UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF OHIO EASTERN DIVISION

HYTERA COMMUNICATIONS CORP. LTD.) CASE NO. 1:17-cv-01794-DCN
EID.) Honorable Donald C. Nugent
Plaintiff,)
) Magistrate Judge William H. Baughman, Jr.
VS.	
) SECOND AMENDED COMPLAINT FOR
MOTOROLA SOLUTIONS INC.,) PATENT INFRINGEMENT
)
Defendant.) REDACTED
	(Jury Demand)

Plaintiff Hytera Communications Corp. Ltd. ("Hytera") alleges as follows against Defendant Motorola Solutions, Inc. ("Motorola"). The allegations herein are made based on personal knowledge as to Hytera with respect to its own actions and upon information and belief as to all others.

NATURE OF THE ACTION

1. This is a civil action for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 1 et seq. and for such other relief as the Court deems just and proper.

THE PARTIES

- 2. Hytera is a company organized and existing under the laws of the People's Republic of China, with its principal place of business at Hytera Tower, Hi-Tech Industrial Park North #9108 Beihuan Road, Nanshan District, Shenzhen, People's Republic of China. Hytera sells its products in Ohio and in this District through its wholly-owned subsidiary Hytera America (West), Inc. Through this wholly-owned subsidiary, Hytera maintains an Ohio sales representative.
- 3. Hytera is a world leader in the development, manufacturing and sales of two-way radios and push-to-talk wireless communications systems and related technology. The company is a full solutions provider for professional push-to-talk communications for each of public safety, government agencies, transportation, and business/light industry. Hytera's reliable, robust and secure communications products are distributed in more than 60 countries across the globe.
- 4. Hytera is the owner of all right, title and interest to United States Patent No. 9,183,846 ("the '846 Patent") titled "Method and Device for Adaptively Adjusting Sound

Effect." A copy of the '846 Patent is attached as Ex. A and a copy of the assignment filed with the United States Patent Office ("USPTO") is attached as Ex. B.

- 5. Motorola is a company organized and existing under the laws of Delaware with its principal place of business at 500 W. Monroe Street, Chicago, IL 60661.
- 6. On information and belief, Motorola maintains a physical office in this District, at 12430 Plaza Dr., Parma, OH 44130 ("Motorola's Parma Office"). On further information and belief, Motorola's Parma Office manages and performs sales, service and repairs of its products for this District.
- 7. On information and belief, the Motorola name and logo are affixed in large blue letters to the street-facing side of Motorola's Parma Office. On further information and belief, Motorola's Parma Office has a sign adjacent to its front door that reads "Cleveland Service Center."
- 8. On information and belief, Motorola maintains at least 20 employees who live and work in the Cleveland/Akron area including its area sales manager for Ohio as well as Ohio account managers.
- 9. On information and belief, Motorola offers for sale and sells products both directly in this District and through distributers located in this District. On further information and belief, Motorola communication devices that are the subject of this complaint are offered for sale in this District and sold in this District.
- 10. On information and belief, one such distributor of Motorola's products in this District is Staley Communication, Inc., which has an office at 7338 Southern Boulevard, Boardman, OH 44512. On further information and belief, Staley Communication, Inc. sells

Motorola's MOTOTRBO radios and lists itself as a "Motorola Solutions Platinum Channel Partner" on its website, attached as Ex. C.

11. On information and belief, another such distributor of Motorola's products in this District is North Coast Two Way Radio, which has an office at 14250 Industrial Ave S. Ste 102, Maple Heights, OH 44137. On further information and belief, North Coast Two Way Radio sells Motorola's MOTOTRBO radios and, on a tab of its website labeled "Motorola Solutions," attached as Ex. D, the company touts itself as "Motorola Factory Authorized" for sales, service and installation of systems for police, fire, public safety & commercial communications equipment.

JURISDICTION AND VENUE

- 12. This civil action arises under the Patent Laws of the United States, Title 35, United States Code. This Court has jurisdiction over Count I under 28 U.S.C. §§ 1331 and 1338(a).
- 13. Personal jurisdiction exists generally and specifically over Motorola because it (directly and/or through their subsidiaries, divisions, groups or distributors) has sufficient minimum contacts with the Northern District of Ohio as a result of substantial business conducted within the state of Ohio. For example, on information and belief, Motorola has a physical office in Parma, Ohio and employs at least 20 people that work and live in Ohio. On information and belief, Motorola has also committed acts of infringement in this District by selling and offering for sale, directly and through distributors, communication devices that are the subject of this complaint.

14. Venue is proper in this district under 28 U.S.C. § 1400(b) because Motorola maintains a regular and established place of business in this District and offers for sale and sells the infringing products in this District.

FACTUAL BACKGROUND

- 15. Two-way radios and other such push-to-talk communication devices are in common use by modern industry and public safety organizations. During use, these communication devices are often moved between quiet environments, which can have little background noise, and loud environments where machinery, engines, sirens or other noise may make it difficult to hear the sound output of the communication device.
- 16. On May 29, 2014, Hytera filed U.S. Patent Application No. 14/361,367 entitled "Method and Device For Adaptively Adjusting Sound Effect" based on PCT Application No. PCT/CN2011/083373 (the "PCT Application"), which was filed on December 2, 2011 and published on June 6, 2013.
- 17. U.S. Patent Application No. 14/361,367 ("U.S. Application") was published on November 13, 2014, and issued as the '846 Patent on November 10, 2015.
- 18. The claims of the issued '846 Patent are identical to the claims of the published PCT Application. (Ex. E, Prosecution History Excerpt—PCT Translation.)
- 19. The claims of the issued '846 Patent are identical to the claims of the publishedU.S. Application. (Ex. U, Published U.S. Application.)
- 20. Independent claim 1 of the '846 Patent recites a method for adaptively adjusting an acoustic effect in a device with an audio output. The device obtains the current level of ambient noise, receives a triggering instruction, and adjusts the current output volume of the

device based on the level ambient noise. If the ambient noise is high, the volume adjustment is greater at higher (treble) sound frequencies.

- 21. On information and belief, Motorola sells a number of communications devices in the U.S. and this District that contain a feature dubbed "Intelligent Audio," including the following exemplary devices MOTOTRBO radios: XPR 2500, XPR 3300, XPR 3300e, XPR 3500e, XPR 3500e, XPR 5350e, XPR 5350e, XPR 5380e, XPR 5580e, XPR 5550e, XPR 5580e, XPR 5580e, XPR 7350e, XPR 7350e, XPR 7350e, XPR 7350e, XPR 7550is, XPR 7580e, XPR 7580eis, SL 3500e, SL 7550, SL 7550e, SL 7580e, SL 7590e, and SL 7590e (the "Accused Instrumentalities"). A copy of the specification for Motorola's MOTOTRBO XPR 7550e, for example, shows that it includes the "Intelligent Audio" feature and is attached as Ex. F.
- 22. Motorola has advertised its "Intelligent Audio" feature as used in its

 MOTOTRBO product line in a video advertisement. This video advertisement (the "Intelligent

 Audio Video Advertisement") is available on the web at

 https://www.youtube.com/watch?v=kNlapiu-rUg (last visited December 28, 2018). Motorola

 states that the MOTOTRBO communications device "monitors background noise and adjusts the

 speaker volume, so you don't have to." (Intelligent Audio Video Advertisement, at 0:06.)
- 23. The Intelligent Audio Video Advertisement also demonstrates that the output sound level of the Motorola device using "Intelligent Audio" increases when the device is moved into an area with a higher ambient noise level. (*Id.* at 0:37–0:58.)
- 24. The user manual for the MOTOTRBO XPR 7500 series also states, under the heading "Intelligent Audio," that "Your radio can automatically adjust its audio volume to overcome background noise in the environment, inclusive of all stationary and non-stationary

noise sources." A copy of the relevant page of the MOTOTRBO XPR 7500 series user manual is attached as Ex. G.

- 25. Motorola extensively promotes and encourages its customers to use the "Intelligent Audio" feature through its marketing and advertising materials and its user guides. For example, Motorola proclaims in brochures available on its website, attached as Ex. H (*see*, *e.g.* pp. 2 and 17) that the Intelligent Audio feature provides "crystal-clear communications" and that "[t]he Intelligent Audio feature automatically adjusts radio volume up and down in response to the level of noise in the workplace."
- 26. On information and belief, Motorola has offered the Accused Instrumentalities, including the MOTOTRBO XPR 7550e, for sale in this District.

COUNT I: INFRINGEMENT OF THE '846 PATENT

- 27. Hytera incorporates by reference herein the allegations of Paragraphs 1–26 of this Complaint.
 - 28. The '846 Patent is in effect and is presumed valid under the U.S. patent laws.
 - 29. Claim 1 of the '846 Patent states:

A method for adaptively adjusting an acoustic effect, wherein the method is applied to an apparatus having an audio output device, and the method comprises:

obtaining an energy value of a current ambient noise;

receiving a first triggering instruction, and adjusting a current output volume based on the energy value of the current ambient noise; and

performing a treble boost processing if it is determined that the energy value of the current ambient noise is greater than a first threshold, or performing a bass boost processing if it is determined that the energy value of the current ambient noise is smaller than a second threshold.

Direct Infringement

- 30. Motorola's Intelligent Audio Video Advertisement states that its devices with Intelligent Audio "monitor[] background noise." (Intelligent Audio Advertisement at 0:06.)
- 31. Motorola's Intelligent Audio Video Advertisement demonstrates that output volume is increased when a call is received (a triggering instruction) in an environment with increased ambient noise. (*Id.* at 0:37–0:58.)
- 32. According to the MOTOTRBO Customer Programming Software (CPS), a screenshot of which is attached as Ex. I, when the "Intelligent Audio" feature is enabled, "[t]he noise threshold of the intelligent audio follows the volume knob position [of the device]. Once the ambient noise is above the noise threshold, the audio volume is boosted."
- 33. The automatic output volume increase caused by Motorola's "Intelligent Audio" feature in response to increased ambient noise is more significant at higher (treble) frequencies than at lower (bass) frequencies. This increase in output volume is a treble boost automatically performed because the ambient noise energy value is higher than a first threshold.

186:21 – 192:8; Ex. N, Rangarajan Dep., 106:1–15, 118:12–119:11, 141:23–142:4.)

- 35. Motorola has also been and still is directly infringing at least claims 1–5 and 8 of the '846 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a) by installing its MOTOTRBO software that includes Intelligent Audio on all of the Accused Instrumentalities, programming or otherwise configuring the Accused Instrumentalities to perform the methods claimed in the '846 Patent as set forth in Ex. J (Hytera's Final Infringement Contentions).
- 36. Hytera's testing of the Accused Instrumentalities and analysis of the MOTOTRBO software installed on the Accused Instrumentalities confirms that the Accused Instrumentalities directly infringe at least claims 1–5 and 8 the '846 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a), as set forth in Ex. J (Hytera's Final Infringement Contentions).
 - 37. Motorola will continue to infringe unless enjoined by this Court.

Indirect Infringement

- 38. Motorola has been and still is indirectly infringing at least claims 1–5 and 8 of the '846 Patent under 35 U.S.C. § 271(b) by actively inducing direct infringement and under 35 U.S.C. § 271(c) by contributory infringement, as set forth below and in Ex. J (Hytera's Final Infringement Contentions).
- 39. Motorola's customers, end-users, dealers, and manufacturers have been and still directly infringe at least claims 1–5 and 8 of the '846 Patent, either literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a) by using, offering for sale, selling, and importing two-way communication devices with Motorola's Intelligent Audio Feature, including the Accused Instrumentalities. (Ex. K, Motorola First Supp. Interrogatory Reponses at pp. 20, 21.)

40.	At a minimum, Motorola had knowledge of the 846 Patent and that the Accused
Instrumental	lities infringed the '846 Patent on August 28, 2017, the date Hytera served Motorola
with its initi	al Complaint. (ECF No. 1.)
41.	Motorola tacitly admits that it had knowledge of the 846 Patent prior to August
28, 2017 by	stating
	(Ex. K, Motorola First Supp.
Interrogator	y Reponses at p. 18.) (emphasis added)
42.	Motorola had knowledge of, should have known of, or was willfully blind to the
existence of	the '846 Patent prior to August 28, 2017.
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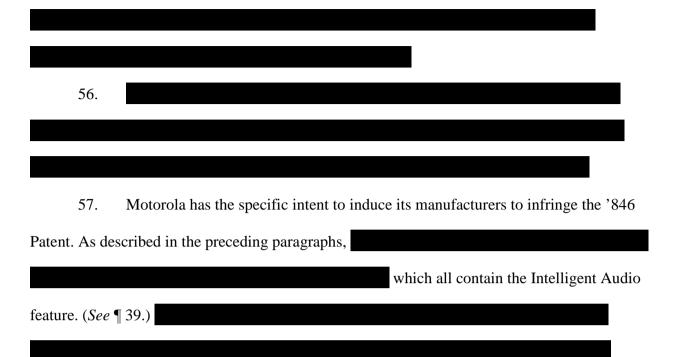
49. M	otorola monitored, or should have monitored, the '846 Patent application until it
issued on Novem	ber 10, 2015 as the '846 Patent, considering Motorola and Hytera operate in a
unique market wi	th few competitors;
; 2	and that the Intelligent Audio feature was important to Motorola (see, e.g., infra
¶ 52.).	
50. Th	nese facts indicate that Motorola was either aware of the '846 Patent or took
affirmative steps	to avoid acquiring knowledge of the '846 Patent.
51. M	otorola also has the specific intent to induce its customers to infringe the '846
Patent. As describ	ped in the preceding paragraphs, an end-user directly infringes the '846 Patent
	used Instrumentalities, which all contain the Intelligent Audio feature. (See $\P\P$
30–36.)	
· <u></u>	

52.
In its
narketing materials, Motorola credits Intelligent Audio for "Crystal-Clear Audio" and "Best In-
Class Audio." (See, e.g., Ex. H, HYTERA_02341114; HYTERA_02341289.)

- 53. Further, Motorola contributes to its end-user-customers' direct infringement by providing the Accused Instrumentalities configured to operate with the automatic volume and frequency response adjustments of Intelligent Audio that are used to directly infringe the claims of the '846 Patent. The Accused Instrumentalities configured as such include all the components that are needed to infringe the claims of the '846 Patent. Further the Accused Instrumentalities configured to operate with the automatic volume and frequency response adjustments of Intelligent Audio are not staple articles or commodities of commerce capable of substantial non-infringing uses and constitute a material part of the patented methods. The Intelligent Audio feature is programmed into each Accused Instrumentality and is an important feature that Motorola touts in its marketing materials, including as an important safety feature (*see, e.g.*, *supra* ¶ 52; Ex. S, MSI-1794-00263083.)
- 54. Further, Motorola possessed the specific intent to contribute to its customers' direct infringement. As described in the preceding paragraphs, an end-user directly infringes the '846 Patent by using the Accused Instrumentalities, which all contain the Intelligent Audio feature. (See ¶¶ 30-37, 39.)

has known or is and has been willfully blind to the fact that its the Accused Instrumentalities are used by its customers to infringe the '846 patent. And as explained in ¶ 49, Motorola intends for its customers to use the Accused Instrumentalities in an infringing manner.

55.



58. Further, Motorola contributes to its manufacturer's direct infringement by suppling MOTOTRBO software that includes Motorola's Intelligent Audio Feature and other components to the manufacturer to be combined with two-way communication devices to form the Accused Instrumentalities. The Accused Instrumentalities configured as such include all the components that are needed to infringe the claims of the '846 Patent. Further, the Accused Instrumentalities configured to operate with the automatic volume and frequency response adjustments of Intelligent Audio are not staple articles or commodities of commerce capable of substantial non-infringing uses and constitute a material part of the patented methods. The Intelligent Audio feature is programmed into each Accused Instrumentality and is an important feature that Motorola touts in its marketing materials, including as an important safety feature.

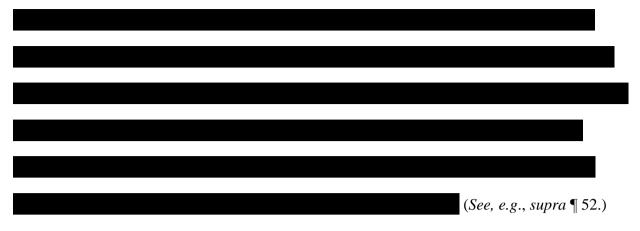
	59.	Further, Motorola possessed the specific intent to contribute to its manufacturer's
direct	infring	ement. As described in the preceding paragraphs,
Moto	rola kno	ows and has known or is and has been willfully blind to the fact that its

Motorola knows and has known or is and has been willfully blind to the fact that its manufacturers infringe the '846 patent by importing the Accused Instrumentalities.

- 60. As a result of Motorola's infringement of the '846 Patent, Hytera has suffered monetary damages in an amount not yet determined, has suffered irreparable harm and will continue to suffer irreparable harm in the future unless Hytera's infringing activities are enjoined by this Court.
- 61. Hytera will be greatly and irreparably harmed unless preliminary and permanent injunctions are issued enjoining Motorola and their agents, servants, employees, attorneys, representatives, and all others acting on their behalf from infringing the '846 Patent.

Pre-Issuance and Enhanced Damages

- 62. Motorola has knowingly and willfully infringed the '846 Patent, as set forth below and in Ex. J (Hytera's Final Infringement Contentions).
- 63. At minimum, Motorola had knowledge of the existence of the '846 Patent and that the Accused Instrumentalities infringed the '846 Patent as of August 28, 2017, the date Hytera served Motorola with its initial Complaint. (ECF No. 1.)
- 64. And as explained in the preceding paragraphs (*see* ¶¶ 38-61), Motorola either knew of or was willfully blind to the '846 Patent.



Accordingly, Motorola's egregious, knowing infringement entitles Hytera to enhanced damages under 35 U.S.C. § 284.

- 65. Motorola is entitled to a pre-issuance damages under 35 U.S.C. § 154(d).
- 66.
- 67. The invention as claimed in the published PCT and U.S. applications is substantially identical to the invention as claimed in the asserted claims of the '846 Patent. (*See* Ex. E.)
- 68. Under 35 U.S.C. § 154(d)(4), Hytera is entitled to damages for infringement beginning on May 29, 2014, the date on which the USPTO received a translation of the PCT Application (Ex. E).
- 69. Under 35 U.S.C. § 154(d)(1), Hytera is entitled to damages for infringement beginning on November 13, 2014, the date the U.S. Application published.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the following relief:

- A. A judgment that Motorola has directly infringed and continues to infringe the '846 Patent;
- B. A judgment that Motorola has indirectly infringed and continues to infringe the '846 Patent by contributory infringement and/or inducement.
- C. A judgment that Motorola's infringement of the '846 Patent has been willful;
- D. A judgment against Motorola awarding Hytera damages suffered by Hytera pursuant to 35 U.S.C. § 284 on account of Motorola's infringement of the '846 Patent;
- E. A judgment that Hytera's damages be trebled pursuant to 35 U.S.C. § 284 and that punitive damages be assessed against Motorola;
- F. A judgment that Hytera is entitled to damages beginning on May 29, 2014, the date on which the USPTO received a translation of the PCT Application, or, in the alternative, beginning on November 13, 2014, the date on which the U.S. Application was published;
- G. Preliminary and permanent injunctions against Motorola and any entity acting in concert with Motorola, pursuant to 35 U.S.C. § 283 preventing Motorola and any such entity from infringing the '846 Patent;
- H. A judgment that Motorola be directed to pay Hytera's costs incurred herein; and
- I. Such other and further relief as the Court deems just and equitable.

DEMAND FOR JURY TRIAL

Pursuant to Fed. R. Civ. P. Rule 38(b), Hytera respectfully demand a trial by jury of all issues triable as of right to a jury.

Dated: January 14, 2019

Respectfully submitted,

/s/ Todd R. Tucker

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CERTIFICATE OF SERVICE

A true and correct copy of the foregoing, *Second Amended Complaint for Patent Infringement (Redacted)*, has been filed electronically this 14th day of January 2019 with the United States District Court for the Northern District of Ohio. Notice of the filing will be sent by email to all counsel by operation of the Court's electronic filing system and all parties may access this filing through that system.

/s/ Todd R. Tucker
One of the Attorneys for Plaintiff
Hytera Communications Corp. Ltd.