

UNITED STATES DISTRICT COURT  
DISTRICT OF CONNECTICUT

OMEGA ENGINEERING, INC.,	:	
Plaintiff,	:	CIVIL ACTION NO.
	:	3:98-cv-2052 (JCH)
v.	:	
	:	MARCH 15, 2002
COLE-PARMER INSTRUMENT	:	
CO., ET AL.,	:	
Defendants/Counterclaim	:	
Plaintiff.	:	
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RAYTEK CORPORATION,	:	
Plaintiff,	:	CIVIL ACTION NO.
	:	3:98-cv-2276 (JCH)
v.	:	
	:	MARCH 15, 2002
OMEGA ENGINEERING, INC.,	:	
ET AL.,	:	
Defendants.	:	

**RULING ON DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT  
OF NON-INFRINGEMENT AND OF INVALIDITY OF '678 AND '679  
PATENTS AND PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT  
OF INFRINGEMENT ON CLAIMS 15, 16, 33 AND 41 OF '679 PATENT  
[DKT. NOS. 44, 47, 63]**

These consolidated cases involve claims of patent infringement and related Lanham Act and other unfair competition claims brought by the plaintiff Omega Engineering, Inc., the manufacturer of a line of infrared thermometers or temperature measurement devices, against the manufacturer, Raytek Corporation,

and distributors, Cole-Parmer Instrument Co. and Davis Instruments Manufacturing Co., of rival temperature measurement devices. Omega, the holder of U.S. Patent Nos. 5,823,678 (“‘678 Patent”) and 5,823,679 (“‘679 Patent”), accuses the defendants Raytek, Cole-Parmer and Davis (collectively “defendants”) of infringing the ‘678 and ‘679 Patents.

The court previously issued a Markman Ruling [Dkt. No. 214] construing all the claims of the ‘678 and ‘679 Patents, except Claim 5 of the ‘678 Patent which is not at issue.<sup>1</sup> At issue before the court are the defendants’ Motions for Summary Judgment of Non-infringement and Invalidity [Dkt. Nos. 44, 47] and Omega’s Motion for Summary Judgment of Infringement on Claims 15, 16, 33 and 41 of the ‘679 Patent [Dkt. No. 63] on the plaintiff’s claim of patent infringement under 35 U.S.C. § 271 in the First and Second Counts of the Amended Complaint in Case No. 3:98-cv-2052.

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<sup>1</sup>These cases were previously consolidated with Omega Engineering, Inc. v. Raytek Corp., 3:98-cv-733 (JCH), as the lead case. In two summary judgment motions, the court disposed of all claims against the defendants in the lead case. Omega filed an appeal with the Federal Circuit, requiring the court to deconsolidate the three cases and reconsolidate the two remaining cases. The Markman ruling on the ‘678 and ‘679 Patents issued while all three cases were still consolidated under 3:98-cv-733 and accordingly bears a docket number from that prior lead case.

## **I. FACTS**

### **A. The Raynger Infrared Thermometers**

Raytek is a manufacturer and seller of infrared thermometers. Cole-Parmer and Davis are distributors of infrared thermometers made by Raytek. Omega alleges that two lines of infrared thermometers sold by Raytek infringe the '678 and '679 Patents, the Raynger ST and MX.

The Raynger ST and MX measure the temperature of an object using a radiometer that detects the amount of infrared energy emitted by the object measured. Both models include a laser sighting mechanism. The Raynger ST uses a diffraction grating that disperses a single laser beam, creating interference patterns that result in eight beams directed toward the energy zone. The Raynger MX uses a diffraction grating, similar to the Raynger ST, that disperses a single laser beam into sixteen beams directed toward an optical element with prism faces that redirects the light toward the energy zone. A single beam passes through the diffraction grating of the Raynger ST and MX to mark the center of the beams directed toward the energy zone. As used in the '678 and '679 Patents, the term "energy zone" means an area on the measured surface from which approximately 90% of the heat energy

detected by the radiometer originates. Markman Ruling (Dkt. No. 214) at 12.

There are no moving parts in the laser sighting system of the Raynger ST or MX.

The light directed toward the energy zone by the Raynger ST and MX provides some indication of the size and location of the energy zone. The Raynger ST displays eight stationary spots that roughly approximate the energy zone. Because the diffraction grating for the Raynger ST uses a wider projection angle than the infrared detector for the radiometer and is offset from the detector, the circle created by the eight spots roughly correlates with the energy zone at approximately 96 inches distance for only the Raynger ST80, one of the specific ST models. In contrast, the Raynger MX uses sixteen stationary spots and more accurately reflects the energy zone's size and location using the prism faces in the optical element. The laser sighting mechanism for both the Raynger ST and MX projects a center laser spot that is visible to the naked eye and of about the same intensity or magnitude as the other dots projected by the sighting mechanism. Both Raynger models also produce generalized low-level laser light over the area encompassed by the dots.

## **B. Construction of Claims**

Familiarity with the court's prior Markman Ruling [Dkt. No. 214] construing Claims of the '678 and '679 Patents is assumed. For ease of reference, however, the court's holdings on key concepts in that Markman Ruling and the court's subsequent Ruling on Plaintiff's Motion for Reconsideration [Dkt. No. 221] are summarized herein.

As used in the patents, "radiometer," "pyrometer," and "temperature measurement device" refer to infrared temperature measurement devices that measure temperature by detecting the infrared energy emitted from a target area defined by the device's field of view and the distance to the target. "Energy zone" refers to a subarea of the target from which approximately 90% of the energy detected by the measurement device is being emitted. "Outline said energy zone" and similar phrases

require that the periphery of the target area defined by the thermometer's field of view be marked with the at-least-three laser beams that are projected at the target surface and that align, as the beams strike the target surface, with a zone from which approximately 90% of the heat energy to be measured originates.

Markman Ruling [Dkt. No. 214]. The patent language precludes the addition of a

center dot for Claims at issue in the '678 Patent and Claims 1-14, 17-32, 34-40, and 42-53 in the '679 Patent. Claims 33 and 41 of the '679 Patent are dependent claims of Claims 32 and 38, respectively.

Claims 15 and 16 of the '679 Patent contain the “means-plus-function” language necessary to invoke 35 U.S.C. § 112, ¶ 6. As used in Claim 15, “means for projecting” identifies a device with a function to emit three or more laser beams toward the surface measured by the radiometer. Disclosed structures for the device are light sources, such as a laser, laser generator, laser aiming device, and laser sighting device, and optical devices that split a single laser beam into more than two beams, such as a beam splitter, laser beam splitting device, diffraction device, grating or holographic component, and optical fibers. The function for “means of causing” in Claim 15 is the manipulation of one or more projected laser beams onto the center and periphery of the energy zone surface. The disclosed structures are optical devices for splitting a single laser beam into more than two beams.

For Claim 16, “means of projecting at least one” identifies a device with a function to emit at least one laser beam toward the surface measured by the radiometer, including the center of the energy zone. The disclosed structures are

optical devices for splitting a single laser beam into more than two beams. “Means for projecting more than two” identifies a device with a function to emit three or more laser beams toward the surface measured by the radiometer. The disclosed structures are optical devices for splitting a single laser beam into more than two beams.

### **C. Prior Art**

The defendants cite three references for their argument that Omega’s patents are invalid as obvious in light of the combined prior art. The first reference is German patent DE 3213955 (“Specht Patent”), issued in 1982. The Specht Patent describes a laser sighting mechanism for an infrared thermometer that used a beam splitter to create two beams from a single laser source and direct those beams to mark the diameter of the energy zone. The second reference is Japanese patent JP 57022521 (“Imagawa Patent”), published in 1982. The Imagawa Patent describes the use of multiple light sources to identify the size and location of the energy zone. The third reference is United Kingdom patent UK 2,203,537 (“Demisch Patent”), published in 1988. The Demisch Patent describes a sighting mechanism for an infrared thermometer that used a single light source blocked by a circular masking

patch to create a circle of light around the periphery of the energy zone.

## **II. STANDARD OF REVIEW**

Summary judgment is only appropriate when no genuine issue of material fact exists and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c); Hermes Int'l v. Lederer de Paris Fifth Ave, Inc., 219 F.3d 104, 107 (2d Cir. 2000). The burden of showing that no genuine factual dispute exists rests upon the moving party. Carlton v. Mystic Transp., Inc., 202 F.3d 129, 133 (2d Cir. 2000) (citing Gallo v. Prudential Residential Servs., Ltd. P'ship, 22 F.3d 1219, 1223 (2d Cir. 1994)). In assessing the record to determine if such issues do exist, all ambiguities must be resolved and all inferences drawn in favor of the party against whom summary judgment is sought. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986); Heilweil v. Mount Sinai Hosp., 32 F.3d 718, 721 (2d Cir.1994). "Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge." Anderson, 477 U.S. at 255. When reasonable persons, applying the proper legal standards, could differ in their responses to the questions raised on the basis of the evidence presented, the question is best left to the jury. Sologub v. City of New



York, 202 F.3d 175, 178 (2d Cir. 2000).

Summary judgment is appropriate if the nonmoving party has failed to make a sufficient showing to establish the existence of an essential element of its case with respect to which it has the burden of proof. Gen. Elec. Co. v. Nintendo Co., Ltd., 179 F.3d 1350, 1359 (Fed. Cir. 1999). “A party may not overcome a grant of summary judgment by merely offering conclusory statements.” Moore U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091, 1112 (Fed. Cir. 2000). “Mere denials and conclusory statements . . . are not sufficient to establish a genuine issue of material fact.” McElmurry v. Ark. Power & Light Co., 995 F.2d 1576, 1578 (Fed. Cir. 1993).

### **III. DISCUSSION**

#### **A. Validity**

Patent claims are presumed valid independent of the validity of other claims. 35 U.S.C. § 282. A party challenging the validity of a claim must present clear and convincing evidence to overcome the presumption of validity. Apotex USA, Inc. v. Merck & Co., 254 F.3d 1031, 1036 (Fed. Cir. 2001). The defendants challenge the validity of Omega’s claims on the basis of indefiniteness and obviousness.

A valid patent must “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. Claim definiteness that satisfies the statute requires the inventor to “apprise those skilled in the art of the scope of the invention.” Credle v. Bond, 25 F.3d 1566, 1576 (Fed. Cir. 1994). Internal inconsistencies of claims read in light of the specification do not provide a definite scope to the claimed invention and render the claim invalid. In re Merat, 519 F.2d 1390, 1394-96 (C.C.P.A. 1975); In re Cohn, 438 F.2d 989, 993 (C.C.P.A. 1971). Determinations of definiteness are questions of law for the court. Exxon Research & Eng’g Co. v. United States, 265 F.3d 1371, 1376 (Fed. Cir. 2001).

A patent claim is obvious “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.” 35 U.S.C. § 103(a). Obviousness is a question of law, but the determination involves several factual inquiries. SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp., 225 F.3d 1349, 1355 (Fed. Cir. 2000).

In order to determine obviousness as a legal matter, four factual inquiries must be made concerning: 1) the scope and content of the

prior art; 2) the level of ordinary skill in the art; 3) the differences between the claimed invention and the prior art; and 4) secondary considerations of nonobviousness, which in case law is often said to include commercial success, long-felt but unresolved need, failure of others, copying, and unexpected results.

Ruiz v. A.B. Chance Co., 234 F.3d 654, 662-63 (Fed. Cir. 2000) (citing Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966)).

In considering the scope and content of the prior art, the fact finder must determine “whether there is a reason, suggestion, or motivation in the prior art or elsewhere that would have led one of ordinary skill in the art to combine the references.” Id. at 664-65. “The reason, suggestion, or motivation to combine may be found explicitly or implicitly: 1) in the prior art references themselves; 2) in the knowledge of those of ordinary skill in the art that certain references, or disclosures in those references, are of special interest or importance in the field; or 3) from the nature of the problem to be solved, ‘leading inventors to look to references relating to possible solutions to that problem.’” Id. at 665 (quoting Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1572 (Fed. Cir. 1996). “[T]he showing of combinability must be ‘clear and particular.’” Id. at 665 (quoting In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999).

1. Claims 33 and 41 of the '679 Patent

The defendants argue that Claim 41 of the '679 Patent cannot satisfy the definiteness requirement of 35 U.S.C. § 112, ¶ 2 because it is internally contradictory. The defendants also make an analogous argument for Claim 33 of the '679 Patent in their response to Omega's Motion for Partial Summary Judgment of Infringement.<sup>2</sup> Both Claim 33 and 41 are dependent claims of Claim 32 and 38 respectively. The court construed Claims 32 and 38 as explicitly precluding a center dot. Claims 33 and 41, however, explicitly require a center dot. As dependent claims, Claims 33 and 41 include the limitations of the independent claims from which they are derived. Therefore, Claims 33 and 41 would propose to teach the exclusion of a center dot and the requirement of a center dot simultaneously. No one of ordinary skill in the art would be able to determine the scope of these claims because of this logical contradiction. The court concludes Claims 33 and 41 are invalid for failure to satisfy the claim definiteness requirement. Therefore, the court

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<sup>2</sup>The defendants equate Claims 33 and 41 in their non-infringement analysis, but the arguments in that context implicate the invalidity arguments of earlier pleadings, where defendants only referred to Claim 41. Since Claims 33 and 41 are indistinguishable under the present analysis, the court subjects Claim 33 to the same arguments raised for Claim 41 by the defendants in the invalidity pleadings.

grants the defendants' motion for summary judgment of invalidity as to Claims 33 and 41 of the '679 Patent.

2. Other Claims of the '678 and '679 Patents

The defendants contend that the asserted claims of the '678 and '679 Patents are obvious in light of a prior art reference not considered by the Patent Examiner.<sup>3</sup> Specifically, the defendants cite the Demisch Patent combined with other prior art references considered by the Examiner, the Specht and Imagawa Patents, to conclude that the claimed inventions of Omega's Patents are obvious.

The defendants do not dispute, for purposes of this motion, that an individual of ordinary skill in the art would have a knowledge of basic optics and three years of experience. The defendants argue that Specht and Demisch address the same problem, aiming an infrared thermometer, and that a person of ordinary skill in the

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<sup>3</sup>The defendants point to the Patent Examiner's rejection of similar claims in another Omega patent based on the same prior art references now brought to the court's attention. The defendants argue that the PTO's rejection of similar claims based on the references justifies invalidating the '678 and '679 claims. However, Omega submitted material indicating that the Examiner would allow similar claims in amended form despite the references. Given the continuation of Omega's application and the ongoing nature of the prosecution process, the court refuses to speculate as to the PTO's final resolution of the obviousness question for patents unrelated to those asserted in this case. Since some of the prior art brought to the court's attention was not before the Patent Examiner during the prosecution of the '678 and '679 Patents, the court will conduct an obviousness analysis.

art would have reason to combine those references to reach the '678 and '679 Patent claims. Omega disagrees, claiming Specht teaches a measurement of the radius or diameter of the energy zone while Demisch teaches an outline of the energy zone. Omega further contends that a person of ordinary skill in the art would not combine Specht and Demisch.

Examining the descriptions of the patents, the court concludes that the defendants are correct that the Specht and Demisch Patents address the same problem, aiming a sighting mechanism to target the energy zone of a radiometer. Both descriptions discuss problems inherent to identifying the energy zone of a radiometer in order to achieve accurate results and propose their inventions as a method to identify the area to be measured. While the Specht Patent only marks the "position and diameter" of the energy zone, the description identifies the targeting problem and considers the beams marking the diameter sufficient to solve the problem. Also, although not a sighting mechanism necessarily, the Imagawa Patent identifies the same problem and proposes its invention as a solution. Therefore, the court considers the Specht, Demisch, and Imagawa Patents prior art for the '678 and '679 Patents.

Although the court views Specht and Demisch as prior art, the court cannot conclude as a matter of law that the claimed invention was obvious in light of the prior art. The defendant argues that the Demisch Patent teaches the value of multiple points of reference outlining the energy zone, as opposed to only two dots. Omega disputes the defendants' attempt to equate a circle of light and individual points of reference.<sup>4</sup> Also, Omega notes that the Imagawa teaches the value of multiple points of reference and that the Patent Examiner would have considered defendants' position since the Examiner had Imagawa and Specht as prior art.<sup>5</sup>

Moreover, the plaintiff argues that the light sources for the Demisch Patent

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<sup>4</sup>The court notes that in a footnote to its previous Markman ruling for the '880 Patent it equated a "continuous" line with "a very large number of points of light between which no gap is visible to the eye." That observation was made in the context of determining the number of points that the laser sighting mechanism of the '880 Patent required. The observation is less obvious in the context of comparing an incoherent light source with a laser source. Therefore, the prior statement should not be regarded as relevant to the present discussion absent evidence that a person of ordinary skill in the art would equate the two sources.

<sup>5</sup>The defendants attempt to distinguish Imagawa by claiming that Demisch teaches a single light source. However, that argument does not differentiate the combination of Specht and Imagawa from the combination of Specht and Demisch because Specht also teaches a single light source. Therefore, together Specht and Imagawa teach a single light source and multiple points of reference—the two attributes defendants have cited thus far as making Omega's Patents obvious. Without more, the court would consider Demisch cumulative of the prior art before the Examiner, but, for now, will rely on the disputes of fact to deny the invalidity motion, rather than explore the deference owed to the Patent Examiner's decision.

and the Specht Patent, an incoherent broadband light source and a laser respectively, are significantly different, leaving room for a reasonable jury to disagree as to whether there are differences between the claimed invention and the prior art. The court concludes that there are disputed issues of material fact as to the differences between the claimed invention and the prior art.<sup>6</sup> Therefore, the court cannot conclude as a matter of law that the claims of the '678 and '679 Patents were obvious and denies the defendants' motion for summary judgment of invalidity insofar as it is based on the obviousness.

## **B. Infringement**

To determine whether a device infringes a patent, the court must compare the alleged infringing device with the patent's claims, as properly construed in a Markman ruling. SmithKline Diagnostics, Inc. v. Helena Laboratories Corp., 859 F.2d 878, 889 (Fed. Cir. 1988). The device infringes the patent if it "embodies every limitation of the asserted claims," either literally or in equivalent form under the doctrine of equivalents. IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1429 (Fed. Cir. 2000). Whether the device embodies every limitation of the

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<sup>6</sup>Based on this holding, the court does not address the parties' disputes over the objective factors in the obviousness analysis.



claims is a question of fact for the fact finder unless the court concludes, after drawing all reasonable inferences in favor of the non-movant, that no reasonable jury could find for the non-movant. Id.

Literal infringement requires that the alleged infringing device contain every element in the same form stated in the asserted claim. In contrast, the doctrine of equivalents provides a separate standard for infringement that focuses on the “role played by each element in the context of the specific patent claim” and determines equivalence using “an objective inquiry on an element-by-element basis.” Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17,40 (1997). To be equivalent, the elements of the accused device must perform substantially the same function, in substantially the same way, to obtain substantially the same result or otherwise have only insubstantial differences compared to the claim limitations of the patent. Id.

“An infringement analysis of a claim with limitations drafted pursuant to 35 U.S.C. § 112, ¶ 6 (1994), involves the same two steps— claim construction and a comparison of the accused device or method with the properly construed claims. After claim construction, a claim limitation written in § 112, ¶ 6 form must be met,

literally or equivalently, in the accused device for infringement to lie.” Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1268 (Fed. Cir. 1999). “Literal infringement of a § 112, ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.” Id. at 1267. Both functional identity and either structural identity or equivalence are required for literal infringement of a means-plus-function claim. Id. “[W]hen properly focusing on the disputed function, ‘evidence that one of ordinary skill in the art would have recognized the interchangeability of [the accused and claimed structures] for performing the [disputed] functions in the claimed invention . . . should be considered in a § 112, ¶ 6 equivalence determination.’” Caterpillar Inc. v. Deere & Co., 224 F.3d 1374, 1380 (Fed. Cir. 2000) (quoting IMS Tech., 206 F.3d at 1437).

Alternatively, “[s]tructural equivalence under § 112, ¶ 6 is . . . ‘an application of the doctrine of equivalents . . . in a restrictive role.’” Odetics, 185 F.3d at 1267 (quoting Warner-Jenkinson, 520 U.S. at 28). Unlike the application of the doctrine of equivalence in non-means-plus-function claims, “under § 112, ¶ 6 equivalence,

functional identity is required; thus the equivalence (indeed, identity) of the ‘function’ of the assertedly substitute structure, material, or acts must be first established in order to reach the statutory equivalence analysis.” Id. For claims written as means-plus-function limitations, “the statutory equivalence analysis requires a determination of whether the ‘way’ the assertedly substitute structure performs the claimed function, and the ‘result’ of that performance, is substantially different from the ‘way’ the claimed function is performed by the ‘corresponding structure, acts, or materials described in the specification,’ or its ‘result.’” Id.

The Federal Circuit has made clear that the individual components of an overall structure which corresponds to the claimed function are not themselves claim limitations, but, rather, the limitation is the overall structure corresponding to the claimed function. Id. at 1268. Thus, structures with different numbers of parts may be equivalent under § 112, ¶ 6 and thus meet the claim limitation. Id. With these principles in mind, the court turns to the allegedly infringing products.

1. Claims with No Center Dot

The Raynger ST and MX do not infringe any Claims of the '678 Patent or Claims 1-14, 17-32, 34-40, and 42-53 of the '679 Patent. The laser sighting mechanism of the Raynger ST and MX projects a beam that passes straight through the grating and into center of the energy zone. The court interpreted these claims to preclude any center dot projected on the energy zone because a center dot would contradict the specific claim language. Therefore, the defendants' devices do not literally infringe these claims because there is no identity of elements or functional identity for the non-means-plus-function and means-plus-function claims respectively.<sup>7</sup>

Omega argues in its opposition memorandum to the defendants' motion for summary judgment of non-infringement that the center dot projected by the Raynger ST and MX is de minimis and inconsequential to the consumer. This argument could be construed as raising an issue of material fact regarding infringement based on insubstantial differences under the doctrine of equivalents.

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<sup>7</sup>For a fuller discussion of the literal infringement analysis as applied to the similar means-plus-function claims of the '880 Patent, see the court's Ruling on Defendants' Motion for Partial Summary Judgment [Dkt. No. 223] in 3:98-cv-733 (JCH).

The parties do not dispute that the center dot for the Raynger ST and MX is visible to the naked eye in daylight, but Omega argues that the dot has negligible effect on the temperature measured by the energy zone and furthers no purpose in outlining the energy zone, making it equivalent to any other device without the center dot. As noted, however, the claim language specifically excludes a center dot, so any center dot would constitute a substantial difference. Any device using a center dot would fail to serve substantially the same function in substantially the same way to achieve substantially the same result as the asserted claims since those claims specifically teach that light should *not* be directed into the energy zone. Therefore, these claims could not satisfy the doctrine of equivalents standard for infringement. The defendants are entitled to summary judgment of non-infringement for all claims at issue in the '678 Patent and Claims 1-14, 17-32, 34-40, and 42-53 of the '679 Patent.<sup>8</sup> Accordingly, the court grants the defendants' motion for summary judgment of non-infringement as to those claims of the '678 and '679 Patent.

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<sup>8</sup>Omega argues in a footnote that Claim 7 of the '678 Patent could be construed to allow a center dot. The court has already issued a Markman ruling construing this claim and given Omega ample opportunity to seek reconsideration. In its Markman ruling, this court held that Claim 7 specifically precludes a center dot.

2. Claims 33 and 41 of the '679 Patent

The court has concluded that Claims 33 and 41 are invalid, which means that they cannot be infringed. As alternative grounds for summary judgment for the defendants on non-infringement of Claims 33 and 41, the court also notes that if devices do not infringe independent claims, they do not infringe corresponding dependent claims. See Streamfeeder, LLC v. Sure-Feed Sys., Inc., 175 F.3d 974, 984-85 (Fed. Cir. 1999) (recognizing only one exception for this “axiomatic principle” where courts engaged in formulating equivalents under the doctrine of equivalents use a narrower range for the dependent claim in order to avoid prior art). Claims 33 and 41 are dependent claims of independent claims 32 and 38 respectively. Accordingly, the Raynger ST and MX do not infringe the dependent claims 33 and 41 because those devices do not infringe the independent claims 32 and 38 respectively.<sup>9</sup> The court, therefore, grants the defendants’ motion for

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<sup>9</sup>Omega cites cases holding that a dependent claim may be valid despite an invalid independent claim. Infringement analysis differs significantly from validity analysis. Narrower dependent claims benefit patentees under validity analysis because the narrower drafting may avoid prior art that render a broader independent claim invalid. Narrower dependent claims hinder patentees in infringement analysis, however, because the patentee must establish that the accused device infringes every element of the patent claim, which, for any dependent claim, necessarily includes all elements of the independent claim. Therefore, if the patentee fails to prove infringement of an independent claim, it would be impossible for the patentee to establish infringement of claims dependent on that

summary judgment of non-infringement as to Claims 33 and 41 of the '679 Patent and denies Omega's motion for partial summary judgment of infringement as to those claims.

3. Claims 15 and 16 of the '679 Patent

The only remaining claims under the infringement analysis are Claims 15 and 16 of the '679 Patent.<sup>10</sup> The court has construed both of these independent means-plus-function claims to include the projection of a center dot onto the energy zone. For purposes of the infringement analysis against the Raynger devices, Claims 15 and 16 are indistinguishable.

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independent claim, except in the limited circumstances identified by the Streamfeeder court.

In its reply memorandum to its Motion for Summary Judgment of Infringement, Omega also argues that the defendants' position automatically rejecting any infringement analysis for the dependent claims forces the court to reconsider the Markman ruling because the court recognized the viability of a center dot for those dependent claims. As the court noted in its reconsideration of the Markman ruling for Claim 38, the court's Markman ruling did not hold Claims 38 or 41 valid because such a holding would be outside the scope of a Markman ruling, which only construes the claim language.

<sup>10</sup>To the extent that the court grants summary judgment of non-infringement based on the analysis of Claims 15 and 16, that analysis would also provide alternative grounds for summary judgment on the other claims previously discussed.

a. The Raynger ST Models

The defendants argue that the Raynger ST does not infringe the claims because the device's laser sighting mechanism is out of proportion and alignment with the corresponding radiometer's field of view. Specifically, the projection angle for the sighting mechanism is approximately two degrees or more greater than the field of view angle for the radiometer. Also, the mechanism is offset from the radiometer, creating vertical discrepancies between the energy zone and the circle of projected spots. At close distances, the offset results in a laser outline that encircles little of the energy zone. At further distances, the difference in projection angle results in a laser outline that encompasses proportionately more than the energy zone.

In its motion for partial summary judgment of infringement and in response to the defendants' motion for summary judgment of non-infringement, Omega argues that the offset only occurs at close distances and quickly diminishes. Omega admits that the Raynger ST outlines an area "larger than that which is seen by the infrared detector." Pl. Opp. to Def. Mot. for Summary Judgment of Non-Infringement, at 15 (citing Expert Report of Dr. Balog at 16). In its initial



pleadings, Omega focused on the specific range between 90 and 96 inches where it claims that the laser outline of the ST80, a specific Raynger ST product, and the energy zone coincide. Id. at 16. At oral argument, however, Omega contended that various ST devices infringed the '679 Patent at different ranges.

After oral argument, the court requested that Omega submit a supplemental memorandum identifying the claimed infringement by the ST devices and the basis for that claimed infringement.<sup>11</sup> The court informed Omega that it wanted the alleged infringement limited to the construction of the '679 Patent as clarified during oral argument, namely the range of the ST devices where both the laser sighting mechanism projected a circle that aligned with the energy zone and the laser

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<sup>11</sup>The court only requested citations to the record regarding Omega's claimed bases for infringement. Transcript [Dkt. No. 74], at 55 ("And again, I don't think it's a long pleading and it can be in chart form with just cites to where the basis of what you are saying is, in other words, see Exhibit Such-and-such at page so-and-so."). The court did not permit Omega to reopen the summary judgment record in order to submit additional evidence of infringement. In its opposition to the Motion to Strike, Omega states that it relied in the supplemental memorandum on new evidence in the form of a declaration by Dr. Hollander and temperature measurements performed by individuals at Omega, rather than the plaintiff's prior expert opinions and the laser profiles conducted by Raytek, which were previously submitted by both parties. Raytek moved to strike the declaration and additional evidence. The court grants the defendants' Motion to Strike Declaration of Dr. Hollander [Dkt. No. 75] and, therefore, relies on the supplemental memorandum only to the extent that it followed the court's instructions and provided citations to the existing record.

circle and the energy zone were approximately the same size.<sup>12</sup> Omega responded with ranges of infringement that far exceeded the court’s instructions—for example, Omega claimed infringement where the circle did not encompass the energy zone.<sup>13</sup>

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<sup>12</sup>The court recognizes that it did not define “periphery” of the energy zone in the Markman ruling to address sufficiently whether the laser outline identifies the periphery of the energy zone. Taking the plain meaning of the word, periphery refers to “[t]he outermost region or part within a precise boundary . . . immediately beyond a precise boundary [or] a zone constituting an imprecise boundary.” Webster’s II New College Dictionary 818 (1995). Therefore, the phrase “periphery of the target area,” as used to construe “outline said energy zone” and similar phrases, is limited to a region within close proximity to the energy zone relative to the size of that zone and incorporating imprecision, if any, in measuring the energy zone.

The court implied a similar understanding when it rejected the defendants’ argument that the laser outline *precisely align* with the energy zone. While the court rejected a limitation of exact precision, the words “outline” and “periphery” cannot be read completely out of the claim construction. The court clarified its claim construction at the hearing. Transcript, at 55 (“I would like you to answer or address that issue in light of what I think was my construction of the patent, which is that the laser sighting circle be concentric with the outline of the energy zone and approximately the same size.”); see also Transcript, at 31-32 (“You can answer my question [for] what products and at what distances does the laser sighting circle coincide with the periphery, you can answer it even if it’s not exact.”). Accordingly, Omega cannot succeed in its continued attempts to claim infringement where the Raynger ST laser sighting circles merely encompass the energy zone without any proximate relation to the size and location of the energy zone. See, e.g., Pl. Suppl. Memo, at 3 (claiming, for example, infringement by the ST60 at 36 inches despite evidence that, at that distance, the energy zone is half the size of the laser outline and contained almost entirely in the lower half of the laser outline).

<sup>13</sup>In its supplemental memorandum, Omega also claimed, for the first time, that ST devices other than the ST30, ST60, and ST80/90 infringed the ‘679 Patent. Despite an obligation to present evidence in support of its claims, Fed. R. Civ. P. 56(e), Omega did not present any evidence regarding these devices in its original response to the defendants’ summary judgment motion for non-infringement, or in its summary judgment motion for infringement. Also, as noted at footnote 11, the court did not permit Omega to reopen the record in the supplemental memorandum; the court only asked Omega to provide citations to the existing record that supported Omega’s claims of infringement. Finally,

Based on the evidence in the record, the court makes the following comments. The parties do not dispute that at close distances the ST sighting mechanisms do not align the laser outline with the energy zone. Also, there is no dispute that at greater distances the ST sighting mechanisms project an outline out of proportion to the energy zone. Finally, the laser profiles demonstrate that all Raynger ST models except the ST80 fail to align the laser outline and energy zone while the two are the same relative size. Although a device that performs inefficiently compared to patent claims would still infringe the patent absent other evidence of non-infringement, Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855, 859 (Fed. Cir. 1988), the court concludes that the Raynger ST models, except the ST80, do not infringe claims 15 and 16. No reasonable jury could find that the sighting mechanism for the Raynger ST models, except the ST80, infringe the claimed means in the '679 Patent because the devices do not "outline" the "periphery" of the energy zone at any distance.

A reasonable jury could find, however, that the ST80 at 90-96 inches infringes the '679 Patent based on the statements of plaintiff's expert and the laser

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Omega only provided the defendants' advertisements as evidence of infringement. As demonstrated by the disputes over the accuracy of the other ST devices, which have similar advertisements, advertising statements alone do not establish actual infringement. Thus, the court finds that Omega did not press any claims against those other devices.

profile. Therefore, there are disputed issues of fact as to whether the ST80 infringes the '679 Patent. The court concludes that the ST devices other than the ST80 do not infringe the remaining claims, Claims 15 and 16 of the '679 Patent. Therefore, the court grants the defendants' motion for summary judgment of non-infringement for the Raynger ST devices, except the ST80, as to Claims 15 and 16 of the '679 Patent and denies Omega's motion for partial summary judgment of infringement for all the ST devices as to those claims.

b. The Raynger MX Models

Omega points to the diffraction grating and prism ring of the Raynger MX as infringing the means-plus-function language of Claims 15 and 16. The defendants argue that the prism ring does not fall within the function of the claimed "means for causing" or "means for projecting" because it only redirects beams toward the surface to be measured. However, the defendants' argument engages in the component-by-component analysis prohibited by the Federal Circuit. Each means limitation in Claims 15 and 16 contemplates some component that directs beams toward the surface, in addition to other components that satisfy the totality of the claimed function. While the diffraction grating could accomplish the task of directing beams toward the surface, the prism ring accomplishes that task in the

Raynger MX. Decl. of Pete King in Support of Mot. for Summary Judgment of Non-infringement ¶ 9. Therefore, Omega correctly identifies the diffraction grating and prism ring as the structural unit for comparison to the means of Claims 15 and 16 because those two components together satisfy the means limitation.

The defendants also argue that the prism ring defeats any structural equivalence argument under 35 U.S.C. § 112, ¶ 6 because the prism ring introduces substantial differences. Omega counters that focusing on the prism ring engages in component-by-component analysis and asserts, alternatively, that the prism ring introduces only insubstantial differences that would not defeat equivalence.

Omega misinterprets the defendants' argument as a component-by-component analysis. The defendants argue that taking the grating and prism ring as a unit, that unit is substantially different from the claimed means in the patent. The parties do not dispute that the prism ring surrounding the radiometer projects beams at a skewed angle, rather than directly at the surface to be measured. The court must determine whether the prism ring, as a distinctive way to accomplish the desired result, and the skewed angle constitute a substantial difference from the claimed means.

Examining the '679 Patent specification, the court notes that, while most of Omega's specification focuses on laser sighting mechanisms offset from the radiometer, Figures 5 and 10, as described by plaintiff's expert, contemplate the use of fiber optics that surround the radiometer and project beams toward the surface to be measured.<sup>14</sup> The court concludes that a disputed issue of material fact exists, precluding summary judgment, based on the structures described in Figures 5 and 10 and the method and result achieved by the Raynger MX. A reasonable jury could differ as to whether the Raynger MX introduced more than insubstantial differences to the fiber optic mechanisms in Figures 5 and 10. Therefore, the court denies the defendants' motion for summary judgment of non-infringement for the Raynger MX devices as to Claims 15 and 16 of the '679 Patent and denies Omega's motion for partial summary judgment of infringement for those devices and claims.

#### **IV. CONCLUSION**

For the foregoing reasons, defendants' Motions for Summary Judgment [Dkt. Nos. 44, 47] are GRANTED IN PART and DENIED IN PART, and Omega's Motion for Summary Judgment of Infringement [Dkt. No. 63] is DENIED. For

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<sup>14</sup>The court does not address the equivalence of any other embodiments in the Patent because Omega only presented optical fibers as equivalents of the prism ring and Figures 5 and 10 are the only embodiments that the plaintiff's expert describes as incorporating optical fibers. Pl. Suppl. Memo., at 7.

Claims 33 and 41 of the '679 Patent, the defendants' Motion for Summary Judgment of Invalidity [Dkt. No. 47] is GRANTED, but in all other respects, the motion is DENIED. For Claims 15 and 16 of the '679 Patent, the defendants' Motion for Summary Judgment of Non-infringement [Dkt. No. 44] is DENIED, but in all other respects, the motion is GRANTED. Omega's infringement claim based on Claims 15 and 16 of the '679 Patent is limited to the extent that the Raynger ST80 allegedly infringes the claims at a distance of 90-96 inches and to the extent that the Raynger MX infringes Figures 5 and 10 as an embodiment of the claims. Further, as noted at footnote 11, the defendants' Motion to Strike Declaration of Dr. Hollander [Dkt. No. 75] is GRANTED.

**SO ORDERED.**

Dated at Bridgeport, Connecticut this 15th day of March, 2002.

\_\_\_\_\_/s/\_\_\_\_\_  
Janet C. Hall  
United States District Judge