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Attorneys for Plaintiffs Seiko Epson Corporation, Epson America, Inc., and Epson Portland Inc.

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF OREGON PORTLAND DIVISION

SEIKO EPSON CORPORATION, a Japan corporation; EPSON AMERICA, INC., a California corporation; and EPSON PORTLAND INC., an Oregon corporation,

Plaintiffs,

v.

NANO BUSINESS & TECHNOLOGY, INC., an Oregon corporation,

Defendant.

Civil No. 3:16-cv-2211

COMPLAINT FOR:

PATENT INFRINGEMENT and BREACH OF CONTRACT

DEMAND FOR JURY TRIAL

Plaintiffs Seiko Epson Corporation, Epson America, Inc., and Epson Portland Inc., for their Complaint herein, allege as follows

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et. seq.*, and for breach of contract arising under the laws of the State of Oregon.

RELATED ACTIONS

- 2. This action is related to five legal proceedings, all of which were pending before this Court and were assigned to the Honorable Anna J. Brown. All five proceedings were concluded by settlement, entry of consent orders and/or by entry of defaults and default judgments, with the last of the proceedings concluding on June 15, 2012 when the cases were closed by the Court. One of the two patents (the '917 patent, discussed below) asserted in this case was litigated in each of the five related proceedings against the same or overlapping groups of products that are accused of infringement in this action. The five related proceedings are as follows:
 - a. Seiko Epson Corporation, et al. v. Glory South Software Manufacturing

 Inc., et al., Civil No. 06-236-BR (D. Or.), closed June 15, 2012;
 - b. Seiko Epson Corporation, et al. v. Glory South Software Manufacturing

 Inc., et al., Civil No. 06-477-BR (D. Or.), closed June 15, 2012;
 - c. Seiko Epson Corporation, et al. v. Abacus 24-7 LLC, et al., Civil No. 09-477-BR (D. Or.), closed June 15, 2012;
 - d. Seiko Epson Corporation, et al. v. E-Babylon, Inc., et al., Civil No. 07-896-BR (D. Or.), closed February 27, 2012; and

- e. Seiko Epson Corporation, et al. v. Inkjetmadness.com, Inc., et al., Civil No. 08-452-BR (D. Or.), closed February 27, 2012.
- 3. In addition, this action is related to *In the Matter of CERTAIN INK*CARTRIDGES AND COMPONENTS THEREOF, Investigation No. 337-TA-946, United States
 International Trade Commission, Washington, D.C. ("ITC"), which has been adjudicated by the
 ITC in a final determination (Commission Opinion, May 26, 2016) (the "337-TA-946 ITC
 Investigation") and in which the Commission issued a General Exclusion Order, certain Cease
 and Desist Orders, and a Consent Order against the Defendant in this action, Nano Business &
 Technology, Inc. ("Nano Digital" or "Defendant"). The other of the two patents (the '749 patent,
 discussed below) asserted in this case was litigated in the 337-TA-946 ITC Investigation against
 the same or overlapping groups of products that are accused of infringement in this action. In
 addition, Nano Digital entered into a contract, the "Settlement Agreement" (discussed below),
 with Plaintiffs in this action to resolve the 337-TA-946 ITC Investigation, which forms the basis
 of the breach of contract claim alleged herein. The '917 and '749 patents are both subjects of the
 Settlement Agreement between Defendant and Plaintiffs.
- 4. In addition, this action is related to *In the Matter of CERTAIN INK*CARTRIDGES AND COMPONENTS THEREOF, Investigation No. 337-TA-565, United States

 International Trade Commission, Washington, D.C., which has been adjudicated by the ITC in a final determination (Commission Opinion, October 19, 2007) (the "337-TA-565 ITC

 Investigation") in which the Commission issued a General Exclusion Order, a Limited Exclusion Order and certain Cease and Desist Orders. The ITC's final determination was upheld in its entirety in a *per curiam* judgment by the Federal Circuit and on June 1, 2009 the United States

 Supreme Court denied a Petition for Writ of *Certiorari* for review of the Federal Circuit

decision. The '917 patent asserted in this case was litigated in the 337-TA-565 ITC Investigation against the same or overlapping groups of products that are accused of infringement in this action.

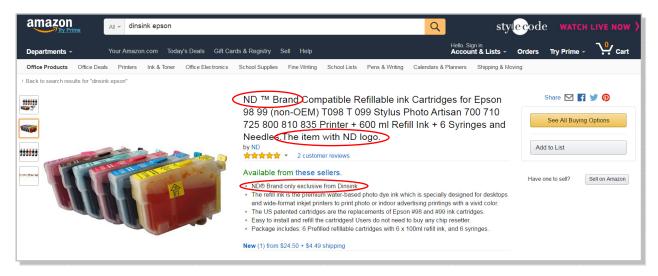
THE PARTIES

- 5. Plaintiff Seiko Epson Corporation ("Seiko Epson") is a corporation organized and existing under the laws of Japan. Its principal place of business is located at 3-3-5 Owa Suwa-Shi Nagano-Ken, 392-8502, Japan.
- 6. Plaintiff Epson America, Inc. ("Epson America") is a corporation organized and existing under the laws of the State of California. Its principal place of business is located at 3840 Kilroy Airport Way, Long Beach, California 90806. As the North American sales, marketing and customer service affiliate of Seiko Epson, Epson America is the exclusive licensee of the Epson Patents described below for distributing in the United States Epson ink cartridges that embody the inventions contained in the Epson Patents, including cartridges manufactured by Epson Portland Inc.
- 7. Plaintiff Epson Portland Inc. ("Epson Portland") is a corporation organized and existing under the laws of the State of Oregon. Its principal place of business is located at 3950 NW Aloclek Place, Hillsboro, Oregon 97124. Epson Portland is the exclusive licensee of the Epson Patents described below for manufacturing in the United States Epson ink cartridges that embody the inventions contained in the Epson Patents. Seiko Epson, Epson America and Epson Portland are sometimes referred to collectively herein as "Epson" or "Plaintiffs."
- 8. Plaintiffs produce and sell ink cartridges that operate with Epson ink jet printers utilizing Epson's patented technology and designs in the United States and in this judicial district.

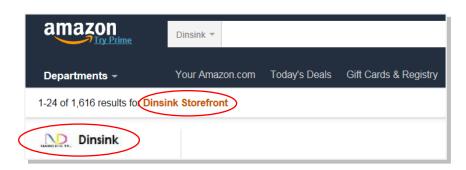
- 9. On information and belief, defendant Nano Business & Technology, Inc. ("Nano Digital" or "Defendant") is a corporation organized and existing under the laws of the State of Oregon. Based on information and belief, and according to Nano Digital's Amended Annual Report that Nano Digital filed with the Oregon Secretary of State on October 13, 2016, Nano Digital's primary and principal place of business is located at 1915 Arena Ct., West Linn, Oregon, 97068. According to Google Maps and Google Maps Street View the foregoing address is located in a residential neighborhood, rather than in a commercial or business district. The aforementioned Amended Annual Report was filed by Wei Li, who, according to the Amended Annual Report is Nano Digital's registered agent, president, secretary and owner. Wei Li, as Nano Digital's registered agent, president, secretary and owner and/or officer, also filed similar Amended Annual Reports at least in each of years 2015, 2014, 2013, 2012 and 2011. Each Amended Annual Report, as well as the Oregon Secretary of State website, shows that Nano Digital has been an ongoing business in Oregon since November 21, 2003, when it filed its Articles of Incorporation. See http://egov.sos.state.or.us/br/pkg_web_ name_srch_inq.show_detl?p_be_rsn=1003344&p_srce=BR_INQ&p_print=FALSE.
- 10. On information and belief, Nano Digital does business on-line as "Nano Digital Ink" and "Nano Ink Spot" through at least its website *www.nanodigital.com*. On information and belief, Nano Digital sells infringing ink cartridges under the "Nano Digital" and "ND" brands and the "ND" logo, which is shown below:



In addition, on information and belief, and after a reasonable investigation, Nano Digital is also doing business online through its on-line stores and/or listings at Amazon.com using at least the on-line seller names "dinsink," and "ink727," and on eBay.com using at least the on-line seller name "nano-refill-ink." For example, in the annotated screen capture below of an Amazon.com listing, visited on November 22, 2016, Nano Digital offers for sale infringing ink cartridges for Epson printers and describes the infringing ink cartridges as "ND TM Brand Compatible Refillable ink Cartridges for Epson 98 99 (non-OEM) T098 T 099 Stylus Photo Artisan 700 710 725 800 810 835 Printer + 600 ml Refill Ink + 6 Syringes and Needles. The item with ND logo" and explains that these infringing ink cartridges are "ND® Brand only exclusive from Dinsink."



The "Dinsink Storefront" on Amazon.com proudly displays Nano Digital's "ND" logo next to the "Dinsink" seller name, as indicated by the annotations shown in the screen capture below of the Dinsink Storefront visited on Nov. 22, 2016:



PAGE 6 – COMPLAINT

11. On June 12, 2015, Nano Digital entered into a contract with Epson to settle claims of patent infringement, including claims for infringement of the patents asserted here, brought by Epson in an action filed in the United States International Trade Commission, U.S. ITC Inv. No. 337-TA-946 (the "Settlement Agreement"). In the Settlement Agreement, Nano Digital identified itself and its address as: "Nano Business and Technology, Inc., 4287 SE International Way, Suite C, Milwaukie, OR 97222." The settlement agreement was signed by Jie Wang as Nano Digital's CEO and President. In addition, on June 25, 2015, Nano Digital and Epson filed in the ITC an Amended Joint Motion to terminate the ITC Investigation as to Nano Digital and Zhuhai Nano Digital Technology Co., Ltd. (a Chinese entity related to Nano Digital which was also a named respondent in the ITC Investigation), based on the Settlement Agreement, an Amended Consent Order Stipulation filed in the ITC, and an Amended Proposed Consent Order (later entered by the ITC and prohibiting Nano Digital from infringing Epson's patents). The Amended Joint Motion and Amended Consent Order Stipulation were also signed on behalf of Nano Digital by Jie Wang as its CEO and President and identified the same foregoing Milwaukie, Oregon address. Infringing Nano Digital ink cartridges were shipped by Nano Digital from the same foregoing Milwaukie, Oregon address in fulfillment of ink cartridge purchases made by Epson from Nano Digital's Amazon.com and eBay.com listings identified in the preceding paragraph in support of the investigation leading to this Complaint. Attached as Exhibit A to this Complaint is a true and correct copy of the public version of the Amended Joint Motion filed in the ITC which includes as attachments the public versions of the Settlement

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¹ Nano Digital and Epson had initially filed their joint motion to terminate the ITC Investigation, together with a consent order stipulation and a proposed consent order, on June 18, 2015. The Amended Joint Motion filed on June 25, 2015 modified certain provisions of the consent order stipulation and the proposed consent order based on requests from the ITC

Agreement, Amended Consent Order Stipulation, and Amended Proposed Consent Order.

Attached as Exhibit B to this Complaint is a true and correct copy of the public version of Order No. 10 entered by the ITC Administrative Judge, issuing an Initial Determination granting the Amended Joint Motion and approving the Amended Consent Order Stipulation and Amended Proposed Consent Order. Attached as Exhibit C to this Complaint is a true and correct copy of the Consent Order issued by the ITC against Nano Digital.

JURISDICTION AND VENUE

- 12. The causes of action for patent infringement arise under the patent laws of the United States, 35 U.S.C. § 271. This Court has subject matter jurisdiction over the claims for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- This Court has personal jurisdiction of the Defendant at least because Defendant regularly conducts business in this judicial district, maintains its principal place of business in this judicial district, is incorporated under the laws of Oregon and resides in this judicial district, and has committed acts of direct and indirect patent infringement in this judicial district, including those complained of herein. Venue is proper in this district under 28 U.S.C. §§ 1391(b), (c) and 1400(b).
- 14. This Court has supplemental jurisdiction of Plaintiffs' claims for breach of contract pursuant to 28 U.S.C. § 1367. Plaintiffs' claims for breach of the Settlement Agreement are so related to and intertwined with Plaintiffs' claims for patent infringement as to constitute the same case and controversy between the parties. The breach of contract action arises directly out of the Settlement Agreement entered into between Plaintiffs and Defendant on June 12, 2015 to resolve claims of patent infringement, including claims of infringement in this district, and to

Commission Investigative Attorney.

Agreement provides that it "shall be construed and enforced under and in accordance with the laws of the United States and the State of Oregon" and that "[a]ny dispute arising between the parties related to the making or performance of th[e] Agreement shall be resolved by the United States District Court for the District of Oregon."

15. Venue is proper for the breach of contract claim in this district under 28 U.S.C. §§ 1391(b) and (c).

FIRST CLAIM FOR RELIEF

(Patent Infringement—35 U.S.C. § 271)

INFRINGEMENT OF U.S. PATENT NO. 6,502,917

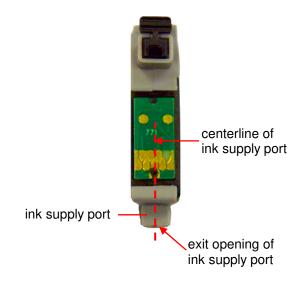
- 16. Epson incorporates by reference each and every allegation contained in Paragraphs 1 through 15 as though fully set forth at length here.
- 17. Epson owns all right, title, and interest in, including the right to sue thereon and the right to recover for infringement thereof, United States Patent No. 6,502,917, which was duly and legally issued to Seiko Epson by the United States Patent and Trademark Office on January 7, 2003. Attached as Exhibit D to this Complaint is a true and correct copy of the 6,502,917 patent. On February 3, 2009, reexamination certificate 6,502,917 C1 was duly and legally issued to Seiko Epson by the Unites States Patent and Trademark Office. Attached as Exhibit E to this Complaint is a true and correct copy of the reexamination certificate. The original patent and the reexamination certificate are collectively referred to herein as the "917 patent." The '917 patent relates generally to ink cartridges for printers.
 - 18. The '917 patent is valid and enforceable.

- 19. On information and belief after conducting a reasonable investigation, Nano Digital has infringed and is infringing the '917 patent, as defined by numerous claims of the patent in violation of 35 U.S.C. § 271(a) by making, using, importing, offering to sell, and selling in this judicial district and elsewhere aftermarket ink cartridges that operate with Epson ink jet printers, including but not limited to ink cartridges having model nos. T0441, T0442, T0443, T0444, T0481, T0482, T0483, T0484, T0485, T0486, T0541, T0542, T0543, T0544, T0546, T0547, T0548, T0549, T0601, T0602, T0603, T0604, T0691, T0692, T0693, T0694, T0771, T0772, T0773, T0774, T0775, T0776, T0781, T0781, T0782, T0782, T0783, T0784, T0785, T0786, T0791, T0792, T0793, T0794, T0795, T0796, T0870, T0871, T0872, T0873, T0874, T0877, T0878, T0879, T0881, T0882, T0883, T0884, T0981, T0991, T0992, T0993, T0994, T0995, T0996, T1241, T1242, T1243, T1244, T1251, T1252, T1253, T1254, T1261, T1261, T1262, T1263, T1264, T2001XL, T2002XL, T2003XL, T2004XL, T2521, T2522, T2523, and T2524, as well as others that are no more than colorably different from the foregoing (collectively, the "Accused '917 Ink Cartridges"). The specific models of Accused '917 Ink Cartridges identified above were obtained by Epson during its investigation leading to this Complaint. The Accused '917 Ink Cartridges were shipped by Nano Digital in packaging having or including with the shipment the "Nano Digital" and "ND" brand and logo identified above in paragraph 10. The "Nano Digital" and "ND" brand and logo also appear, in certain instances, on the ink cartridge label or on the instructions included with the ink cartridge.
- 20. As a non-limiting example, set forth below is a claim chart with a description of Nano Digital's infringement of exemplary claim 9 of the '917 patent by the Accused '917 Ink Cartridges:

Claim 9 of the '917 Patent	Where found in the Accused '917 Ink Cartridges
[9a] An ink cartridge for mounting on a carriage of an ink jet printing apparatus and for supplying ink to a printhead of said ink jet printing apparatus through an ink supply needle, the ink cartridge comprising:	Each of the Accused '917 Ink Cartridges is an ink cartridge for mounting on the carriage of an Epson ink jet printer (an ink jet printing apparatus). Defendant markets and sells the Accused '917 Ink Cartridges as being compatible with one or more specific Epson ink jet printers. When mounted, each of the Accused '917 Ink Cartridges supplies ink to the printhead of the ink jet printer through an ink supply needle of the printer (the needle, which is part of the carriage inside the ink jet printer and not part of the cartridge, has a passage that allows ink to pass from the ink cartridge through the needle). Accordingly, the Accused '917 Ink Cartridges literally meet the preamble of claim 9 of the '917 patent.
[9b] a plurality of external walls defining at least some of a chamber;	Each of the Accused '917 Ink Cartridges includes several external walls that define a chamber, and therefore also at least some of a chamber. These features are shown below using a representative Nano Digital ink cartridge from among the Accused '917 Ink Cartridges (Model No. T0771) (Control No. 7758 has been assigned to this cartridge by Epson for identification purposes) that, for infringement purposes, is representative of and represents all ink cartridges in the Accused '917 Ink Cartridges:
	external walls 7758
	Accordingly, the Accused '917 Ink Cartridges literally meet this limitation of claim 9 of the '917 patent.
[9c] an ink supply port for receiving said ink supply needle, the ink supply port having an exit opening	Each of the Accused '917 Ink Cartridges includes an ink- supply port (i.e., a structure with an opening for the movement of ink) in the bottom of the cartridge. The ink

and a centerline and communicating with the chamber;

supply port receives the ink-supply needle of the printer when the cartridge is mounted. The ink supply port is the conduit that allows the ink to leave the cartridge. Consequently, the ink supply port communicates with the chamber. The ink supply port also has a centerline and an exit opening at its end outside the cartridge. These features can be seen as shown below using the same representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758):



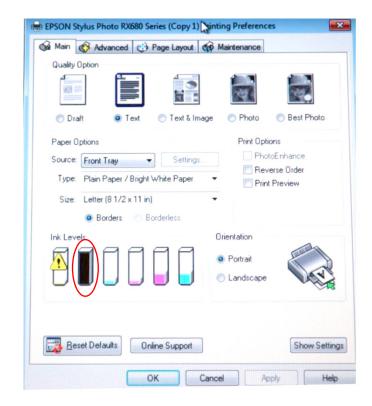
Accordingly, the Accused '917 Ink Cartridges literally meet this limitation of claim 9 of the '917 patent.

[9d] a semiconductor storage device storing information about the ink carried by said cartridge; and

Each of the Accused '917 Ink Cartridges includes a chip (a semiconductor storage device) on the back of a printed circuit board (the circuit board is mounted on the front wall of the ink cartridge). The chip stores information about the ink carried by the cartridge. Testing of the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758), designed for use in an Epson Stylus Photo RX 680 printer, confirms that the chip stores information about the ink, for example, the quantity of ink remaining in the ink cartridge. The following photographs show that the printer utility window on the computer (i.e., the computer to which the printer is connected) and the printer's on-board monitor displayed that the level of ink in the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758) had decremented after printing a number of pages.

In addition, after removing and reinstalling the ink cartridge into the printer, the computer's printer utility window and the printer's on-board monitor continued to display the same level of ink in the ink cartridge. This testing confirms that the chip on the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758) stores information about the ink carried by the cartridge, namely the amount of remaining ink.

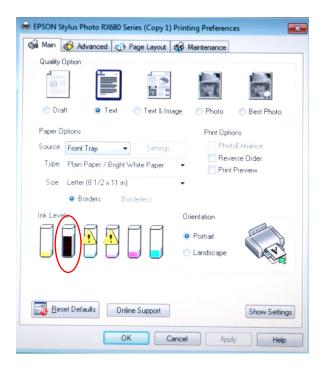
Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on computer's printer utility window before printing (showing full):



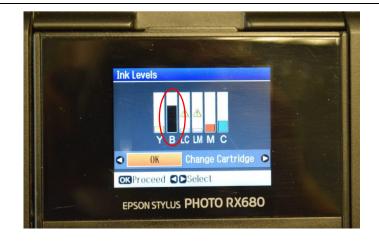
Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on printer's on-board monitor before printing (showing full):



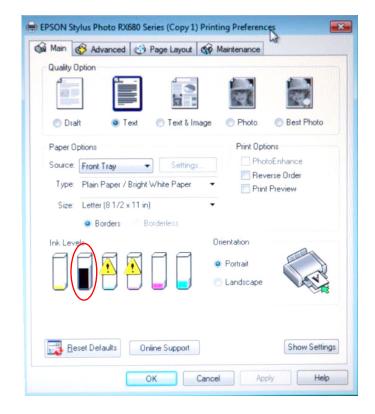
Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on computer's printer utility window after printing (showing partial depletion):



Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on printer's on-board monitor after printing (showing partial depletion):



Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on computer's printer utility window after the ink cartridge was removed from and reinstalled in the printer (showing the same level of partial depletion as before the ink cartridge was removed):



Ink level of the representative Nano Digital black-ink ink cartridge (Model No. T0771; Control No. 7758) shown on printer's on-board monitor after the ink cartridge was removed from and reinstalled in the printer (showing the

same level of partial depletion):



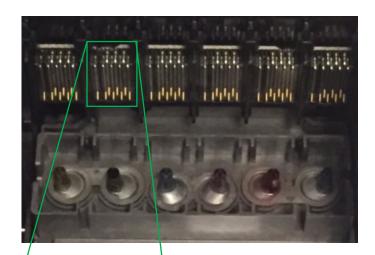
The testing of the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758) is applicable to each of the Accused '917 Ink Cartridges. Accordingly, the Accused '917 Ink Cartridges literally meet this limitation of claim 9 of the '917 patent.

[9e] a plurality of contacts for connecting said semiconductor storage device to the ink jet printing apparatus, the contacts being formed in a plurality of rows so that one of said rows is closer to said exit opening of said ink supply port than an other of said rows, the row of said contacts which is closest to said exit opening of said ink supply port being longer than the row of said contacts which is furthest from said exit opening of said ink supply port.

Each of the Accused '917 Ink Cartridges includes a plurality of contacts for connecting the chip (the semiconductor storage device) to the ink jet printer (ink jet printing apparatus). The testing described above with respect to the preceding limitation confirms that there is an electrical connection between the chip and the ink jet printer. The contacts are the discrete portions of conductive material on the cartridge that are present there to make an electrical connection between the cartridge and the printer (i.e., they contact the printer-side contact forming members when the cartridge is installed in the printer). The contacts allow communication between the chip and the printer through corresponding printer-side contact forming members. Every Epson ink jet printer has printer-side contact forming members, as seen, for example, in the Epson Stylus Photo RX 680 discussed with respect to the preceding limitation. The printer-side contact forming members are configured in two rows with one row above the other row. In addition, the lower row is longer than the upper row. When an ink cartridge from the Accused '917 Ink Cartridges is fully inserted into the printer and in an installed position, the printerside contact forming members come into contact and make an electrical connection with the cartridge contacts

(i.e., the discrete portions located on the larger pattern of electrically conductive material on the cartridge). The contacts are formed in two rows, one above the other. Consequently, the lower row is closer to the exit opening of the ink supply port than the upper row, and the lower row is longer than the upper row. The above described features are shown in the photos below.

Shown below are the printer-side contact forming members of an Epson Stylus Photo RX 680 printer, an exemplary printer with which the exemplary Nano Digital ink cartridge (Control No. 7758 works). The contact forming members are formed in two rows, one above the other, with the lower row of contact forming members longer than the upper row, as can be seen below:





Shown at left is an enlarged view of the printer-side contact forming members of the Epson Stylus Photo RX 680 printer that accepts the representative Nano Digital (black ink) ink cartridge (Model No. T0771; Control No. 7758). The printer-side contact forming members are arranged in two rows with the lower row (shown with a blue line) longer than the upper row (shown with a red line).

The contacts of the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758) are shown below. The contacts are located on the gold colored metallic conductive pattern seen below. To confirm the location and arrangement of the contacts, the conductive pattern was marked with black ink, the cartridge was installed in and then removed from the printer (which caused the printer's contact forming members to leave scratch marks on the conductive pattern thereby removing a portion of the black ink that was applied and therefore indicating the location of the contacts), and the conductive pattern was then photographed. For example, the conductive pattern of the representative Nano Digital ink cartridge (Model No. T0771; Control No. 7758) before marking with black ink is shown on the left and after marking with black ink is shown on the right:

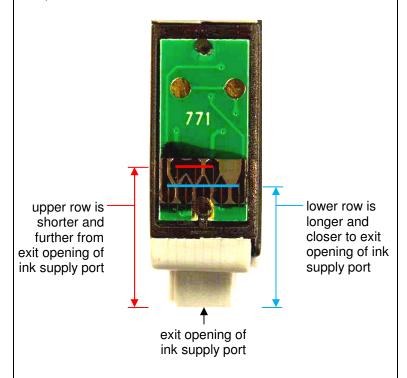




The resulting marks left by the printer's contact forming members on the conductive material of the ink cartridge show the arrangement of the contacts of the ink cartridge. These are shown below with red boxes (top row of contacts) and blue boxes (bottom of row of contacts).



As shown below, the lower row of contacts is longer and closer to the exit opening of the ink supply port (blue line) than the upper row of contacts, which is shorter and further from the exit opening of the ink supply port (red line):



Accordingly, the Accused '917 Ink Cartridges literally meet this limitation of claim 9 of the '917 patent.

- 21. On information and belief after conducting a reasonable investigation,
 Defendant has and is actively, knowingly and intentionally aiding and abetting and inducing
 infringement of the '917 patent in violation of 35 U.S.C. § 271(b) by non-parties, including endusers, despite Defendant's knowledge of the '917 patent, including through its participation in the
 337-TA-946 ITC Investigation, and its knowledge of the ITC's adjudication of validity and
 infringement of the '917 patent, as well as other Epson patents asserted in earlier ITC
 Investigations and the earlier Oregon District Court Actions.
- 22. On information and belief, Defendant is contributing to the infringement of the '917 patent in violation of 35 U.S.C. § 271(c) by non-parties by offering to sell or selling within the United States or importing into the United States components of the patented inventions set forth in the '917 patent. The components constitute a material part of the inventions. Defendant knows that such components are especially made or especially adapted for use in an infringement of the '917 patent. The components are not a staple article or commodity of commerce suitable for substantial noninfringing use.
- 23. By reason of Defendant's infringing activities, Epson has suffered, and will continue to suffer, substantial damages in an amount to be proven at trial.
- 24. Defendant's acts complained of herein have damaged and will continue to damage Epson irreparably. Epson has no adequate remedy at law for these wrongs and injuries. Epson is therefore entitled to a preliminary and permanent injunction restraining and enjoining Defendant and its agents, servants, and employees, and all persons acting thereunder, in concert with, or on their behalf, from infringing the claims of the '917 patent.
- 25. Defendant is not licensed or otherwise authorized to make, use, import, sell, or offer to sell any ink cartridge or process/method claimed in the '917 patent, and Defendant's

conduct is, in every instance, without Epson's consent.

26. On information and belief, Defendant's infringement has been and continues to be willful.

SECOND CLAIM FOR RELIEF

(Patent Infringement—35 U.S.C. § 271)

INFRINGEMENT OF U.S. PATENT NO. 8,794,749

- 27. Epson incorporates by reference each and every allegation contained in Paragraphs 1 through 15 as though fully set forth at length here.
- Epson owns all right, title, and interest in, including the right to sue thereon and the right to recover for infringement thereof, United States Patent No. 8,794,749 (the "'749 patent"), which was duly and legally issued to Seiko Epson by the United States Patent and Trademark Office on August 5, 2014. The '749 patent relates generally to ink cartridges for printers. Attached as Exhibit F to this Complaint is a true and correct copy of the '749 patent.
 - 29. The '749 patent is valid and enforceable.
- 30. On information and belief after conducting a reasonable investigation, Nano Digital has infringed and is infringing the '749 patent, as defined by numerous claims of the patent in violation of 35 U.S.C. § 271(a) by making, using, importing, offering to sell, and selling in this judicial district and elsewhere aftermarket ink cartridges that operate with Epson ink jet printers, including but not limited to ink cartridges having model nos. T0541, T0542, T0543, T0544, T0546, T0547, T0548, T0549, T0691, T0692, T0693, T0694, T0771, T0772, T0773, T0774, T0775, T0776, T0781, T0781, T0782, T0782, T0783, T0784, T0785, T0786, T0791, T0792, T0793, T0794, T0795, T0796, T0870, T0871, T0872, T0873, T0874, T0877, T0878, T0879, T0881, T0882, T0883, T0884, T0981, T0991, T0992, T0993, T0994, T0995, T0996,

T1241, T1242, T1243, T1244, T1251, T1252, T1253, T1254, T1261, T1261, T1262, T1263, T1264, T2001XL, T2002XL, T2003XL, T2004XL, T2521, T2522, T2523, T2524, T273XL Series, T273XL020, T273XL120, T273XL220, T273XL320, T273XL420, T277XL Series, T676XL1, T676XL2, T676XL3, and T676XL4, as well as others that are no more than colorably different from the foregoing (collectively, the "Accused '749 Ink Cartridges"). The specific models of Accused '749 Ink Cartridges identified above were obtained by Epson during its investigation leading to this Complaint. The Accused '749 Ink Cartridges were shipped by Nano Digital in packaging having or including with the shipment the "Nano Digital" and "ND" brand and logo identified above in paragraph 10. The "Nano Digital" and "ND" brand and logo also appear, in certain instances, on the ink cartridge label or on the instructions included with the ink cartridge.

31. As a non-limiting example, set forth below is a claim chart with a description of Nano Digital's infringement of exemplary claim 1 of the '749 patent by the Accused '749 Ink Cartridges:

Claim 1 of the '749 Patent	Where found in the Accused '749 Ink Cartridges
[1a] A printing material container adapted to be attached to a printing apparatus by being inserted into the printing apparatus in an insertion direction, the printing apparatus having a print head and a plurality of apparatus-side electrical contact members, the printing material container comprising:	Each of the Accused '749 Ink Cartridges is a printing material container (an ink cartridge) adapted to be attached to an Epson ink jet printing apparatus. Each of the Accused '749 Ink Cartridges is inserted, in an insertion direction, into an Epson ink jet printer. All Epson ink jet printers that accept the Accused '749 Ink Cartridges have a print head and a plurality of printerside (apparatus-side) electrical contact members.
container comprising.	These features are shown below using a representative Nano Digital ink cartridge from among the Accused '749 Ink Cartridges (Model No. T1261) (Control No. 7805 has been assigned to this cartridge by Epson for identification purposes) that, for purposes of infringement, is representative of and represents all ink cartridges in the

Accused '749 Ink Cartridges.

The representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805) is adapted to be attached to an Epson WorkForce WF-3520 ink jet printer by being inserted in an insertion direction, as shown in the following photographs:

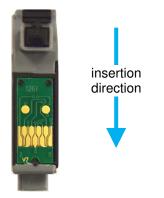


Nano Digital ink cartridge, Model No. T1261, Control No. 7805



Epson WorkForce WF-3520 ink jet printer

The following photograph depicts the insertion direction (blue arrow) in which the Nano Digital ink cartridge (Model No. T1261; Control No. 7805) is inserted into the Epson WorkForce WF-3520 ink jet printer:

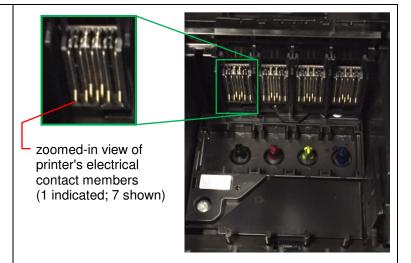


The following photograph shows the Nano Digital ink cartridge (Model No. T1261; Control No. 7805), a black-ink cartridge, attached in the Epson WorkForce WF-3520 ink jet printer after the cartridge has been inserted into the printer in the insertion direction (the magenta, yellow and cyan cartridges, genuine Epson cartridges used to fill the remaining slots of the cartridge holder, can also be seen):

Nano Digital ink cartridge (Model No. T1261; Control No. 7805) installed in the Epson printer



The Epson ink jet printers that accept the Accused '749 Ink Cartridges each include a print head for printing and multiple printer-side electrical contact members for each ink cartridge accepted by the printer. These features are shown below for the printer's cartridge holder slot that accepts the representative Nano Digital black-ink ink cartridge (Model No. T1261; Control No. 7805) (the printer's electrical contact members for the magenta, yellow, and cyan cartridges can also be seen in the right photo):



Accordingly, the Accused '749 Ink Cartridges literally meet the preamble of claim 1 of the '749 patent.

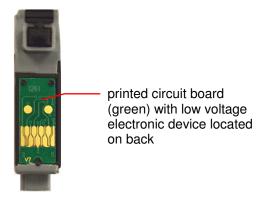
[1b] an ink supply opening, having an exit, adapted to supply ink from the ink cartridge to the printing apparatus; Each of the Accused '749 Ink Cartridges comprises an ink supply opening having an exit. When attached, the ink supply opening of each of the Accused '749 Ink Cartridges is adapted to supply ink from the cartridge to the Epson ink jet printer that accepts the cartridge. The following photograph depicts the exit of the ink supply opening of the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805):



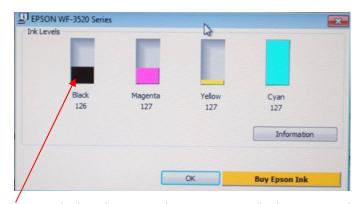
exit of ink supply opening (shown here with anti-leak film undisturbed and in place)

Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent.

[1c] a low voltage electronic device adapted to receive and function with a low voltage, the low voltage electronic device comprising a memory device; Each of the Accused '749 Ink Cartridges comprises a low voltage electronic device that comprises a memory device adapted to receive and function with a low voltage. The low voltage electronic device is an integrated circuit ("IC") chip located on the back of a printed circuit board that is mounted on a wall of the ink cartridge, as shown below in the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805):



In addition, the presence of a low voltage electronic device (i.e., an IC chip comprising a memory device) is further confirmed through testing demonstrating that the Epson ink jet printers that accept the Accused '749 Ink Cartridges read the remaining ink level and other descriptive information about the ink cartridge from the ink cartridge's memory device, and display that information on the display screen of a connected computer and on the printer's display screen. The following photographs show the display of such information on the computer display screen and the printer's display screen for the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805) containing black ink, attached to an Epson WorkForce WF-3520 ink jet printer:



memory device shows, on the computer's display screen, the amount of black ink remaining in the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805)



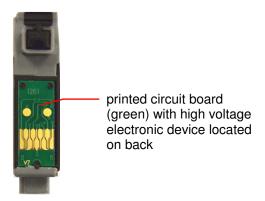
memory device shows, on the printer's display screen, the amount of black ink remaining in the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805)

All Epson ink jet printers that accept the Accused '749 Ink Cartridges have similar circuitry and programming in terms of the voltages and signals they apply to their contact forming members and, consequently, to the corresponding contact portions of the Accused '749 Ink Cartridges (the contact portions are located on the goldcolored metallic terminals of the ink cartridge shown above). In particular, Epson printers apply a maximum voltage of approximately 4 volts (a low voltage as compared to the high voltage discussed in the next limitation) to certain of their contact forming members that in turn correspond to certain of the contact portions of the Accused '749 Ink Cartridges that are connected to the low voltage electronic device comprising a memory device. Consequently, the low voltage electronic device is adapted to receive and function with a low voltage.

Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent.

[1d] a high voltage electronic device adapted to receive and function with a high voltage, which is a higher voltage than the low voltage of the low voltage electronic device; and Each of the Accused '749 Ink Cartridges comprises a high voltage electronic device that is adapted to receive and function with a voltage that is a higher voltage than the voltage of the low voltage electronic device. The high voltage electronic device may be, for example, a resistor, or one or more other coupled electronic components, that is/are capable of receiving and functioning with a high voltage. The high voltage electronic device is located on the back of a printed circuit board that is mounted on a wall of the ink cartridge, as shown below in the

representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805):



All Epson ink jet printers that accept the Accused '749 Ink Cartridges have similar circuitry and programming in terms of the voltages and signals they apply to their contact forming members and, consequently, to the corresponding contact portions of the Accused '749 Ink Cartridges (the contact portions are located on the gold terminals of the ink cartridge shown above). In particular, Epson printers apply a voltage of approximately 42 volts (a high voltage as compared to the low voltage of approximately 4 volts applied to the low voltage electronic device discussed in the preceding limitation) to two of their contact forming members that in turn correspond to two of the contact portions of the Accused '749 Ink Cartridges that are connected to the high voltage electronic device. Consequently, the high voltage electronic device is adapted to receive and function with a high voltage.

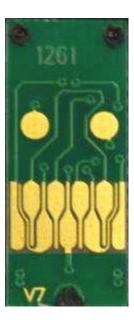
Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent.

[1e] a plurality of container-side terminals having contact portions adapted and positioned to contact corresponding apparatus-side contact forming members so that electrical communication is enabled between the container and the printing apparatus, the contact portions of the terminals including a plurality of low

Each of the Accused '749 Ink Cartridges comprises a plurality of container-side terminals that have contact portions. The contact portions are adapted and positioned on the cartridge so that, when the cartridge is attached to the printer, the contact portions of the cartridge's terminals contact corresponding printer-side contact forming members so that electrical communication is enabled between the cartridge and the printer.

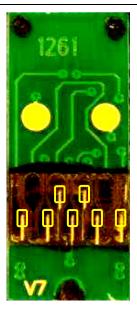
voltage electronic device contact portions electrically coupled to the low voltage electronic device, and a first high voltage electronic device contact portion and a second high voltage electronic device contact portion, each electrically coupled to the high voltage electronic device, wherein:

As seen with respect to limitation 1c above, the terminals of the Accused '749 Ink Cartridges are the gold colored metallic portions on the green printed circuit board. The contact portions are located on these gold colored metallic portions. To confirm the location and arrangement of the terminals' contact portions, the terminals were marked with black ink, the cartridge was installed in and then removed from the printer (which caused the printers' contact forming members to leave scratch marks on the terminals thereby removing a portion of the black ink that was applied and therefore indicating the location of the contact portions), and the terminals were then photographed. For example, the terminals of the representative Nano Digital ink cartridge (Model No. T1261; Control No. 7805) before marking with black ink is shown on the left and after marking with black ink is shown on the right:



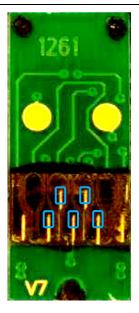


The resulting marks left by the printer's contact forming members on the terminals show the location and arrangement of the contact portions. These are indicated below with annotated yellow boxes superimposed on the terminals to indicate the location of the contact portions (there are a total of seven contact portions, with two contact portions in a top row and five contact portions in a bottom row):

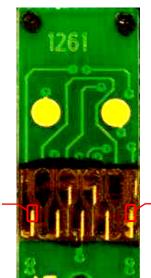


The contact portions shown above correspond to their printer-side contact forming members so that electrical communication is enabled between the ink cartridge and the printer, e.g., so the printer can read remaining ink level and other information from the memory device as described above with respect to limitation 1c.

The above shown contact portions include a plurality of low voltage electronic device contact portions that are electrically coupled to the low voltage electronic device (specifically, the IC chip comprising a memory device). Each low voltage electronic device contact portion is electrically coupled by the terminal it appears on and by other circuitry to the memory device located on the back of the green printed circuit board. The following photograph shows the low voltage electronic device contact portions (there are five such low voltage electronic device contact portions, as indicated by superimposed blue boxes):



The contact portions of the Accused '749 Ink Cartridges' terminals also include first and second high voltage electronic device contact portions that are each electrically coupled to the high voltage electronic device discussed above with respect to limitation 1d. Each high voltage electronic device contact portion is electrically coupled by the terminal it appears on and by other circuitry to the high voltage electronic device on the back of the printed circuit board. The following photograph shows the high voltage electronic device contact portions (there are two such high voltage electronic device contact portions, as indicated by superimposed red boxes):

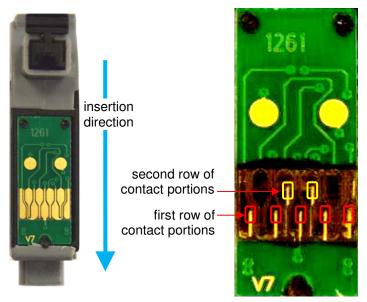


second high voltage electronic device contact portion first high voltage electronic device contact portion

Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent. [1f] the contact portions are The contact portions of each of the Accused '749 Ink arranged in a first row of contact Cartridges are arranged in a first row of contact portions portions and in a second row of and in a second row of contact portions that both extend contact portions, the first row of in a row direction which is generally orthogonal to the contact portions and the second row insertion direction. The following photographs of the of contact portions extending in a representative Nano Digital ink cartridge (Model No. row direction which is generally T1261; Control No. 7805) show the first row and second orthogonal to the insertion direction, row of contact portions extending in a row direction which is generally orthogonal to the insertion direction in which the Accused '749 Ink Cartridges are inserted into Epson ink jet printers that accept the Accused '749 Ink Cartridges. The right photo shows an enlarged and annotated view of the printed circuit board shown in the left photo. insertion direction 90° first row of contact portions (red squares) and second row of contact portions (yellow squares), each extending in a row direction (green arrows) orthogonal to cartridge insertion direction (blue arrow) Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent. [1g] the first row of contact portions In each of the Accused '749 Ink Cartridges, the first row is disposed at a location that is of contact portions is disposed at a location that is further further in the insertion direction than in the insertion direction than the second row of contact

the second row of contact portions, and,

portions. The following photographs show the first row of contact portions (red boxes) disposed at a location that is further in the cartridge insertion direction than the second row of contact portions (yellow boxes) (i.e., the first row is deeper in the printer than the second row).



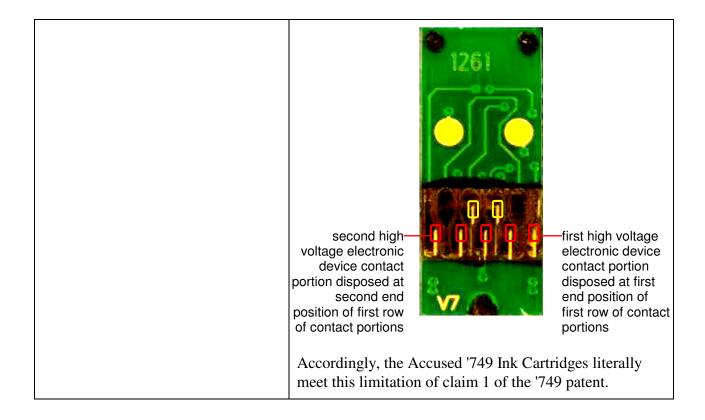
first row of contact portions (red squares) disposed further in insertion direction (blue arrow) than second row of contact portions (yellow squares)

Accordingly, the Accused '749 Ink Cartridges literally meet this limitation of claim 1 of the '749 patent.

[1h] the first row of contact portions has a first end position and a second end position at opposite ends thereof, the first high voltage electronic device contact portion is disposed at the first end position of the first row of contact portions and the second high voltage electronic device contact portion is disposed at the second end position of the first row of contact portions.

In each of the Accused '749 Ink Cartridges, the first row of contact portions has a first end position and a second end position at opposite ends thereof, the first high voltage electronic device contact portion is disposed at the first end position of the first row of contact portions, and the second high voltage electronic device contact portion is disposed at the second end position of the first row of contact portions.

The following photograph shows the first and second high voltage contact portions disposed, respectively, at the first and second end positions at opposite ends of the first row of contact portions.



- 32. On information and belief, Defendant has and is actively, knowingly and intentionally aiding and abetting and inducing infringement of the '749 patent by non-parties in violation of U.S.C. § 271(b), including end-users, despite Defendant's knowledge of the '749 patent, including through its participation in the 337-TA-946 ITC Investigation, and its knowledge of the ITC's adjudication of validity and infringement of the '749 patent, as well as other Epson patents asserted in earlier ITC Investigations and the earlier Oregon District Court Actions.
- 33. On information and belief, Defendant is contributing to the infringement of the '749 patent in violation of 35 U.S.C. § 271(c) by non-parties by offering to sell or selling within the United States or importing into the United States components of the patented inventions set forth in the '749 patent. The components constitute a material part of the inventions. Defendant knows that such components are especially made or especially adapted for use in an infringement

of the '749 patent. The components are not a staple article or commodity of commerce suitable for substantial noninfringing use.

- 34. By reason of Defendant's infringing activities, Epson has suffered, and will continue to suffer, substantial damages in an amount to be proven at trial.
- 35. Defendant's acts complained of herein have damaged and will continue to damage Epson irreparably. Epson has no adequate remedy at law for these wrongs and injuries. Epson is therefore entitled to a preliminary and permanent injunction restraining and enjoining Defendant and its agents, servants, and employees, and all persons acting thereunder, in concert with, or on their behalf, from infringing the claims of the '749 patent.
- 36. Defendant is not licensed or otherwise authorized to make, use, import, sell, or offer to sell any ink cartridge or process/method claimed in the '749 patent, and Defendant's conduct is, in every instance, without Epson's consent.
- 37. On information and belief, Defendant's infringement has been and continues to be willful.

THIRD CLAIM FOR RELIEF

BREACH OF CONTRACT

- 38. Epson incorporates by reference each and every allegation contained in Paragraphs 1 through 15 as though fully set forth at length here.
- 39. The Settlement Agreement between Epson and Nano Digital established a contractual relationship between Epson and Nano Digital with respect to the '917 and '749 patents, as well as other patents. A true and correct copy of the public version of the Settlement Agreement is included as Exhibit 1 to the Amended Joint Motion attached to this Complaint as Exhibit A (see paragraph 11).

- 40. Nano Digital has been, and is, in breach of the Settlement Agreement.
- 41. Nano Digital's actions have resulted in damage to Epson.

PRAYER FOR RELIEF

WHEREFORE, Epson prays for judgment against Defendant as follows:

- A. That the Epson Patents are valid and enforceable;
- B. That Defendant has infringed and is infringing the Epson Patents;
- C. That such infringement is willful;
- D. That Defendant and its subsidiaries, affiliates, parents, successors, assigns, officers, agents, representatives, servants, and employees, and all persons in active concert or participation with it, be preliminarily and permanently enjoined from continued infringement of the Epson Patents;
- E. That Defendant be ordered to pay Epson its damages caused by Defendant's infringement of the Epson Patents and that such damages be trebled, together with interest thereon;
- F. That this case be declared exceptional pursuant to 35 U.S.C. § 285 and that Epson be awarded its reasonable attorneys' fees, litigation expenses and expert witness fees, and costs;
 - G. That Nano Digital has been, and is, in breach of the Settlement Agreement;
- H. That Nano Digital be ordered to pay Epson its damages caused by Nano Digital's breach of the Settlement Agreement, including attorneys fees; and
 - I. That Epson have such other and further relief as the Court deems just and proper.

JURY TRIAL DEMAND

Pursuant to Fed. R. Civ. P. 38(b), Plaintiffs request a trial by jury of all issues so triable.

DATED: November 22, 2016 SCHWABE, WILLIAMSON & WYATT, P.C.

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