pairing.

For instance, each of the foregoing Bluesound Players is programmed with the capability to operate in accordance with a particular type of pairing, which could either be a "no pair" type of pairing, a "Stereo Pair" type of pairing, or a "Home Theatre Group" type of pairing. *See, e.g.,* Ex. 50, 70-71. |

54

	Further, each of the foregoing Bluesound Players is programmed with the capability to determine its type of pairing at various times, including but not limited to when a Bluesound Player receives an instruction to enter or leave a "Fixed Group" (e.g., a "Stereo Pair" or "Home Theatre Group"), when the Bluesound Player is performing certain functions in accordance with its current type of pairing, and when the Bluesound Player powers up.
(iv) configure the playback device to perform a first equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing, and (v) configure the playback device to perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing.	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause the Bluesound Player to configure itself to (1) perform a first equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing and (2) perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing, where performing an equalization comprises "modifying the output audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay; adjusting amplifier gain of the playback device; or using one or more filters." *See* Ex. 69. For instance, each of the foregoing Bluesound Players is programmed with the capability to change its equalization (including but not limited to its channel output) based on pairing type when its type of pairing changes from one of the aforementioned types of pairing (e.g., a "no pair" type of pairing) to another of the aforementioned types of pairing (e.g., a "Stereo Pair" or "Home Theatre Group" type of pairing). *See, e.g.,* Ex. 50, 70-71.

1   151. Additionally and/or alternatively, Defendants have indirectly

2   infringed and continue to indirectly infringe one or more of the claims of the '959

3   Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the

4   Bluesound System to directly infringe the one or more claims of the '959 Patent.

5   In particular, (a) Defendants had actual knowledge of the '959 Patent or were

6   willfully blind to its existence prior to (at least as early as November 1, 2018), and

7   no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants

8   intentionally cause, urge, or encourage users of the Bluesound System to directly

9   infringe one or more claims of the '959 Patent by promoting, advertising, and

10   instructing customers and potential customers about the Bluesound System and uses

11   of the system, including infringing uses (*see* Ex. 50, 70-71), and (c) Defendants

12   know (or should know) that their actions will induce users of the Bluesound System

13   to directly infringe one or more claims the '959 Patent, and (d) users of the

14   Bluesound System directly infringe one or more claims of the '959 Patent. For

15   instance, at a minimum, Defendants have supplied and continue to supply

16   Bluesound Players (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE

17   MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE

18   SOUNDBAR 2i, and PULSE SUB) to customers while knowing that use of these

19   products will infringe one or more claims of the '959 Patent, and that Defendants'

20   customers then directly infringe one or more claims of the '959 Patent by using

21   these Bluesound Players in accordance with Defendants' product literature.

22   152. Additionally and/or alternatively, Defendants have indirectly

23   infringed and continue to indirectly infringe one or more of the claims of the '959

24   Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the

25   United States, and/or importing into the United States, components in connection

26   with the Bluesound System that contribute to the direct infringement of the '959

27   Patent by users of the Bluesound System. In particular, (a) Defendants had actual

28   knowledge of the '959 Patent or were willfully blind to its existence prior to (at

least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection with the Bluesound System, one or more material components of the invention of the '959 Patent that are not staple articles of commerce suitable for substantial noninfringing use, (c) Defendants know (or should know) that such component(s) were especially made or especially adapted for use in an infringement of the '959 Patent, and (d) users of devices that comprise such material component(s) directly infringe one or more claims of the '959 Patent. For instance, at a minimum, Defendants offer for sale, sell, and/or import software updates for Bluesound Players (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, and PULSE SUB) that meet one or more claims of the '959 Patent. *See, e.g.*, Ex. 65. These software updates are material components of the Bluesound Players that meet the one or more claims of the '959 Patent. Further, Defendants especially made and/or adapted these software updates for use in the Bluesound Players that meet the one or more claims of the '959 Patent, and these software updates are not staple articles of commerce suitable for substantial noninfringing use. Defendants' customers then directly infringe the one or more claims of the '959 Patent by installing and using software updates on the Bluesound Players.

153. Defendants' infringement of the '959 Patent is also willful because Defendants (a) had actual knowledge of the '959 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity despite an objectively high likelihood that Defendants' actions constituted infringement of the '959 Patent, and (c) this objectively-defined risk was either known or so obvious that it should have been known to Defendants.

154. Additional allegations regarding Defendants' pre-suit knowledge of the '959 Patent and willful infringement will likely have evidentiary support after

1   a reasonable opportunity for discovery.

2   155. Sonos is in compliance with any applicable marking and/or notice

3   provisions of 35 U.S.C. § 287 with respect to the '959 Patent.

4   156. Sonos is entitled to recover from Defendants all damages that Sonos

5   has sustained as a result of Defendants' infringement of the '959 Patent, including,

6   without limitation, a reasonable royalty and lost profits.

7   157. Defendants' infringement of the '959 Patent was and continues to be

8   willful and deliberate, entitling Sonos to enhanced damages.

9   158. Defendants' infringement of the '959 Patent is exceptional and entitles

10   Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

11   U.S.C. § 285.

12   159. Defendants' infringement of the '959 Patent has caused irreparable

13   harm (including the loss of market share) to Sonos and will continue to do so unless

14   enjoined by this Court.
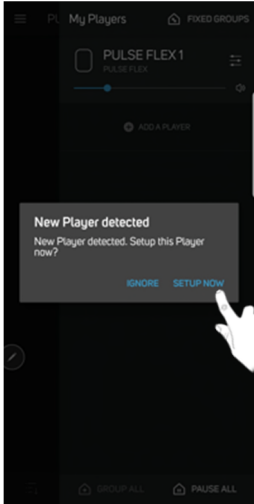
15   **COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 8,868,698**

16   160. Sonos incorporates by reference and re-alleges paragraphs 25-33 and

17   75-86 of this Complaint as if fully set forth herein.

18   161. Defendants and/or users of the Bluesound System have directly

19   infringed (either literally or under the doctrine of equivalents) and continue to

20   directly infringe one or more of the claims of the '698 Patent, in violation of 35

21   U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound

22   System within the United States and/or importing the Bluesound System into the

23   United States without authority or license.

24   162. As just one non-limiting example, set forth below is an exemplary

25   infringement claim chart for claim 9 of the '698 Patent in connection with the

26   Bluesound System. This claim chart is based on publicly available information.

27   Sonos reserves the right to modify this claim chart, including, for example, on the

28   basis of information about the Bluesound System that it obtains during discovery.

Claim: 9	Bluesound
9. A non-transitory computer-readable storage medium including a set of instructions for execution by a processor, the set of instructions, when executed, facilitating connection of a device to a secure playback network via a method comprising:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, NODE, NODE 2, NODE 2i, POWERNODE, POWERNODE 2, POWERNODE 2i, VAULT, VAULT 2, VAULT 2i, and any other "BluOS Enabled" or "BluOS Ready" audio player (e.g., the NPM-1) comprises a "playback device" as recited in claim 9, and any device installed with a BluOS Controller App comprises a "controller device" that includes a processor, a non-transitory computer-readable storage medium, and a set of executable instructions that, when executed, facilitate connection of a Bluesound Player to a secure playback network via the functions recited in claim 9. *See, e.g.*, Ex. 24, 43-44, 61.
receiving a manual user action at a controller device;	A device installed with the BluOS Controller App is a controller device that is programmed with the capability to receive a manual user action. For instance, a device installed with the BluOS Controller App is programmed with the capability to receive manual input that initiates a process for setting up a Bluesound Player and thereby causes the device to enter a listen mode. One example of this functionality is illustrated in the following sequence of screenshots:

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	*See also, e.g.*, Ex. 51.
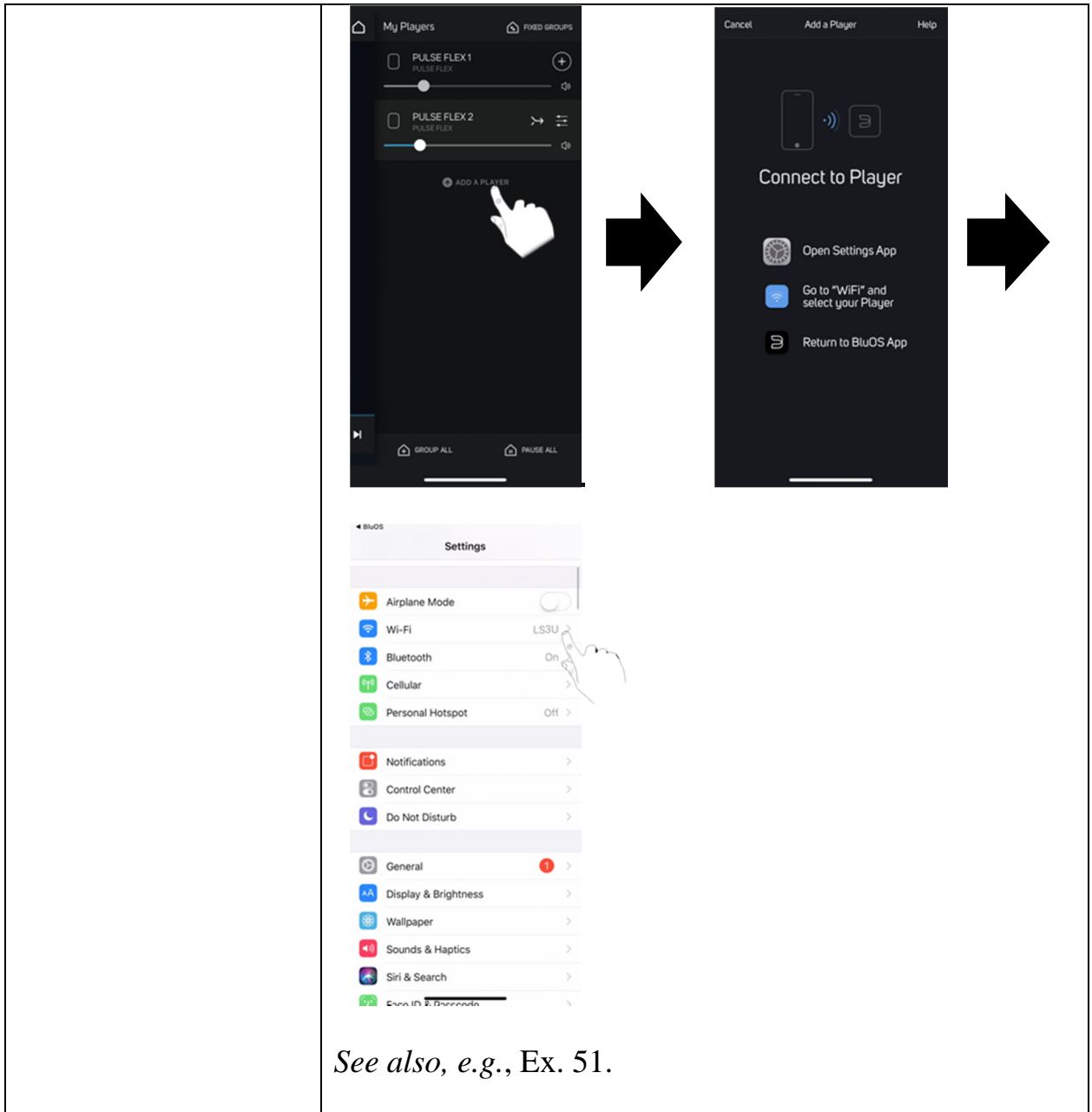
21	in response to the manual user action, causing the controller device to enter a listen mode to listen for a first message from a playback device over a firs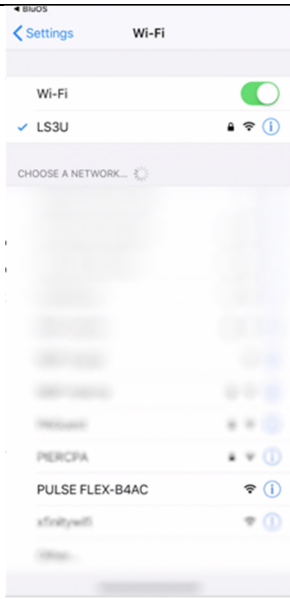t network, the first message indicating that the playback	A device installed with the BluOS Controller App is a controller device that is programmed such that, in response to the manual user action, the device enters a listen mode to listen for a first message from a Bluesound Player over a first network, where the first message indicates that the Bluesound Player is available for configuration.

For instance, a device installed with the BluOS Controller App is programmed such that, in response to receiving manual input that initiates a process for setting |

60

device is available for configuration;	up a Bluesound Player, the device enters a listen mode and begins listening for a message from a Bluesound Player over a first network that indicates that the Bluesound Player is available for configuration. *See also, e.g.*, Ex. 51.
receiving, by the controller device, the first message from the playback device over the first network;	A device installed with the BluOS Controller App is a controller device that is programmed with the capability to receive a first message from a Bluesound Player over a first network indicating that the Bluesound Player is available for configuration.

For instance, a device installed with the BluOS Controller App is programmed such that, after entering a listening mode in the manner described above, the device receives a message from a Bluesound Player over a first network that indicates that the Bluesound Player is available for configuration. This functionality is illustrated in the following screenshots:

 |

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	*See also, e.g.,* Ex. 51.
11	
12–22	in response to receiving the first message, the controller device transmitting a second message to the playback device over the first network, wherein the second message requests the playback device's network configuration information;	A device installed with the BluOS Controller App is a controller device that is programmed such that, in response to receiving the first message, the device transmits a second message to the Bluesound Player over the first network, where the second message requests the Bluesound Player's network configuration information.
		For instance, a device installed with the BluOS Controller App is programmed such that, in response to receiving a first message from a Bluesound Player indicating that the Bluesound Player is available for configuration, the device transmits a second message to the Bluesound Player that requests the Bluesound Player's network configuration information. One example of such a second message takes the form of a "SyncStatus" request. *See also, e.g.*, Ex. 51.
23–28	receiving, by the controller device, a third message from the playback device over the first network, wherein the third message includes the playback device's	A device installed with the BluOS Controller App is a controller device that is programmed with the capability to receive a third message from a Bluesound Player over a first network, where the third message includes the Bluesound Player's network configuration information.
		For instance, a device installed with the BluOS Controller App is programmed such that, after

network configuration information;	transmitting a second message to the Bluesound Player that requests the Bluesound Player's network configuration information, the device is capable of receiving a third message from the Bluesound Player that includes the Bluesound Player's network configuration information. One example of such a third message takes the form of a "SyncStatus" response. *See also, e.g.*, Ex. 51.
in response to receiving the third message, determining whether the playback device is configured for the secure playback network; and	A device installed with the BluOS Controller App is a controller device that is programmed such that, in response to receiving the third message, the device determines whether the Bluesound Player is configured for a secure playback network. For instance, a device installed with the BluOS Controller App is programmed such that, in response to receiving a third message that includes a Bluesound Player's network configuration information, the device determines whether the Bluesound Player is configured for a secure Wi-Fi network based on the contents of the third message (e.g., based on the contents of a "SyncStatus" response). *See also, e.g.*, Ex. 51.
sending, by the controller device based on the third message, a fourth message to the playback device over the first network, wherein the fourth message instructs the playback device to reconfigure its network configuration information according to network configuration parameters, including a security parameter,	A device installed with the BluOS Controller App is a controller device that is programmed such that, based on the third message, the device sends a fourth message to the Bluesound Player over the first network that instructs the Bluesound Player to reconfigure its network configuration information according to network configuration parameters, including a security parameter, provided by the device to the Bluesound Player such that the reconfigured Bluesound Player is to join the secure playback network without further user input via either the Bluesound Player or the device. For instance, a device installed with the BluOS Controller App is programmed such that, after receiving a third message that includes a Bluesound Player's network configuration information (e.g., a "SyncStatus" response), the device functions to transmit a fourth

provided by the controller device to the playback device such that the reconfigured playback device is to join the secure playback network without further user input via either the playback device or the controller device.	message that instructs the Bluesound Player to reconfigure its network configuration information according to network configuration parameters for a secure Wi-Fi network, such as an SSID and a WPA key, which causes the Bluesound Player to join the secure Wi-Fi network without further user input via either the Bluesound Player or the device. One example of such a fourth message takes the form of a "POST wificfg" command. *See also, e.g.*, Ex. 51.

163. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '698 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '698 Patent. In particular, (a) Defendants had actual knowledge of the '698 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants intentionally cause, urge, or encourage users of the Bluesound System to directly infringe one or more claims of the '698 Patent by promoting, advertising, and instructing customers and potential customers about the Bluesound System and uses of the system, including infringing uses (*see* Ex. 24, 51), and (c) Defendants know (or should know) that their actions will induce users of the Bluesound System to directly infringe one or more claims the '698 Patent, and (d) users of the Bluesound System directly infringe one or more claims of the '698 Patent. For instance, at a minimum, Defendants have supplied and continue to supply the BluOS Controller Apps to customers while knowing that installation and use of the BluOS Controller Apps will infringe one or more claims of the '698 Patent, and that Defendants' customers then directly infringe one or more claims of the '698 Patent by installing

1   and using the BluOS Controller Apps in accordance with Defendants' product

2   literature. *See, e.g.*, Ex. 65.

3   164. Additionally and/or alternatively, Defendants have indirectly

4   infringed and continue to indirectly infringe one or more of the claims of the '698

5   Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the

6   United States, and/or importing into the United States, components in connection

7   with the Bluesound System that contribute to the direct infringement of the '698

8   Patent by users of the Bluesound System. In particular, (a) Defendants had actual

9   knowledge of the '698 Patent or were willfully blind to its existence prior to (at

10   least as early as November 1, 2018), and no later than, the filing of this action (*see*

11   ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection

12   with the Bluesound System, one or more material components of the invention of

13   the '698 Patent that are not staple articles of commerce suitable for substantial

14   noninfringing use, (c) Defendants know (or should know) that such component(s)

15   were especially made or especially adapted for use in an infringement of the '698

16   Patent, and (d) users of devices that comprise such material component(s) directly

17   infringe one or more claims of the '698 Patent. For instance, at a minimum,

18   Defendants offer for sale, sell, and/or import BluOS Controller Apps for installation

19   on user devices that meet one or more claims of the '698 Patent. *See, e.g.*, Ex. 65.

20   These BluOS Controller Apps are material components of the user devices that

21   meet the one or more claims of the '698 Patent. Further, Defendants especially

22   made and/or adapted the BluOS Controller Apps for use in the user devices that

23   meet the one or more claims of the '698 Patent, and the BluOS Controller Apps are

24   not a staple article of commerce suitable for substantial noninfringing use.

25   Defendants' customers then directly infringe the one or more claims of the '698

26   Patent by installing and using the BluOS Controller Apps on the customers' user

27   devices.

28   165. Defendants' infringement of the '698 Patent is also willful because

1   Defendants (a) had actual knowledge of the '698 Patent or were willfully blind to

2   its existence prior to (at least as early as November 1, 2018), and no later than, the

3   filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity

4   despite an objectively high likelihood that Defendants' actions constituted

5   infringement of the '698 Patent, and (c) this objectively-defined risk was either

6   known or so obvious that it should have been known to Defendants.

7   166.   Additional allegations regarding Defendants' pre-suit knowledge of

8   the '698 Patent and willful infringement will likely have evidentiary support after

9   a reasonable opportunity for discovery.

10   167.   Sonos is in compliance with any applicable marking and/or notice

11   provisions of 35 U.S.C. § 287 with respect to the '698 Patent.

12   168.   Sonos is entitled to recover from Defendants all damages that Sonos

13   has sustained as a result of Defendants' infringement of the '698 Patent, including,

14   without limitation, a reasonable royalty and lost profits.

15   169.   Defendants' infringement of the '698 Patent was and continues to be

16   willful and deliberate, entitling Sonos to enhanced damages.

17   170.   Defendants' infringement of the '698 Patent is exceptional and entitles

18   Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

19   U.S.C. § 285.

20   171.   Defendants' infringement of the '698 Patent has caused irreparable

21   harm (including the loss of market share) to Sonos and will continue to do so unless

22   enjoined by this Court.

23   **COUNT V: INFRINGEMENT OF U.S. PATENT NO. 9,883,234**

24   172.   Sonos incorporates by reference and re-alleges paragraphs 25-33 and

25   87-98 of this Complaint as if fully set forth herein.

26   173.   Defendants and/or users of the Bluesound System have directly

27   infringed (either literally or under the doctrine of equivalents) and continue to

28   directly infringe one or more of the claims of the '234 Patent, in violation of 35

U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound System within the United States and/or importing the Bluesound System into the United States without authority or license.

174.   As just one non-limiting example, set forth below is an exemplary infringement claim chart for claim 1 of the '234 Patent in connection with the Bluesound System. This claim chart is based on publicly available information. Sonos reserves the right to modify this claim chart, including, for example, on the basis of information about the Bluesound System that it obtains during discovery.

Claim: 1	Bluesound
1. A playback device comprising:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, NODE, NODE 2, NODE 2i, POWERNODE, POWERNODE 2, POWERNODE 2i, VAULT, VAULT 2, VAULT 2i, and any other "BluOS Enabled" or "BluOS Ready" audio player (e.g., the NPM-1) comprises a "playback device" as recited in claim 1. *See, e.g.*, Ex. 24, 43-44, 61.
a network interface;	Each of the foregoing Bluesound Players includes a network interface, such as a WiFi interface and/or an Ethernet interface. *See, e.g.*, Ex. 43, 61.
one or more processors;	Each of the foregoing Bluesound Players includes one or more processors. *See*, *e.g.*, Ex. 61.
tangible computer-readable media having instructions encoded therein, wherein the instructions, when executed by the one or more processors, cause the playback	Each of the foregoing Bluesound Players includes tangible computer readable media encoded with program instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to perform the functions identified below. *See, e.g.*, Ex. 61.

device to perform a method comprising:	
receiving, via the network interface from one or more first cloud servers, an instruction to (1) add a particular multimedia content to a local playback queue on the playback device and (2) play back the multimedia content from the local playback queue beginning at a particular play position within the multimedia content corresponding to when a set of inputs for transferring playback of the multimedia content from a control device to a zone group was detected at a control interface of the control device, the zone group comprising a first zone and a second zone of a media playback system, the first zone comprising the playback device and the second zone comprising at least one additional playback device, wherein the control	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to receive, via its network interface from one or more first cloud servers, an instruction to (1) add a particular multimedia content to a local playback queue on the Bluesound Player and (2) play back the multimedia content from the local playback queue beginning at a particular play position within the multimedia content corresponding to when a set of inputs for transferring playback of the multimedia content from a control device to a zone group was detected at a control interface of the control device, the zone group comprising a first zone and a second zone of a Bluesound system, the first zone comprising the Bluesound Player and the second zone comprising at least one additional Bluesound Player, where the control device is distinct from the Bluesound Player, and where receiving the instruction comprises receiving a resource locator indicating a particular source of the multimedia content at one or more second cloud servers of a streaming content service. For instance, each of the foregoing Bluesound Players is programmed with the capability to enter into a group with one or more other Bluesound Players. *See, e.g.*, Ex. 61, 67. In such a group, the Bluesound Player that receives the direction to enter into the synchrony group may be referred to as the "master" or "primary" of the group and every other Bluesound Player in the group may be referred to as a "slave." *See, e.g.,* Ex. 68. Further, each of the foregoing Bluesound Players is programmed with the capability to assume playback responsibility for audio content from a streaming content service that was previously being played back by a control device.

device is distinct from the playback device, and wherein receiving the instruction comprises receiving a resource locator indicating a particular source of the multimedia content at one or more second cloud servers of a streaming content service;	For example, each of the foregoing Bluesound Players is programmed with "Spotify Connect" capability. *See, e.g.,* Ex. 54, 72. With "Spotify Connect," playback of audio content available from Spotify can initially begin at a control device installed with the Spotify app, such as a user's smartphone, tablet, or computer. Then, during the control device's playback of the audio content, the control device is capable of detecting a set of user inputs at a Spotify control interface that requests the playback of the audio content to be transferred from the control device to a group of Bluesound Players. In response to detecting such user input, the control device communicates the user's request to a first Spotify cloud server, which in turn transmits an instruction to one of the Bluesound Players in the group to (1) add the audio content to the Bluesound Player's local playback queue and (2) play back the audio content beginning at a particular play position within the audio content that corresponds to the time when the control device detected the user's request to transfer playback from the control device to the group of Bluesound Players, where such an instruction includes a uniform resource identifier (URI) indicating a source of the audio content at a second Spotify cloud server. The following screenshots illustrate an example set of inputs detected at a Spotify control interface of a control device that facilitates transferring playback of audio content from the control device to a group of Bluesound Players:

See also, e.g., Ex. 73.

Thus, in accordance with its "Spotify Connect" capability, each of the foregoing Bluesound Players is programmed with the capability to receive an instruction from a first Spotify cloud server to (1) add particular audio content available from Spotify to a local playback queue on the Bluesound Player and (2) play back the particular audio content from the local playback queue beginning at a particular play position within the audio content corresponding to when a set of inputs are detected at a Spotify control interface of a control device for transferring playback of the audio content from the control device installed with the Spotify app to a group of Bluesound Player that includes the Bluesound Player, where the instruction comprises a URI indicating a particular source of the audio content at a second Spotify cloud server.
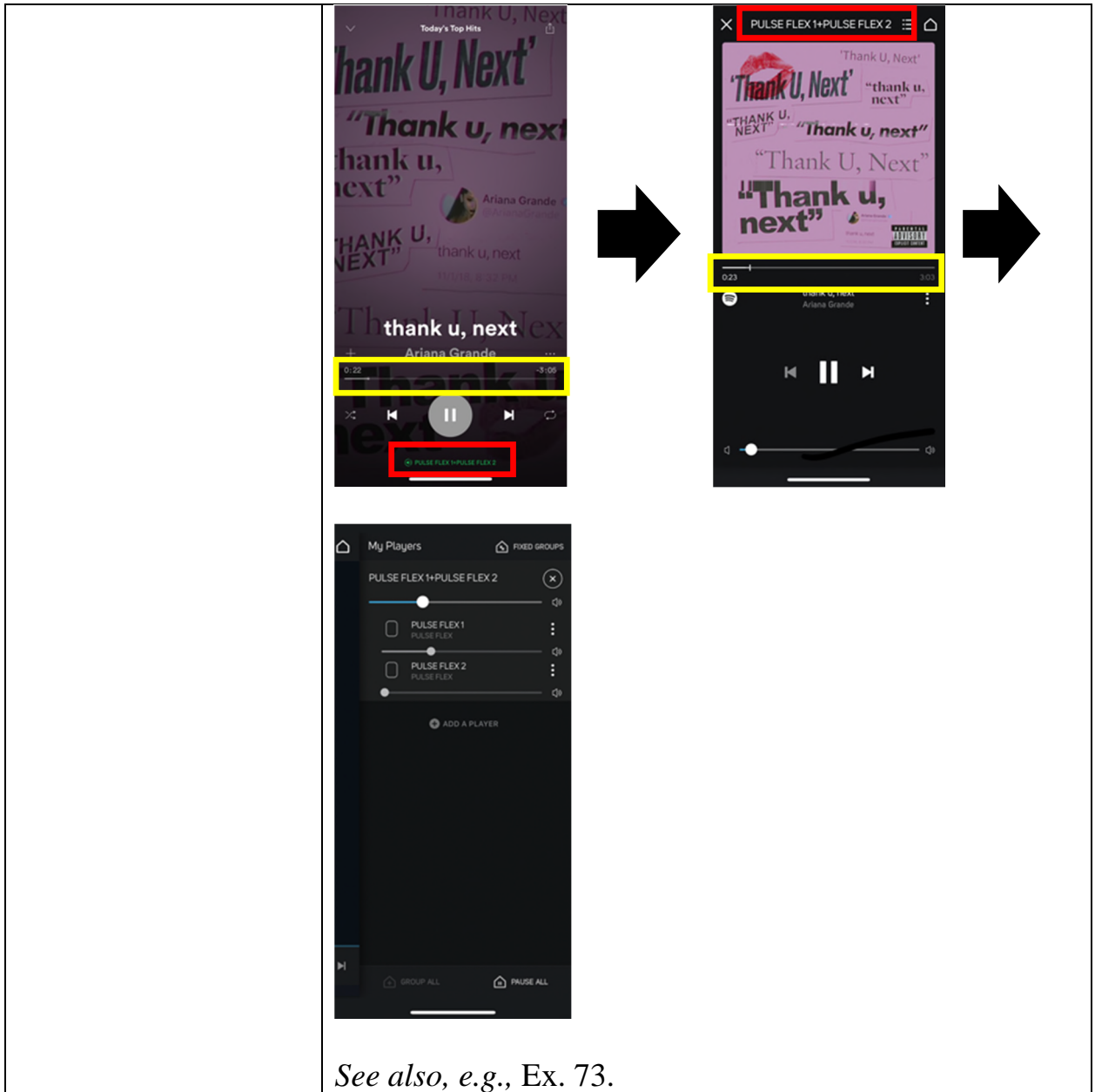
in response to the received instruction from the one or more first cloud servers: adding the particular multimedia content to a local playback	Each of the foregoing Bluesound Players comprises program instructions that, when executed by the Bluesound Player's one or more processors, cause the given Bluesound Player to, in response to the received instruction from the one or more first cloud servers, add the particular multimedia content to a local playback queue on the Bluesound Player and play back the particular multimedia content beginning at the particular

70

queue on the playback device; and playing back the particular multimedia content beginning at the particular play position within the multimedia content in synchrony with the at least one additional playback device, wherein playing back the multimedia content comprises obtaining the multimedia content from the particular source of the multimedia content at the one or more second cloud servers of the streaming content service using the resource locator, wherein the particular source is outside of a local area network that communicatively couples the control device and the playback device.	play position within the multimedia content in synchrony with at least one additional Bluesound Player in the zone group, where playing back the multimedia content comprises obtaining the multimedia content from the particular source of the multimedia content at the one or more second cloud servers of the streaming content service using the resource locator, and where the particular source is outside of a local area network that communicatively couples the control device and the Bluesound Player. For instance, as discussed above, each of the foregoing Bluesound Players is programmed with the capability to receive an instruction from a first Spotify cloud server to (1) add particular audio content available from Spotify to the Bluesound Player's local playback queue and (2) play back the particular audio content from the local playback queue beginning at a particular play position within the audio content, which corresponds to when the control device detected a set of user inputs at a Spotify control interface that request the playback of the audio content to be transferred from the control device to a group of Bluesound Players that includes the Bluesound Player. In turn, each of the foregoing Bluesound Players is programmed such that, in response to receiving such an instruction, the Bluesound Player adds the particular audio content to a local playback queue of the Bluesound Player, uses the URI included in the instruction to obtain the particular audio content from a second Spotify cloud server, and then plays back the particular audio content beginning at the particular play position within the audio content in synchrony with the one or more other Bluesound Players in the group. This functionality is illustrated by the following screenshots:

71

See also, e.g., Ex. 73.

175. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '234 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '234 Patent. In particular, (a) Defendants had actual knowledge of the '234 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants intentionally cause, urge, or encourage users of the Bluesound System to directly

infringe one or more claims of the '234 Patent by promoting, advertising, and instructing customers and potential customers about the Bluesound System and uses of the system, including infringing uses (*see* Ex. 54), and (c) Defendants know (or should know) that their actions will induce users of the Bluesound System to directly infringe one or more claims the '234 Patent, and (d) users of the Bluesound System directly infringe one or more claims of the '234 Patent. For instance, at a minimum, Defendants have supplied and continue to supply Bluesound Players to customers while knowing that use of these products will infringe one or more claims of the '234 Patent, and that Defendants' customers then directly infringe one or more claims of the '234 Patent by using these Bluesound Players in accordance with Defendants' product literature.

176. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '234 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the United States, and/or importing into the United States, components in connection with the Bluesound System that contribute to the direct infringement of the '234 Patent by users of the Bluesound System. In particular, (a) Defendants had actual knowledge of the '234 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection with the Bluesound System, one or more material components of the invention of the '234 Patent that are not staple articles of commerce suitable for substantial noninfringing use, (c) Defendants know (or should know) that such component(s) were especially made or especially adapted for use in an infringement of the '234 Patent, and (d) users of devices that comprise such material component(s) directly infringe one or more claims of the '234 Patent. For instance, at a minimum, Defendants offer for sale, sell, and/or import software updates for Bluesound Players that meet one or more claims of the '234 Patent. *See, e.g.*, Ex. 65. These

1 software updates are material components of the Bluesound Players that meet the

2 one or more claims of the '234 Patent. Further, Defendants especially made and/or

3 adapted these software updates for use in the Bluesound Players that meet the one

4 or more claims of the '234 Patent, and these software updates are not staple articles

5 of commerce suitable for substantial noninfringing use. Defendants' customers

6 then directly infringe the one or more claims of the '234 Patent by installing and

7 using software updates on the Bluesound Players.

8   177. Defendants' infringement of the '234 Patent is also willful because

9 Defendants (a) had actual knowledge of the '234 Patent or were willfully blind to

10 its existence prior to (at least as early as November 1, 2018), and no later than, the

11 filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity

12 despite an objectively high likelihood that Defendants' actions constituted

13 infringement of the '234 Patent, and (c) this objectively-defined risk was either

14 known or so obvious that it should have been known to Defendants.

15   178. Additional allegations regarding Defendants' pre-suit knowledge of

16 the '234 Patent and willful infringement will likely have evidentiary support after

17 a reasonable opportunity for discovery.

18   179. Sonos is in compliance with any applicable marking and/or notice

19 provisions of 35 U.S.C. § 287 with respect to the '234 Patent.

20   180. Sonos is entitled to recover from Defendants all damages that Sonos

21 has sustained as a result of Defendants' infringement of the '234 Patent, including,

22 without limitation, a reasonable royalty and lost profits.

23   181. Defendants' infringement of the '234 Patent was and continues to be

24 willful and deliberate, entitling Sonos to enhanced damages.

25   182. Defendants' infringement of the '234 Patent is exceptional and entitles

26 Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

27 U.S.C. § 285.

28   183. Defendants' infringement of the '234 Patent has caused irreparable

74

1 harm (including the loss of market share) to Sonos and will continue to do so unless

2 enjoined by this Court.

3 **COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 8,938,312**

4 184.   Sonos incorporates by reference and re-alleges paragraphs 25-33 and

5 99-111 of this Complaint as if fully set forth herein.

6 185.   Defendants and/or users of the Bluesound System have directly

7 infringed (either literally or under the doctrine of equivalents) and continue to

8 directly infringe one or more of the claims of the '312 Patent, in violation of 35

9 U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound

10 System (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i,

11 PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, NODE 2,

12 NODE 2i, POWERNODE 2, POWERNODE 2i, VAULT 2, and VAULT 2i) within

13 the United States and/or importing the Bluesound System into the United States

14 without authority or license.

15 186.   As just one non-limiting example, set forth below is an exemplary

16 infringement claim chart for claim 1 of the '312 Patent in connection with the

17 Bluesound System. This claim chart is based on publicly available information.

18 Sonos reserves the right to modify this claim chart, including, for example, on the

19 basis of information about the Bluesound System that it obtains during discovery.

20

Claim: 1	Bluesound
1. A playback device comprising:	At least each of Defandants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, NODE 2, NODE 2i, POWERNODE 2, POWERNODE 2i, VAULT 2, and VAULT 2i players comprises a "playback device" as recited in claim 1. *See, e.g.*, Ex. 24, 43-44, 61.
a line-in connector for receiving a first audio signal;	Each of the foregoing Bluesound Players includes a line-in connector for receiving a first audio signal, such as an optical and/or HDMI line-in connector. *See*, *e.g.*, Ex. 43-44

75

a network interface; and	Each of the foregoing Bluesound Players includes a network interface, such as a WiFi interface and/or an Ethernet interface. *See, e.g.*, Ex. 43, 61, 66.
a processor;	Each of the foregoing Bluesound Players includes one or more processors. *See*, *e.g.*, Ex. 43, 61.
a non-transitory computer readable storage medium having stored therein instructions executable by the processor to:	Each of the foregoing Bluesound Players includes a non-transitory computer readable storage medium having stored therein executable instructions that enable the Bluesound Player to perform the functions identified below. *See, e.g.,* Ex. 43, 61.
determine whether the first audio signal is present at the line-in connector;	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's processor, cause that Bluesound Player to determine whether the first audio signal is present at the line-in connector. For instance, each of the foregoing Bluesound Players is programmed with the capability to determine whether an audio signal is present at the Bluesound Player's optical or HDMI line-in connector in accordance with the Bluesound Player's "Auto Sense" functionality. *See, e.g.*, Ex. 58. Bluesound describes this "Auto Sense" functionality as follows:
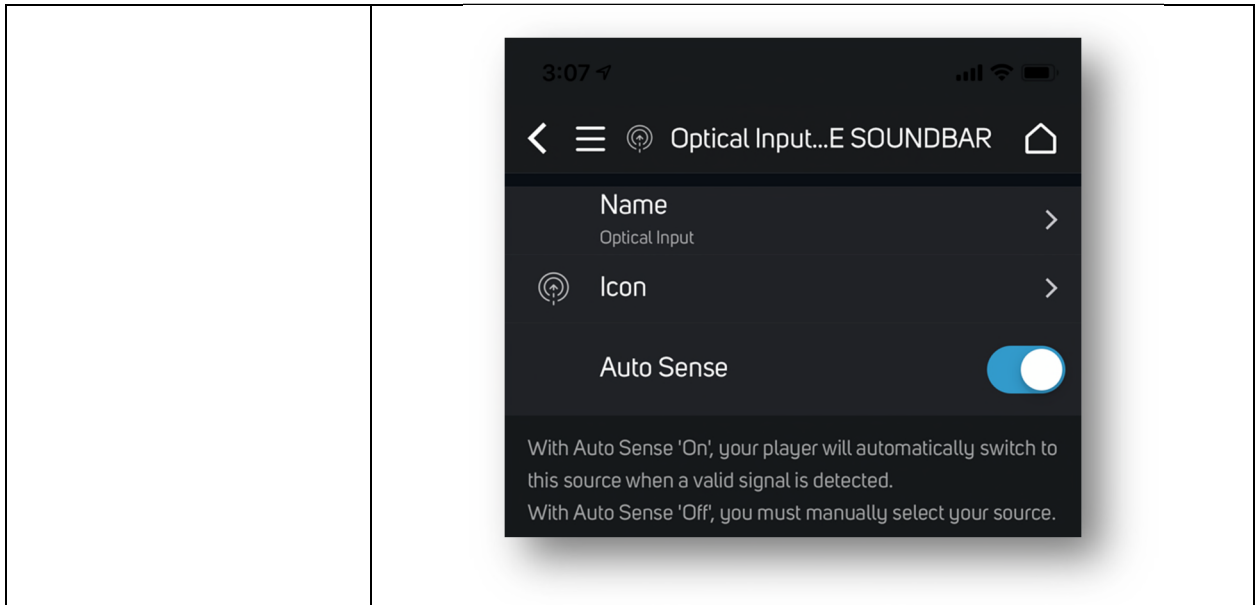
76

1

2

3

4

5

6

7

8

9

10

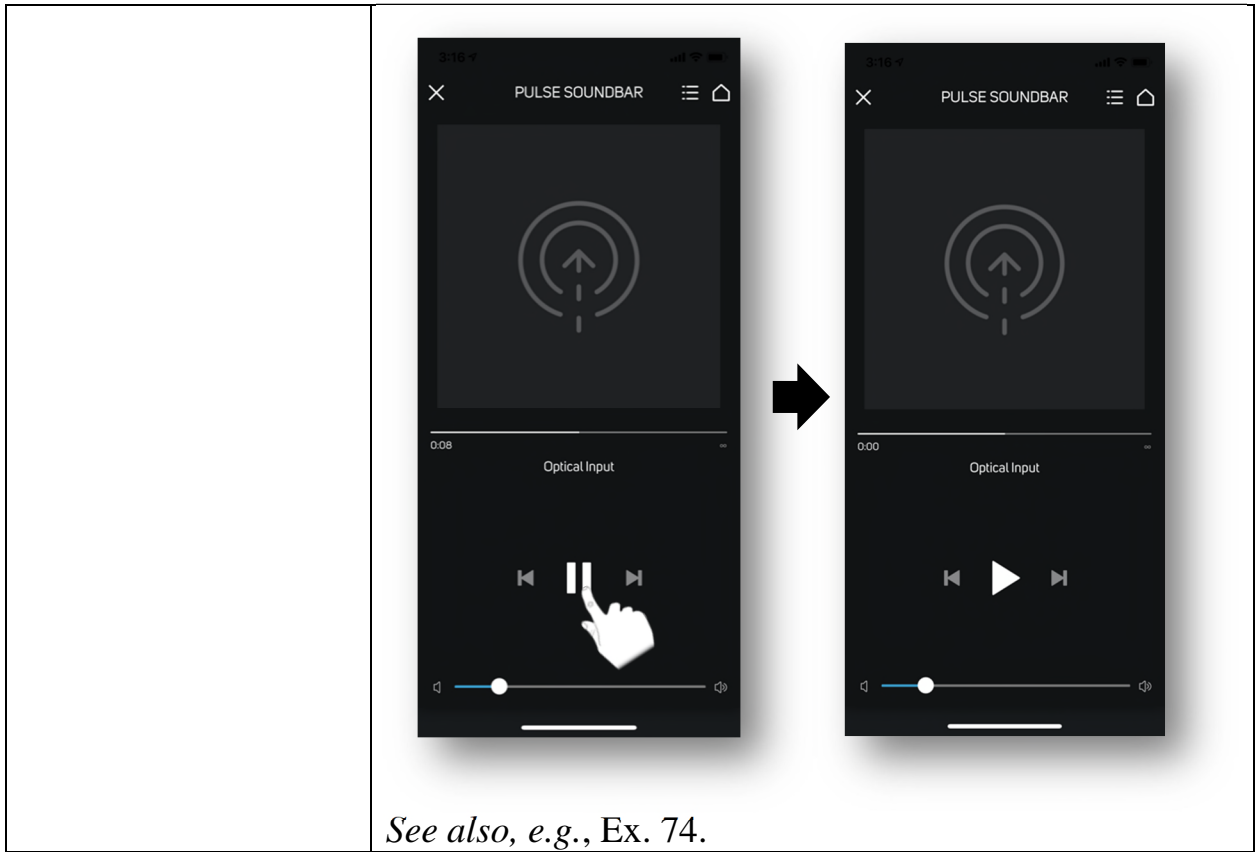|	
in response to determining that the first audio signal is present at the line-in connector, (i) cease playback of a second audio signal being played by the playback device, wherein the second audio signal is not present at the line-in connector, and (ii) cause the playback device to play the first audio signal;	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's processor, cause that Bluesound Player to, in response to determining that the first audio signal is present at the line-in connector, (i) cease playback of a second audio signal being played by the Bluesound Player, where the second audio signal is not present at the line-in connector, and (ii) cause the Bluesound Player to play the first audio signal. For instance, each of the foregoing Bluesound Players is programmed such that, in response to determining that an audio signal (e.g., a TV audio signal) is present at the Bluesound Player's optical or HDMI line-in connector, then in accordance with the Bluesound Player's "Auto Sense" functionality, the Bluesound Player functions to (i) cease playback of an audio signal being played by the Bluesound Player that is not present at the Bluesound Player's optical or HDMI line-in connector (e.g., audio content received from an Internet-based music service) and (ii) cause the Bluesound Player to play the audio signal that is present at the Bluesound Player's optical or HDMI line-in connector. *See, e.g.*, Ex. 58 ("BluOS Players can automatically switch to Optical Input if signal is detected from a TV, CD Player or other digital audio input device. Turning on your TV or playing a CD

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

	will interrupt any existing audio and play from this source.").
receive, via the network interface, a first instruction to stop the playback device from playing the first audio signal while the first audio signal is still present at the line-in connector;	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's processor, cause that Bluesound Player to receive, via the Bluesound Player's network interface, a first instruction to stop the Bluesound Player from playing the first audio signal while the first audio signal is still present at the line-in connector. For instance, each of the foregoing Bluesound Players is programmed with the capability to receive, via the Bluesound Player's network interface, an instruction to stop the Bluesound Player from playing an audio signal (e.g., a TV audio signal) while that audio signal is present at the Bluesound Player's optical or HDMI line-in connector. Such an instruction may take the form of an instruction sent by a device installed with the BluOS Controller App or a cloud server that is communicatively coupled to the Bluesound Player after a user makes a request to (i) "pause" playback of the audio signal that is present at the Bluesound Player's optical or HDMI line-in connector (an example of which is illustrated in the below screenshots) or (ii) play audio content from a different source (e.g., audio content from an Internet-based music service).

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

See also, e.g., Ex. 74.

determine that the first audio signal is no longer present at the line-in connector; and	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's processor, cause that Bluesound Player to determine that the first audio signal is no longer present at the line-in connector.

For instance, in accordance with "Auto Sense" functionality discussed above, each of the foregoing Bluesound Players is programmed with the capability to determine whether an audio signal is present at the Bluesound Player's optical or HDMI line-in connector, which includes the capability to determine that an audio signal that was previously present at the line-in connector is no longer present. *See, e.g.*, Ex. 58. |
| in response to determining that the first audio signal is no longer present at the line-in connector, arm the playback device such that a subsequent | Each of the foregoing Bluesound Players comprise instructions that, when executed by the Bluesound Player's processor, cause that Bluesound Player to, in response to determining that the first audio signal is no longer present at the line-in connector, arm the Bluesound Player such that a subsequent presence of the |

| presence of the first audio signal at the line-in connector causes the playback device to play the first audio signal. | first audio signal at the line-in connector causes the Bluesound Player to play the first audio signal.

For instance, each of the foregoing Bluesound Players is programmed such that, in response to determining that an audio signal (e.g., a TV audio signal) is no longer present at the Bluesound Player's optical or HDMI line-in connector, then in accordance with the Bluesound Player's "Auto Sense" functionality, the Bluesound Player arms itself such that a subsequent presence of the audio signal (e.g., the TV audio signal) at the Bluesound Player's optical or HDMI line-in connector causes the Bluesound Player to automatically begin playing back the audio signal at the optical or HDMI line-in connector (which may involve ceasing playback of audio content from another source such as an Internet-based music service). *See, e.g.*, Ex. 58 ("BluOS Players can automatically switch to Optical Input if signal is detected from a TV, CD Player or other digital audio input device. Turning on your TV or playing a CD will interrupt any existing audio and play from this source."). |
|---|---|

187. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '312 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '312 Patent. In particular, (a) Defendants had actual knowledge of the '312 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants intentionally cause, urge, or encourage users of the Bluesound System to directly infringe one or more claims of the '312 Patent by promoting, advertising, and instructing customers and potential customers about the Bluesound System and uses of the system, including infringing uses (*see* Ex. 58), and (c) Defendants know (or should know) that their actions will induce users of the Bluesound System to

1 directly infringe one or more claims the '312 Patent, and (d) users of the Bluesound

2 System directly infringe one or more claims of the '312 Patent. For instance, at a

3 minimum, Defendants have supplied and continue to supply Bluesound Players

4 (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE 2,

5 PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, NODE 2, NODE 2i,

6 POWERNODE 2, POWERNODE 2i, VAULT 2, and VAULT 2i) to customers

7 while knowing that use of these products will infringe one or more claims of the

8 '312 Patent, and that Defendants' customers then directly infringe one or more

9 claims of the '312 Patent by using these Bluesound Players in accordance with

10 Defendants' product literature.

11   188. Additionally and/or alternatively, Defendants have indirectly

12 infringed and continue to indirectly infringe one or more of the claims of the '312

13 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the

14 United States, and/or importing into the United States, components in connection

15 with the Bluesound System that contribute to the direct infringement of the '312

16 Patent by users of the Bluesound System. In particular, (a) Defendants had actual

17 knowledge of the '312 Patent or were willfully blind to its existence prior to (at

18 least as early as November 1, 2018), and no later than, the filing of this action (*see*

19 ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection

20 with the Bluesound System, one or more material components of the invention of

21 the '312 Patent that are not staple articles of commerce suitable for substantial

22 noninfringing use, (c) Defendants know (or should know) that such component(s)

23 were especially made or especially adapted for use in an infringement of the '312

24 Patent, and (d) users of devices that comprise such material component(s) directly

25 infringe one or more claims of the '234 Patent. For instance, at a minimum,

26 Defendants offer for sale, sell, and/or import software updates for Bluesound

27 Players (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i,

28 PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, NODE 2,

NODE 2i, POWERNODE 2, POWERNODE 2i, VAULT 2, and VAULT 2i) that meet one or more claims of the '312 Patent. *See, e.g.*, Ex. 65. These software updates are material components of the Bluesound Players that meet the one or more claims of the '312 Patent. Further, Defendants especially made and/or adapted these software updates for use in the Bluesound Players that meet the one or more claims of the '312 Patent, and these software updates are not staple articles of commerce suitable for substantial noninfringing use. Defendants' customers then directly infringe the one or more claims of the '312 Patent by installing and using software updates on the Bluesound Players.

189. Defendants' infringement of the '312 Patent is also willful because Defendants (a) had actual knowledge of the '312 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity despite an objectively high likelihood that Defendants' actions constituted infringement of the '312 Patent, and (c) this objectively-defined risk was either known or so obvious that it should have been known to Defendants.

190. Additional allegations regarding Defendants' pre-suit knowledge of the '312 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

191. Sonos is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '312 Patent.

192. Sonos is entitled to recover from Defendants all damages that Sonos has sustained as a result of Defendants' infringement of the '312 Patent, including, without limitation, a reasonable royalty and lost profits.

193. Defendants' infringement of the '312 Patent was and continues to be willful and deliberate, entitling Sonos to enhanced damages.

194. Defendants' infringement of the '312 Patent is exceptional and entitles Sonos to attorneys' fees and costs incurred in prosecuting this action under 35

1   U.S.C. § 285.

2   195.   Defendants' infringement of the '312 Patent has caused irreparable

3   harm (including the loss of market share) to Sonos and will continue to do so unless

4   enjoined by this Court.

5   **COUNT VII: INFRINGEMENT OF U.S. PATENT NO. 9,252,721**

6   196.   Sonos incorporates by reference and re-alleges paragraphs 25-33 and

7   112-123 of this Complaint as if fully set forth herein.

8   197.   Defendants and/or users of the Bluesound System have directly

9   infringed (either literally or under the doctrine of equivalents) and continue to

10   directly infringe one or more of the claims of the '721 Patent, in violation of 35

11   U.S.C. § 271(a), by making, using, offering for sale, and/or selling the Bluesound

12   System (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i,

13   PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i,

14   PULSE SUB, POWERNODE, POWERNODE 2, and POWERNODE 2i) within

15   the United States and/or importing the Bluesound System into the United States

16   without authority or license.

17   198.   As just one non-limiting example, set forth below is an exemplary

18   infringement claim chart for claim 1 of the '721 Patent in connection with the

19   Bluesound System. This claim chart is based on publicly available information.

20   Sonos reserves the right to modify this claim chart, including, for example, on the

21   basis of information about the Bluesound System that it obtains during discovery.

22

Claim: 1	Bluesound
1. A playback device comprising:	At least each of Defendants' PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, POWERNODE, POWERNODE 2, and POWERNODE 2i players comprises a "playback device" as recited in claim 1. *See, e.g.*, Ex. 24, 43-44, 61.

one or more processors;	Each of the foregoing Bluesound Players includes one or more processors. *See*, *e.g.*, Ex. 43, 61.
an amplifier;	Each of the foregoing Bluesound Players includes an amplifier. *See, e.g.*, Ex. 43, 61, 66.
a network interface; and	Each of the foregoing Bluesound Players includes a network interface, such as a WiFi interface and/or an Ethernet interface. *See, e.g.*, Ex. 43, 61, 66.
tangible, non-transitory, computer-readable memory comprising instructions that, when executed by the one or more processors, cause the playback device to:	Each of the foregoing Bluesound Players includes tangible, non-transitory, computer readable memory having instructions that enable the Bluesound Player to perform the functions identified below. *See, e.g.*, Ex. 61.
operate in a first power mode in which the amplifier consumes a first amount of power;	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to operate in a first power mode in which the Bluesound Player's amplifier consumes a first amount of power. For instance, each of the foregoing Bluesound Players is programmed with the capability to operate in a "Ready Mode" in which the Bluesound Player's amplifier consumes a higher amount of power than when the Bluesound Player is operating outside of the "Ready Mode." The Bluesound Players operates in such a "Ready Mode" at various times, including but not limited to when the Bluesound Player is playing back audio. *See, e.g.*, Ex. 60 (describing restoring a Bluesound Player back to "Ready Mode.").
while operating in the first power mode, receive one or more packets addressed to	Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to, while operating in the first power mode,

| the playback device, and determine that a defined time has passed since receiving a specified type of data packet; and | receive one or more packets addressed to the Bluesound Player and determine that a defined time has passed since receiving a specified type of data packet.

For instance, each of the foregoing Bluesound Players is programmed such that, while operating in a "Ready Mode," the Bluesound Player functions to (i) receive one or more packets addressed to the Bluesound Player (e.g., packets indicative of another Bluesound Player's presence on the network and/or packets sent from a device installed with the BluOS Controller App) and (ii) determine that a defined time (e.g., 15 minutes) has passed since receiving a specified type of data packet (e.g., an audio data packet). *See, e.g.*, Ex. 60 ("While it idles and waits to receive a command, a Bluesound Player will consume very little power, like other network components such as a switch or router. All Players also continue to stay connected with other Players in your house, even when you are not listening to music. Our Gen2 Players will automatically enter Power Save mode (less than 6.0W of power) after 15 minutes of idle. In this mode the Player will conserve energy but is responsive to App commands and available on the network."); Ex. 75 ("After 15minutes of idle the Bluesound POWERNODE and all PULSE Models Gen 2 or higher (mid 2015) will go into a powersave mode and shut down the amplifier. When pressing play, depending on the model or your player, sometimes the amplifier can take 2-8 seconds to wake and begin to play music again."). |
| after determining that the defined time has passed since receiving the specified type of data packet, transition from operating in the first power mode to operate in a second power mode in which the amplifier | Each of the foregoing Bluesound Players comprises instructions that, when executed by the Bluesound Player's one or more processors, cause that Bluesound Player to, after determining that the defined time has passed since receiving the specified type of data packet, transition from operating in the first power mode to operate in a second power mode in which the Bluesound Player's amplifier consumes a second amount of power, where the first amount of power is greater than the second amount of power. |

85

consumes a second amount of power, wherein the first amount of power is greater than the second amount of power.	For instance, each of the foregoing Bluesound Players is programmed such that, after determining that a defined time (e.g., 15 minutes) has passed since receiving a specified type of data packet (e.g., an audio data packet), the Bluesound Player functions to transition from operating in a "Ready Mode" to operating in an "Amplifier Standby" (or "idle") mode in which the Bluesound Player's amplifier consumes a lower amount of power than while operating in the "Ready Mode." *See, e.g.*, Ex. 60 ("While it idles and waits to receive a command, a Bluesound Player will consume very little power, like other network components such as a switch or router. All Players also continue to stay connected with other Players in your house, even when you are not listening to music. Our Gen2 Players will automatically enter Power Save mode (less than 6.0W of power) after 15 minutes of idle. In this mode the Player will conserve energy but is responsive to App commands and available on the network."); Ex. 75 ("After 15 minutes of idle the Bluesound POWERNODE and all PULSE Models Gen 2 or higher (mid 2015) will go into a powersave mode and shut down the amplifier. When pressing play, depending on the model or your player, sometimes the amplifier can take 2-8 seconds to wake and begin to play music again.").

199. Additionally and/or alternatively, Defendants have indirectly infringed and continue to indirectly infringe one or more of the claims of the '721 Patent, in violation of 35 U.S.C. § 271(b), by actively inducing users of the Bluesound System to directly infringe the one or more claims of the '721 Patent. In particular, (a) Defendants had actual knowledge of the '721 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) Defendants intentionally cause, urge, or encourage users of the Bluesound System to directly infringe one or more claims of the '721 Patent by promoting, advertising, and instructing customers and potential customers about the Bluesound System and uses

1   of the system, including infringing uses (*see* Ex. 60, 75), and (c) Defendants know

2   (or should know) that their actions will induce users of the Bluesound System to

3   directly infringe one or more claims the '721 Patent, and (d) users of the Bluesound

4   System directly infringe one or more claims of the '721 Patent. For instance, at a

5   minimum, Defendants have supplied and continue to supply Bluesound Players

6   (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE,

7   PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE

8   SUB, POWERNODE, POWERNODE 2, and POWERNODE 2i) to customers

9   while knowing that use of these products will infringe one or more claims of the

10 '721 Patent, and that Defendants' customers then directly infringe one or more

11 claims of the '721 Patent by using these Bluesound Players in accordance with

12 Defendants' product literature.

13   200. Additionally and/or alternatively, Defendants have indirectly

14 infringed and continue to indirectly infringe one or more of the claims of the '721

15 Patent, in violation of 35 U.S.C. § 271(c), by offering to sell or selling within the

16 United States, and/or importing into the United States, components in connection

17 with the Bluesound System that contribute to the direct infringement of the '721

18 Patent by users of the Bluesound System. In particular, (a) Defendants had actual

19 knowledge of the '721 Patent or were willfully blind to its existence prior to (at

20 least as early as November 1, 2018), and no later than, the filing of this action (*see*

21 ¶¶ 14-16 above), (b) Defendants offer for sale, sell, and/or import, in connection

22 with the Bluesound System, one or more material components of the invention of

23 the '721 Patent that are not staple articles of commerce suitable for substantial

24 noninfringing use, (c) Defendants know (or should know) that such component(s)

25 were especially made or especially adapted for use in an infringement of the '721

26 Patent, and (d) users of devices that comprise such material component(s) directly

27 infringe one or more claims of the '721 Patent. For instance, at a minimum,

28 Defendants offer for sale, sell, and/or import software updates for Bluesound

Players (e.g., PULSE FLEX, PULSE FLEX 2i, PULSE MINI, PULSE MINI 2i, PULSE, PULSE 2, PULSE 2i, PULSE SOUNDBAR, PULSE SOUNDBAR 2i, PULSE SUB, POWERNODE, POWERNODE 2, and POWERNODE 2i) that meet one or more claims of the '721 Patent. *See, e.g.*, Ex. 65. These software updates are material components of the Bluesound Players that meet the one or more claims of the '721 Patent. Further, Defendants especially made and/or adapted these software updates for use in the Bluesound Players that meet the one or more claims of the '721 Patent, and these software updates are not staple articles of commerce suitable for substantial noninfringing use. Defendants' customers then directly infringe the one or more claims of the '721 Patent by installing and using software updates on the Bluesound Players.

201. Defendants' infringement of the '721 Patent is also willful because Defendants (a) had actual knowledge of the '721 Patent or were willfully blind to its existence prior to (at least as early as November 1, 2018), and no later than, the filing of this action (*see* ¶¶ 14-16 above), (b) engaged in the aforementioned activity despite an objectively high likelihood that Defendants' actions constituted infringement of the '721 Patent, and (c) this objectively-defined risk was either known or so obvious that it should have been known to Defendants.

202. Additional allegations regarding Defendants' pre-suit knowledge of the '721 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

203. Sonos is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '721 Patent.

204. Sonos is entitled to recover from Defendants all damages that Sonos has sustained as a result of Defendants' infringement of the '721 Patent, including, without limitation, a reasonable royalty and lost profits.

205. Defendants' infringement of the '721 Patent was and continues to be willful and deliberate, entitling Sonos to enhanced damages.

206. Defendants' infringement of the '721 Patent is exceptional and entitles Sonos to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

207. Defendants' infringement of the '721 Patent has caused irreparable harm (including the loss of market share) to Sonos and will continue to do so unless enjoined by this Court.

PRAYER FOR RELIEF

WHEREFORE, Sonos respectfully requests:

A. That Judgment be entered that Defendants have infringed at least one or more claims of the patents-in-suit, directly and/or indirectly, literally and/or under the doctrine of equivalents, and that such infringement is willful;

B. An injunction enjoining Defendants, their officers, agents, servants, employees and attorneys, and other persons in active concert or participation with Defendants, and their parents, subsidiaries, divisions, successors and assigns, from further infringement of the asserted patents.

C. An award of damages sufficient to compensate Sonos for Defendants' infringement under 35 U.S.C. § 284, including an enhancement of damages on account of Defendants' willful infringement;

D. That the case be found exceptional under 35 U.S.C. § 285 and that Sonos be awarded its reasonable attorneys' fees;

E. Costs and expenses in this action;

F. An award of prejudgment and post-judgment interest; and

G. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Sonos respectfully demands a trial by jury on all issues triable by jury.

1

2   Respectfully submitted,

3

4   Dated: June 20, 2019   ORRICK HERRINGTON & SUTCLIFFE LLP

5   *and*

6   LEE SULLIVAN SHEA & SMITH LLP

7

8   By: */s/ Alyssa Caridis*

9   Alyssa Caridis

10   *Attorneys for Plaintiff Sonos, Inc.*

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

90