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Attorneys for Plaintiff
Aqua Lighting Technologies, LLC

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

Aqua Lighting Technologies, LLC,
a Virginia limited liability company,

Plaintiff,

v.

Hayward Industries, Inc.,
a New Jersey corporation, and
Hayward Pool Products, Inc.,
a New Jersey corporation,

Defendants.

No. _____

COMPLAINT WITH JURY DEMAND

Plaintiff Aqua Lighting Technologies, LLC ("ALT"), for its Complaint with Jury Demand against Defendants Hayward Industries, Inc. and Hayward Pool Products, Inc. (collectively "Hayward"), alleges as follows:

I. THE PARTIES

1. Plaintiff Aqua Lighting Technologies, LLC ("ALT") is a Virginia limited liability company having a principal place of business at 801 2nd Street, Suite 1110, Seattle, Washington 98104, and was formed to hold, license and enforce U.S. Patent No. 6,616,291 ("the '291 Patent").

2. Defendant Hayward Industries, Inc. is a New Jersey corporation with its corporate headquarters located at 620 Division Street, Elizabeth, New Jersey 07201.

3. Defendant Hayward Pool Products, Inc. is a subsidiary and/or division of Hayward Industries, Inc., with its corporate headquarters located at 620 Division Street, Elizabeth, New Jersey 07201.

4. Hayward designs, manufactures, markets, and sells swimming pool and spa equipment and accessories, including LED underwater lighting assemblies, from, upon information and belief, its New Jersey facility. Hayward sells such products in this judicial district, across the United States, and throughout various parts of the world.

II. JURISDICTION AND VENUE

5. This action arises under the laws of the United States, 35 U.S.C. § 101 *et seq.*, for patent infringement. The Court has original subject matter jurisdiction over the asserted claim pursuant to 28 U.S.C. §§ 1331 and 1332.

6. This Court has personal jurisdiction over Hayward for at least the following reasons: (1) Hayward has its corporate headquarters and nerve center in the State of New Jersey; (2) Hayward has committed acts of patent infringement and induced and contributed to acts of patent infringement by others in this District and in New Jersey; (3) Hayward engages in other persistent courses of conduct and derives substantial revenue from products and/or services

provided to individuals in this District and in New Jersey; and (4) Hayward has purposefully established systematic and continuous contacts with this District and should reasonably expect to be brought into Court here.

7. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400 because (1) Hayward has its corporate headquarters and nerve center in the State of New Jersey; and (2) Hayward has committed acts of patent infringement and induced acts of patent infringement by others in this District and in New Jersey.

III. GENERAL ALLEGATIONS

A. The Invention and '291 Patent

8. David A. Love is a principal in Rosstech Signals, Inc., a company that, among other things, designs and sells signal processing systems and devices for use in the pool and spa industry. In 1999, Love realized there was a need to replace then prevalent, but failure-prone, incandescent lighting assemblies in pools and spas with much more reliable light emitting diode (LED) lighting assemblies. He also recognized that these new LED assemblies could emit more than a single light color, and therefore offered to provide superior functionality compared to their incandescent counterparts.

9. Love believed these new assemblies should be easily installable into preexisting pool and spa systems, which would require using existing wiring and switches. If pool and spa builders did not need to learn how to install new switching or wiring when using the new lighting assemblies, his new lighting products would, he reasoned, be readily adopted for use in both existing and new spas and pools.

10. Love also believed that individual LEDs could be arranged in various desired "banks," perhaps based upon the color or intensity of the light to be emitted by the LEDs

included in the bank, could, if separately controlled by a local programmable controller, provide independent color switching and "light shows" not previously available with incandescent pool light bulbs.

11. Love's perceived need to integrate new LED technology into the pool and spa industry, by adapting it to preexisting wiring, yet control the local programmable processor to allow the user to switch between light colors and light shows, inspired him to invent a unique LED underwater lighting assembly. Love conceived of and created an underwater lighting assembly with a circuit board containing, *inter alia*, a plurality of LEDs separated into banks, each bank with an assigned color. An on-board processor would be pre-programmed to emit constant colors or light shows, by fading out one color while simultaneously fading in a new color. The on-board processor was capable of sensing the cycling between on and off power states, using that information to switch between pre-programmed light states based on the number of on/off cycles.

12. Love filed a patent application with the United States Patent and Trademark Office ("USPTO") on December 20, 2000 and obtained issued U.S. Patent No. 6,616,291 on September 9, 2003, entitled "Underwater Lighting Assembly" ("the '291 Patent"). (A copy of the '291 Patent is attached as Exhibit 1, and its file history is attached as Exhibit 2, which are both incorporated herein by reference.) The '291 Patent has 20 claims and cites 6 prior art patent references, the earliest dating from 1997.

13. As the sole inventor, Love was the sole owner of the '291 Patent. He assigned all right, title and interest in the '291 Patent, including the right to collect damages for past, present and future damages for infringement thereof, to Rosstech Signals, Inc., which has since assigned those rights to ALT. Those assignments have been recorded, respectively, at Reel 011975,

Frame 0247, and Reel 043761, Frame 0443 of the USPTO Assignment and Recording Branch.

(Copies of those assignments are attached as Exhibit 3 and incorporated herein by reference.)

14. The novelty and use of one embodiment of Love's invention is described within the '291 Patent as follows:

Control circuitry allows the separate LED colors installed to be powered from a simple two wire industry standard 12 VAC power supply with simple on/off Switching. This eliminates the required running of multi-conductor wire to control the LED arrays from a multi-position switch. Cycling the on/off switch allows the control circuitry to cycle illumination between the installed LED colors and allows for the addition of a "sequencing" or "modulation" mode in which the various installed colors are cycled randomly at varying intervals with a "fade up" and "fade down" in intensity producing attractive color combinations and intensity effects. Additional modes programmed into the processor can offer illumination in any of an essentially infinite spectrum comprised of the previously mentioned blending of LED colors in varying intensities and combinations.

(Exh. 1, at 5:26-40.)

15. Independent Claim 1 of the '291 Patent reads:

An underwater lighting assembly comprising:

- a waterproof housing for underwater submersion;
- a round front access LED board disposed within a water proof chamber of the housing;
- a plurality of LEDs and a programmable controller mounted on said board within the housing, the LEDs arranged in a plurality of banks, and
- a power supply that powers the controller and the LEDs, the controller configured to control the LEDs in response to switching of the power supply between on and off states.

(*Id.* at 6:34-44.)

16. Claim 2, dependent upon Claim 1, further claims an underwater lighting assembly wherein the LEDs are independently controllable to adjust intensity. Claim 3, also dependent upon Claim 1, claims a configuration of three banks of LEDs.

17. Independent Claim 7 claims a control system for controlling LEDs installed on a board in an underwater lighting assembly. Claim 7 explains an on-board programmable controller for generating operating signals in response to switching the power on and off, with

switching transistors between the controller and LEDs in a plurality of banks, and the controller operative to fade between different colors.¹

18. The '291 Patent includes other independent and dependent claims in addition to Claims 1, 2, 3, and 7.

19. The utility of Love's invention is evidenced by the fact that, upon information and belief, most color LED pool and spa light fixtures utilize the technology claimed in the '291 Patent to provide a modern level of functionality and ambiance in pools and spas, but are capable of using pre-existing two or three wire systems and a simple switch to communicate with the assembly.

B. The Infringing Products Sold by Hayward

20. Hayward claims on its LinkedIn page to be "a leading global manufacturer and marketer of both residential and commercial pool and spa equipment." According to its website, Hayward offers "a complete line of technologically advanced pumps, filters, heaters, heat pumps, automatic pool cleaners, lighting, controls and salt chlorine generators . . ." and has been helping pool owners for over 80 years. See <https://www.hayward-pool.com/shop/en/pools/hayward-about-us>, last visited February 27, 2019. Upon information and belief, Hayward offers its products through various retailers and wholesalers throughout the United States and worldwide.

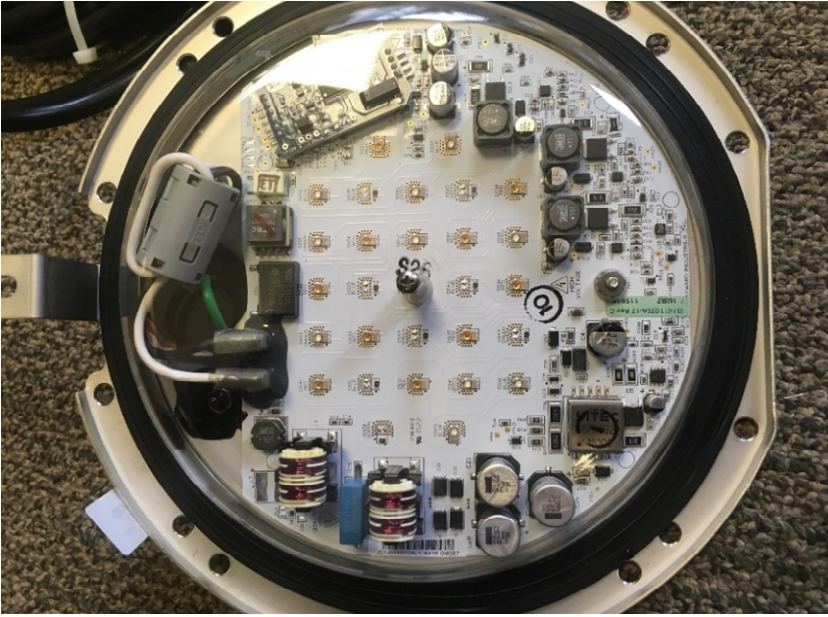
21. Hayward has and is continuing to infringe upon claims of the '291 Patent by its manufacture, offer for sale and sale of numerous lighting products in violation of 35 U.S.C. § 271 (a), (b) and/or (c).

22. As of the filing of this Complaint, Hayward manufactures and offers for sale various underwater pool and spa lighting fixtures, including the ColorLogic line of pool and spa

¹ Claim 7 contains an obvious typographical error made by the USPTO when it ordered the patent for publication; instead of "a non-board," it should read "an on-board."

LED lighting fixtures, including the Universal ColorLogic, ColorLogic 320 & 160, ColorLogic 80 & 40, and ColorLogic 4.0 lines. The ColorLogic lines sold by Hayward consist of a waterproof housing for underwater submersion and include a round front access, LED board, a plurality of LEDs grouped into banks and powered by a power supply within the unit, and a controller located on the board and powered by a power supply and configured to control the LEDs in response to switching the power supply between on and off states. By way of example, the front of the Hayward ColorLogic 4.0 SP0527SLED30, with and without lens and faceplate, is shown below:





23. The photo directly above shows an array of nearly 30 LEDs grouped by colors red, green, and blue around the center of the board. Upon information and belief, the controller is located on the upper part of the pictured circuit board. The Installation and Operation Manual for this product instructs the user to connect the three wires – power, neutral, and ground – to a power load center equipped with a common switch. (A copy of the Installation and Operation Manual is attached as Exhibit 4 and incorporated herein by reference.) The Manual further describes 12 separate light "programs," such as "fixed," "Deep Blue Sea" and "Emerald," and "shows" such as "Twilight – Slow Color Wash" and "Gemstone – Blue/Green/Magenta Fade." As described by Hayward, the functionality of turning on the light and changing colors and of performing a color show is controlled by cycling the power supplied to the board on and off:

The Hayward ColorLogic [] is operated through power-cycling: a method of changing modes which requires no special controller or interface. To activate the light, simply turn on the switch. To deactivate the light, turn off the switch. To advance to the next program, turn the switch off, then back on within 10 seconds.

(Exh. 4, at 12.)

24. As of the filing of this Complaint, Hayward's website advertises at least 44 different current models of the Hayward ColorLogic underwater LED lighting assemblies (the "Accused Products"). Upon information and belief, each of these models contains the same basic elements, infringe claims of the '291 Patent, and are functionally and physically analogous in all material ways. Upon further information and belief, Hayward has manufactured, offered for sale, and sold discontinued models that are functionally and physically analogous in all material ways.

25. Hayward has and is continuing to directly and indirectly infringe, both literally and through the doctrine of equivalents, claims of the '291 Patent by its offer for sale and sale of the ColorLogic line of light fixtures in violation of 35 U.S.C. § 271 (a), (b) and/or (c).

C. Hayward's Infringement of the '291 Has Been and Is Willful

26. Hayward is the assignee of U.S. Patent No. 9,084,314. (*See* Exhibit 5, incorporated herein by reference, "the '314 Patent").

27. The '314 Patent issued from Application No. 11/964,685 filed on November 28, 2007 and claims priority to provisional patent Application No. 60/861,607 filed on November 28, 2006. The '314 Patent and its applications thus post-date the '291 Patent.

28. The '314 Patent is entitled "Programmable Underwater Lighting System," and is directed towards "a programmable underwater lighting system for pools and spas [with a] plurality of underwater lights, each having a plurality of LEDs for producing light of various colors, a microprocessor for controlling the plurality of LEDs, and a memory in communication with the microprocessor containing one or more stored control programs, allow for the generation of various lighting effects in a pool or spa." (Exh. 5, at Abstract.)

29. The '314 Patent "Background of the Invention" states:

[R]ecently, colored lights have been used, with programmable controllers for turning selected lights on and off, effectively producing an underwater light show for the pool's users. In a typical application, an underwater light fixture (also called a luminaire) includes an array of light-emitting diodes (LEDs) coupled to a microprocessor. A specific color is obtained by powering different LEDs in combinations of primary colors (e.g. LEDs in red, green and blue). A light fixture is turned on or off in accordance with a programmed sequence by alternately supplying and interrupting power to the light fixture. For example, as shown in FIG. 1, a light fixture [] has an array of LEDs controlled by a micro- 35 processor. Each light fixture has a power relay [] for interrupting power from a power supply.

It is desirable to provide a programmable lighting system where the lights may turn on or off, change color and brightness, and/or appear to move, according to programmed sequences (including user-defined sequences) that do not depend on power interruption.

(*Id.*, at 1:23-42.)

30. In other words, the '314 Patent claims to disclose an improvement over a light system where the light functions are controlled by on/off power interruptions as disclosed and claimed in the '291 Patent. In fact, the '314 Patent discloses Love's '291 Patent as a cited reference and was included in the '314 Patent application Information Disclosure Statement by the applicant.

31. The '314 Patent lists six inventors: Gilbert Conover, Kevin Potucek, Lloyd Slonim, Carl Brunetti, Joseph Gonsalves, and Paul Canavan. Upon information and belief, at least Messrs. Potucek, Brunetti, and Gonsalves were Hayward employees at the time of the '314 Patent application filing and prosecution.

32. Hayward is the assignee of U.S. Patent No. 10,057,964. (*See* Exhibit 6, incorporated herein by reference, "the '964 Patent".) The '964 Patent issued from Application No. 15/050,207 filed on February 22, 2016 and is a continuation of application 14/790,956 filed July 2, 2015. The '956 Patent and its applications thus post-date the '291 Patent.

33. The '964 Patent is entitled "Lighting System for an Environment and a Control Module for Use Therein" and is directed towards "a lighting system including a line control module for controlling operation of the light modules based on interruption of power to the light modules." (Exh. 6, at 1:17-20.)

34. The '964 Patent "Background" states:

Lighting systems for residential and commercial aquatic environments (e.g., pool, spa, water parks, etc.) are becoming increasingly sophisticated. In some instances, lights in a lighting system can output different colors that can be used to generate a variety of "light shows," which, as used herein, refers to the ability of the lights to output color(s) either statically or dynamically over time. . . .

One approach to controlling which light show is output by the lights includes connecting the lights to a manual switch, such as a conventional wall mounted light switch. To control which light show is output by the lights, the user manually cycles the switch between its on and off position. For example, each time the user cycles the power to the lights by turning the light switch off and then on, the lights can increment to the next light show that can be output by the lights. As a result, a user may have to cycle the power several times to select a desired light show to be output by the lights

(*Id.*, at 1:24-43.)

35. The '964 Patent "Detailed Description" states:

Exemplary embodiments of the present disclosure are directed to a lighting system and components thereof including, for example, a line control module and light modules. The line control module can control an operation of light modules in the lighting system. In exemplary embodiments, the line control module can control an operation of light modules by cycling the power to the light modules (e.g., disconnecting and connecting the light modules to a power source) according to one or more sets of commands. The sets of commands can determine how many times the line control module toggles the power to light modules and/or how long power to the light modules is interrupted (e.g., disconnected from the power source) by the line control module each time the power is toggled.

(*Id.*, at 3:55-4:1.)

36. In other words, the '964 Patent claims a lighting control system that automates the on/off power interruptions that is the claimed control system for the lighting units in the '291

Patent. In fact, the '964 Patent discloses Love's '291 Patent as a cited reference and was included in the '314 Patent application Information Disclosure Statement by the applicant.

37. The '964 Patent application lists five inventors: Danny Raposo, James Carter, Gregory Fournier, James Murdock, and Kevin Potucek. Upon information and belief, all of the listed inventors were Hayward employees at the time of the '964 Patent application filing and prosecution.

38. Therefore, Hayward employees allegedly invented controllers designed to control lights disclosed and claimed in the '291 Patent and cited to Love's '291 Patent as a background reference for the lights that are controlled by Hayward's inventions in the '316 and '964 Patents. Hayward then turned around and manufactured, sold, and offered for sale those lights disclosed and claimed by the '291 Patent. Hayward never had a license or permission to practice the '291 Patent. Thus, Hayward knowingly manufactured, sold, and offered for sale Accused Products infringing the '291 Patent.

39. Mr. Potucek is a listed inventor on both the '316 and '964 Patents, and upon information and belief, has been an employee of Hayward from 2004 to the present. Mr. Potucek is also a listed inventor of U.S. Patent No. 7,514,884. (*See* Exhibit 7, incorporated herein by reference, "the '884 Patent.") The '884 Patent issued from Application No. 10/974,208 filed on April 28, 2005 and provisional patent Application No. 60/515,162 filed on October 28, 2003, issued on April 7, 2009. The '884 Patent is entitled "Microprocessor Controlled Time Domain Switching of Color-Changing Lights" and is directed towards "A lighting system controller comprising a switch connected to a lighting fixture configured to be controlled by time domain switching, and a processor capable of actuating said switch so as to achieve time domain switching of the lighting fixture." (*Id.* at Abstract.)

40. The '884 Patent application included 35 separate claims and did not disclose the '291 Patent in the Information Disclosure Statement as a prior art reference. The 10/974,208 application's Background of Invention section states:

For some color changing lights, color control can be achieved by manually interrupting power to the light's internal microprocessor which activates the color changing mechanism.

Claim 1 of the application as filed read:

A lighting system controller, comprising: a switch connected to a lighting fixture configured to be controlled by time domain switching; and a processor adapted for actuating said switch so as to achieve time domain switching of the lighting fixture.

Claim 15 of the application read:

A lighting system controller, comprising: a first switch connected to a first load; a second switch connected to a second load; and a processor adapted for independently controlling said first switch and said second switch in a manner capable of providing time domain switching of one or both of said first load and said second load.

41. In review, the USPTO patent examiner cited to the '291 Patent and rejected these claims (and others) stating that "Love discloses the claimed invention" In attempts to overcome this rejection, the applicants amended Claim 1 by limiting it to include a user interface for receiving input from a user and limiting Claims 1 and 15 by specifying the processor is "external to said lighting unit." The applicants argued that these amendments overcame the '291 Patent because the '291 Patent teaches that the controller is "part of the lighting assembly, because they are part of the same circuit board Thus, claims 1 and 15 are patentable over [Love]." In sum, the patent examiner rejected the original claims as being disclosed and described by the '291 Patent, and the applicants attempted to overcome this rejection by specifying that the microprocessor is housed within an external controller.

42. The Accused Products manufactured, sold, and offered for sale by Hayward all have circuit board-mounted microprocessor controllers within the lighting unit and are controlled by on/off power cycling as claimed in by the '291 Patent. Upon information and belief, Mr. Potucek was an employee of Hayward at the time and likely knew of this rejection and its bases. In other words, through the course of seeking and obtaining the '884 Patent, the applicants (one of whom became a Hayward employee) attempted to patent the invention disclosed in the '291 Patent. Hayward nevertheless proceeded to knowingly and willfully manufacture, offer for sale, and sell the Accused Products that infringe the '291 Patent.

43. On March 7, 2018, counsel for ALT sent Hayward a letter attaching a courtesy copy of a complaint in a separate lawsuit for infringement of the '291 Patent against a retailer for selling, in part, ColorLogic model lights (*Aqua Lighting Technologies, LLC v. Leslie's Poolmart, Inc.*, U.S. District Court, District of Arizona, 18-cv-00666-ESW). The letter stated:

ALT has filed suit against Leslie's alleging infringement of the '291 Patent for offering for sale and selling various spa and pool lighting fixtures which read on the '291 Patent. The reason we notify you of the above-referenced matter is that the infringing products include Hayward Pool Products, Inc.'s ("Hayward") ColorLogic models.

Nonetheless, Hayward has continued to knowingly and willfully manufacture, offer for sale, and sell the Accused Products that infringe the '291 Patent.

IV. CLAIM FOR RELIEF (Infringement of the '291 Patent)

44. ALT incorporates paragraphs 1 through 43 as though fully set forth herein.

45. ALT owns the '291 Patent, which was duly and legally issued. By its ownership of the '291 Patent, ALT has the right to sue for infringement.

46. Hayward has directly infringed one or more claims of the '291 Patent, including but not limited to Claims 1-4, 7, and 9-13 in violation of 35 U.S.C. § 271(a), (b), and/or (c) by

making, using, importing, selling and/or offering for sale certain underwater LED color lighting assemblies and/or actively and knowingly inducing infringement and/or contributing to infringement of the '291 Patent by its customers to whom it supplies the infringing underwater LED color lighting assemblies.

47. Hayward has and is continuing to infringe, both literally and through the doctrine of equivalents, claims of the '291 Patent.

48. Hayward has never had a license or permission to practice the '291 Patent.

49. Hayward was aware of the '291 Patent prior to manufacturing and selling supplying infringing fixtures. Hayward knew that the Accused Products infringed the '291 Patent. Hayward's infringement of the '291 Patent was willful and in wanton disregard for ALT's patent rights.

V. PRAYER FOR RELIEF

WHEREFORE, ALT prays for judgment in its favor and against Hayward as follows:

A. That Hayward, its officers, directors, agents, servants, employees, privies, representatives, attorneys, parent and subsidiary corporations or other related entities, successors, assigns, licensees, retail distributors, and all persons in active concert or participation with any of them, be permanently enjoined from directly or indirectly infringing, inducing others to infringe and/or contributing to the infringement of the '291 Patent;

B. That ALT be awarded damages in an amount to be determined at trial for Hayward's infringing activities which are at least a reasonable royalty;

C. That ALT be awarded treble damages by reason of the willful, wanton, and deliberate nature of Hayward's infringement pursuant to 35 U.S.C. § 284;

D. That ALT be awarded punitive damages;

- E. That ALT be awarded pre-judgment and post-judgment interest;
- F. That ALT be awarded costs and expenses of suit, including expert witness fees;
- G. That Hayward be required to account for all gains, profits, advantages, and unjust enrichment derived from its violations of law; and
- H. That ALT be awarded other and further relief as the Court deems appropriate at just.

VI. JURY DEMAND

ALT hereby demands a jury trial on issues so triable.

Respectfully submitted,

Dated: March 8, 2019

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