IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

MINELAB ELECTRONICS PTY LTD,	)	Civil Action
	)	
Plaintiff,	)	No. 3:22-cv-211
	)	
v.	)	
	)	
NOKTA MAKRO DETECTORS and AMERICAN DETECTOR DISTRIBUTORS,	)	***Electronically Filed***
	)	
	)	**JURY TRIAL DEMANDED**
	)	
Defendants.	)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Minelab Electronics Pty Ltd ("Minelab"), through its counsel, hereby alleges the following for its Complaint against Defendants, Nokta Makro Detectors ("Nokta") and American Detector Distributors ("American Detector"):

1. This is a civil action under 35 U.S.C. § 271, *et seq*., by Minelab against Nokta and American Detector for the infringement of United States Patent No. 7,579,839 entitled "Metal Detector" ("the '839 patent"). American Detector and Nokta each has improperly made, used, sold, offered to sell and/or imported, and, on information and belief, induced others to use, sell, and/or offer to sell in the United States infringing metal detectors, including at least the "Legend" metal detector, in violation of Minelab's patent rights.

PARTIES

2. Minelab is an Australian company having a principal place of business at Technology Park, 2 Second Avenue, Mawson Lakes, SA 5095, Australia.

3. Upon information and belief, Nokta is a Turkish entity having a place of business at Emek Mah. Sakiz Sok. No:4/1, Sancaktepe 34785, Istanbul, Turkey.

4. American Detector is a Texas limited liability company having a place of business at 6500 Iron Horse Boulevard, North Richland Hills, Texas 76180.

JURISDICTION AND VENUE

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a) because this is an action for patent infringement arising under the laws of the United States, 35 U.S.C. § 1 *et seq*., and more particularly, 35 U.S.C. §§ 271 and 281.

6. This Court has personal jurisdiction over American Detector and Nokta because American Detector and Nokta are each subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Pennsylvania Long Arm Statute. American Detector, Nokta, or their agents have, on information and belief, transacted business in Pennsylvania by selling products, including the infringing "Legend" metal detector, to customers in Pennsylvania; on information and belief, caused tortious injury in Pennsylvania by intentionally shipping the infringing "Legend" metal detector into Pennsylvania; and/or placed the infringing "Legend" metal detector into the stream of commerce with an intent to serve the Pennsylvania market by marketing and selling the "Legend" metal detector in the United States without intending to exclude Pennsylvania, including by selling the "Legend" metal detector through dealers located in Pennsylvania and in this judicial district, through which consumers, including in Pennsylvania, can purchase the "Legend" metal detector. The exercise of personal jurisdiction comports with due process because, as described above, American Detector and Nokta each has purposefully availed itself of the privilege of conducting activities within Pennsylvania such that the assertion of personal jurisdiction is reasonable and fair.

7. Nokta has, upon information and belief, sold and offered for sale the "Legend" metal detector to its United States distributors, including at least American Detector, knowing

that this product will then be sold and offered for sale to customers throughout the United States, including in this judicial district. Nokta has directed customers to purchase infringing products in this state and in this judicial district by providing, on its website (www.noktadectors.com), a listing ("Where to Buy?") of locations to purchase its products, including the "Legend" metal detector. This listing of locations includes, *inter alia*, Fort Bedford Metal Detectors, located at 190 Oak Shade Road, Alum Bank, PA 15521, which is in this judicial district. The website for Fort Bedford Metal Detectors (fortbedfordmetaldetectors.com), a link to which is provided on the Nokta website, includes a product listing for Nokta's infringing "Legend" metal detector and provides an option to purchase this product through the website.

8. American Detector has, upon information and belief, sold and offered for sale the "Legend" metal detector within this state and judicial district and/or has shipped the "Legend" metal detector to customers located in this state and judicial district. For example, American Detector sells, offers for sale, and ships products to a network of dealers located throughout the United States, including in this judicial district. American Detector's website (detectornet.com) provides a "Dealer Locator" webpage which sets forth the "American Detectors Dealer Network." This webpage instructs the public to "[v]isit one of these dealers for great deals and service." This "Dealer Locator" identifies, *inter alia*, Fort Bedford Metal Detectors, located at 190 Oak Shade Road, Alum Bank, PA 15521, which is in this judicial district. The website for Fort Bedford Metal Detectors (fortbedfordmetaldetectors.com), a link to which is provided on the American Detectors "Dealer Locator" webpage, includes a product listing for Nokta's infringing "Legend" metal detector and provides an option to purchase this product through the website.

9. Venue is proper with respect to Nokta under 28 U.S.C. § 1391(c)(3). Nokta is a foreign entity that is not resident in the United States. As such, Nokta may be sued in any judicial district.

10. Venue is proper with respect to American Detector under 28 U.S.C. §§ 1391(b) and 1400(b). Upon information and belief, American Detector has a regular and established place of business in this judicial district at least through its relationship with its network of dealers, at least one of which is located in this judicial district.

THE PATENT-IN-SUIT

11. On August 25, 2009, U.S. Patent No. 7,579,839, entitled "Metal Detector," ("the '839 patent") was duly and legally issued by the United States Patent and Trademark Office. A true and accurate copy of the '839 patent is attached hereto as Exhibit A.

12. The '839 patent generally describes a metal detector including a magnetic transmitter and a receiver, wherein the receiver includes approximate sine-wave weighted synchronous demodulation and a switched voltage signal is applied to the magnetic transmitter and the said receiver approximate sine wave weighted synchronous demodulation is selected to receive synchronously with the switched voltage signal, such that the switched voltage signal and the receiver approximate sine-wave weighted synchronous demodulation may be altered by means of operator selection.

DEFENDANTS' KNOWLEDGE OF THE PATENT-IN-SUIT

13. By letters dated September 15, 2022, Nokta and American Detector were each put on direct notice that the Legend infringed at least claim 1 of the '839 patent.

14. Minelab sells multiple metal detectors in the United States including the Equinox 600 and Equinox 800. These products include a marking directing the public to the Minelab

website for a list of applicable patents. The Minelab website indicates that these products and the use thereof are protected by the '839 patent.

15. Nokta and American Detector each had knowledge of the '839 patent and their infringement before the filing of this action. Nokta and American Detector each had direct knowledge of the '839 patent and the infringement at least since receiving actual notice of infringement from Minelab. In addition, Nokta and American Detector each had constructive knowledge of the '839 patent since Minelab began marking its website with the '839 patent number. Through a reasonable investigation into the competing Minelab products, Nokta and American Detector would have discovered the existence of the '839 patent and their infringement thereof.

CAUSE OF ACTION: PATENT INFRINGEMENT IN VIOLATION OF 35 U.S.C. § 271

16. Minelab repeats and re-alleges the averments contained in paragraphs 1 through 15 of this Complaint as if fully stated herein.

17. Minelab is the owner, by assignment, of the '839 patent. Minelab owns all substantial right, title, and interest in and to the '839 patent, including the sole and exclusive right to prosecute this action and enforce the '839 patent against infringers, and to collect damages for all relevant times.

18. Without Minelab's authorization, Nokta is making, using, importing, selling and/or offering to sell the "Legend" metal detector in the United States, which acts constitute direct infringement of at least claim 1 of the '839 patent in violation of 35 U.S.C. § 271(a). In addition, Nokta is inducing others to use, sell, and/or offer to sell the "Legend" metal detector in the United States, which acts constitute indirect infringement of at least claim 1 of the '839 patent in violation of 35 U.S.C. § 271(b).

19. Without Minelab's authorization, American Detector is selling and offering to sell the Nokta "Legend" metal detector in the United States, which acts constitute infringement of at least claim 1 of the '839 patent in violation of 35 U.S.C. § 271(a). In addition, American Detector is inducing others to use, sell, and/or offer to sell the "Legend" metal detector in the United States, which acts constitute indirect infringement of at least claim 1 of the '839 patent in violation of 35 U.S.C. § 271(b).

20. Independent claim 1 of the `839 patent reads as follows:

> 1. A metal detector used for detecting a metallic target in a soil including:
>
> a. transmit electronics having a plurality of switches to generate a switched voltage signal, the waveform of the switched voltage signal being one of predetermined repeating multi-period rectangular waveforms;
>
> b. a transmit coil connected to the transmit electronics to receive the switched voltage signal and to generate a transmitted magnetic field for transmission;
>
> c. a receive coil to receive a received magnetic field and to provide a received signal induced by the received magnetic field; and
>
> d. receive electronics connected to the receive coil to process the received signal, the processing including a synchronous demodulation of the received signal using one of predetermined substantially sine-wave weighted synchronous demodulation profiles associated with a corresponding predetermined repeating multi-period rectangular waveform; the profiles being selectable by an operator; and a result of the synchronous demodulation is further processed to provide an indicator output signal in real time, the indicator output signal including a signal indicative of the presence of a metallic target in the soil.

21. The Legend is a metal detector used for detecting a metallic target in a soil. Nokta's brochure for the Legend describes the product as follows: "Nokta Makro's first simultaneous multi frequency metal detector **The LEGEND** is loaded with features that makes it the best multi-purpose detector, adaptable for all types of targets and ground conditions." The user manual for the Legend sets forth that targets may be metallic, e.g., "copper, silver, aluminum and lead," a "gold target" that are buried.

22. The Legend has transmit electronics including a Dual N-Channel MOSFET IC including two MOSFET switches that generate a transmit signal, in the form of a switched voltage signal, to the coil. The switched voltage signals at the output of the coil are predetermined for different "Search Modes" of the Legend designed for different terrains and targets, namely "Park" and "Beach," and, at any time, only one of these switched voltage signals is used. The MOSFET switches of the Legend are thus used to "generate a switched voltage signal, the waveform of the switched voltage signal being one of predetermined repeating multi-period rectangular waveforms."

23. The Legend has a transmit coil that receives one of the switched voltage signals from the Dual N-Channel MOSFET IC, and generates therefrom a transmitted magnetic field for transmission.

24. The Legend has a receive coil that receives a received magnetic field from, *inter alia*, the ground and/or a target under interrogation by the transmitted magnetic field. In response to the receive coil receiving the received magnetic field, the receive coil provides a received signal induced (in the receive coil) by the received magnetic field.

25. "Synchronous demodulation of the received signal" is used to recover information from a modulated signal received by the receive coil by mixing the modulated receive signal with signals of the same frequency as that of one or more un-modulated carriers. Metal detection targets produce different responses at different frequencies such that each target modulates one or more frequencies received by the target from the transmit coil in a manner unique to the target and outputs these modulated one or more frequencies which are received, as a received signal, by the receive coil. The received signal is then demodulated by the receive electronics of the Legend thereby enabling the Legend to provide to a user information regarding the target.

26. The Legend performs synchronous demodulation of the received signal. In particular, the Legend is a metal detector with target identification and discrimination, i.e. it can differentiate different targets. The Legend determines characteristics of eddy currents induced in the target on a given frequency or on given frequencies. Such eddy currents induced in a target produce the received signal, in the nature of one or more corresponding magnetic fields, that can be received and detected by the receive coil and converted by the receive coil into one or more corresponding voltages which are processed by the receive electronics of the Legend thereby enabling the Legend to provide to a user information regarding the target.

27. In determining the characteristics of the eddy currents induced in the target, the Legend decomposes the received signal. Synchronous demodulation is an implementation of such decomposition.

28. The Legend uses sine-wave weighted synchronous demodulation and the selected sine-waves are dependent on the profiles (*i.e.* "Park" and "Beach" modes). The different mode settings of the Legend ("Park" and "Beach" modes) have different levels of sensitivity to these sinusoidal signals of different frequencies.

29. The transmission by the Legend of a magnetic field via the transmission coil to a target affects the magnetic field (i.e., the received signal) received from the target by the receive coil. The modes "Park" and "Beach" have different transmit profiles and, thus different corresponding, predetermined demodulation profiles, with selected frequencies and/or weights.

30. An operator of the Legend can change the modes and hence the profiles that are used ("Search Modes", e.g., "Park" and "Beach").

31. The Legend produces real time audio (an output signal) for metallic targets. The volume and the frequency of the audio alert emitted when a target is detected is updated in real

time based on characteristics of the demodulated received signal enabling the users to easily identify targets by audio. The Legend also has a screen that can display real-time target depth during detection.

32. Nokta has actively, knowingly, and intentionally been and continues to induce infringement of the '839 patent by selling the "Legend" metal detector to customers, including its United States distributor(s), for subsequent resale to and use by United States customers. Nokta has, for example, provided the "Legend" metal detector to its United States distributors, including American Detector, knowing that such products will be sold and used in the United States and knowing that the sale and use in the United States will infringe the '839 patent. Nokta has also, for example, informed the public where to purchase Nokta products, including the "Legend" metal detector, in the United States, through the "Where to Buy?" feature on its website with knowledge that such purchase and subsequent use in the United States will constitute direct infringement of one or more claims of the '839 patent. Despite such knowledge, Nokta continues to induce distributors, end users, and others, to sell and use the "Legend" metal detector in the United States.

33. American Detector has actively, knowingly, and intentionally been and continues to induce infringement of the '839 patent by selling the "Legend" metal detector to customers, including its United States dealers, for subsequent resale to and use by United States customers. American Detector has, for example, provided the "Legend" metal detector to its United States dealers knowing that such products will be sold and used in the United States and knowing that the sale and use in the United States will infringe the '839 patent. American Detector has also, for example, informed the public where to purchase Nokta products, including the "Legend" metal detector, in the United States, through the "Dealer Locator" feature on its website with

knowledge that such purchase and subsequent use in the United States will constitute direct infringement of one or more claims of the '839 patent. Despite such knowledge, American Detector continues to induce dealers, end users, and others, to sell and use the "Legend" metal detector in the United States.

34. The activities of each of Nokta and American Detector in infringing the '839 patent are willful and wanton, constituting willful infringement of such United States Patent under 35 U.S.C. § 284. As noted above, Nokta and American Detector have each had knowledge of the '839 patent and their infringement and/or were willfully blind to their infringement and yet have deliberately continued to infringe.

35. Minelab has been irreparably damaged and will continue to be irreparably damaged by reason of Nokta's and American Detector's infringement of the '839 patent unless this Court restrains the infringing acts of Nokta and American Detector. Minelab is without an adequate remedy at law.

36. Minelab has satisfied its marking obligations under 35 U.S.C. § 287(a) with respect to the '839 patent.

DEMAND FOR JUDGMENT

WHEREFORE, Minelab demands judgement as follows:

A. that Nokta and American Detector, their officers, employees, agents, and those persons in active participation with them be permanently enjoined from infringing United States Patent No. 7,579,839;

B. that a decree be entered adjudging that Nokta and American Detector directly and indirectly (through inducement) infringed United States Patent No. 7,579,839 and that such infringement was willful;

C. that Nokta and American Detector be ordered to pay damages to Minelab pursuant to 35 U.S.C. § 284, including interest from the dates of infringement, resulting from Nokta's and American Detector's infringement of United States Patent No. 7,579,839;

D. that Nokta and American Detector be ordered to pay to Minelab treble damages pursuant to 35 U.S.C. § 284, resulting from Nokta's and American Detector's willful infringement of United States Patent No. 7,579,839;

E. that Minelab be awarded its costs of this action and reasonable attorneys' fees pursuant to 35 U.S.C. § 284 and 285; and

F. that Minelab be awarded such further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Minelab hereby demands a trial by jury for all issues triable by a jury.

Respectfully submitted,

THE WEBB LAW FIRM

Dated: November 16, 2022

s/ *Kent E. Baldauf, Jr.*
Kent E. Baldauf, Jr. (PA ID No. 70793)
Bryan P. Clark (PA ID No. 205708)

One Gateway Center
420 Ft. Duquesne Blvd., Suite 1200
Pittsburgh, PA 15222
412.471.8815
412.471.4094 (fax)
kbaldaufjr@webblaw.com
bclark@webblaw.com

Attorneys for Plaintiff