

United States District Court,
N.D. Illinois, Eastern Division.

BLACK & DECKER INC. and Black & Decker (U.S.) Inc,
Plaintiffs.

v.

ROBERT BOSCH TOOL CORPORATION,
Defendant.

Sept. 28, 2005.

Background: Owner of two patents for "ruggedized" work-site radio sued competitor for infringement.

Holdings: Construing claims, the District Court, St. Eve, J., held that:

(1) output voltage for claimed "AC powered DC power supply" did not have to be equal to any particular value;

(2) "power conversion circuit" was not limited to pair of DC/DC converters shown in preferred embodiment;
and

(3) "automatic steering and isolation diode network" was group or system of at least two diodes that supplied voltage both to radio and to removable direct current power supply.

Claims construed.

See also 371 F.Supp.2d 965.

6,308,059, 6,788,925. Construed.

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MEMORANDUM OPINION AND ORDER
ST. EVE, District Judge.

Plaintiffs Black & Decker Inc. and Black & Decker (U.S.) Inc. (collectively "Black & Decker") sued Defendant Robert Bosch Tool Corporation ("Bosch") for patent infringement, alleging infringement of various claims of U.S. Patent Nos. 6,308,059 ("the '059 patent") and 6,788,925 ("the '925 patent"). FN1 On September 26, 2004, the Court conducted a Markman hearing during which it heard evidence and argument regarding the construction of various claim terms in the asserted patents. The Court's construction of these

claim terms is set forth below.

FN1. The '059 and '925 patents are located in the record at R. 53-1; Joint Appendix, FH059001-008, FH925001-008, respectively. When referring to the specification of the patents in suit, the Court will refer to the '059 specification, unless it notes otherwise.

LEGAL STANDARD

[1] Headnote Citing References A determination of patent infringement is a two-step process in which the court first construes the claims. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed.Cir.1998) (en banc). In the first step, claim construction, the court interprets the patent claims that define the scope of the patentee's rights under a patent. Claim construction is a matter of law exclusively for the court. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed.Cir.1995) (en banc), aff'd 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). In the second step, the factfinder compares the properly construed claims to the accused device to determine, as a question of fact, whether all of the claim limitations are present in the accused device. *Cybor*, 138 F.3d at 1454.

[2] Headnote Citing References [3] Headnote Citing References The Federal Circuit recently summarized the principals of claim construction in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed.Cir.2005). A court must "look to the words of the claims themselves [] to define the scope of the patented invention." *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996). Courts should generally give the words of the claim their ordinary and customary meaning, which is "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1312-13. Further, a court cannot look at the ordinary meaning of a claim term "in a vacuum," but must "look at the ordinary meaning in the context of the written description and the prosecution history." *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1310 (Fed.Cir.2005).

[4] Headnote Citing References Other claims of an asserted patent may guide a court in construing claim terms. *Vitronics*, 90 F.3d at 1582. A court should presume that limitations in a dependent claim are not present in the corresponding independent claim. See *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed.Cir.2004). Also, the Federal Circuit has directed that a court must read the claims in light of the specification, explaining that:

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction.

Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1249 (Fed.Cir.1998). The prosecution history is also part of the intrinsic record, although the Federal Circuit has recognized that because it "can often inform the meaning of claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would be otherwise." *Phillips*, 415 F.3d at 1317.

[5] Headnote Citing References In construing claims, district courts may also look to extrinsic evidence such as "expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. Compared to the intrinsic record, though, extrinsic evidence is less significant. *C.R. Bard, Inc. v. U.S.*

Surgical Corp., 388 F.3d 858, 862 (Fed.Cir.2004). The Federal Circuit in Phillips specifically addressed the status of dictionaries in the claim construction process. Phillips, 415 F.3d at 1320-24. While dictionaries may assist the court to better understand the manner in which one of ordinary skill in the art would use the term, Vitronics, 90 F.3d at 1584, n. 6, a court should not adopt a dictionary definition "entirely divorced from the context of the written description." Phillips, 415 F.3d at 1321. Accordingly, at the outset of claim construction, the district court should focus on "how the patentee used the claim term in the claims, specification, and prosecution history." Id.

BACKGROUND

I. The Asserted Patents

Black & Decker accuses Bosch of infringing various claims from two United States patents. Black & Decker's patents generally relate to rugged radios used by construction workers in adverse working conditions. Joseph Domes ("Domes") is the named inventor on each patent. The '059 patent derives from provisional application No. 60/069/372, filed on December 12, 1997. Domes filed application No. 09/209,721, that ultimately issued as the '059 patent, on December 11, 1998. The '059 patent issued on October 23, 2001. Domes filed a continuation application, No. 09/963,356, that issued as U.S. Patent No. 6,456,837 ("the '837 patent").FN2 From that application, Domes filed another continuation application, No. 10/215,657, that issued as the '925 patent on September 7, 2004. Because of this relationship between the '925 and '059 patents, those patents share the same specification. Each of the asserted patents is titled "Ruggedized Tradesworkers Radio."

FN2. Black & Decker does not assert the '837 patent in this litigation.

II. The Prosecution History Of The '059 Patent

Domes filed a provisional application on December 12, 1997. On December 11, 1998, he filed application No. 09/209,71. The Patent Examiner issued an Office Action on December 21, 2001, rejecting all but two of the pending claims, and objecting to the remaining two claims. (R. 53-1; Joint Appendix, FH059069-076.) The Examiner rejected those claims under 35 U.S.C. s. 103(a) as obvious in view of the combination of two prior art references-the Eggering reference and the Bohnstedt reference.FN3 (Id.) The examiner objected to two of the claims as depending from a rejected claim. (Id.)

FN3. The Examiner further rejected one of the pending claims as obvious in view of a combination of Eggering and Bohnstedt, and also the Marren reference.

The patent attorney for Domes interviewed with the Examiner on April 3, 2001. (Id. FH059079.) The summary for that interview provides that the participants agreed that Domes would amend claim 1 to incorporate some of the features from pending claim 19 to achieve possible allowance. (Id.) In a subsequent Amendment, Domes provided that during the interview the Examiner:

noted that a significant feature of the present invention, which is neither disclosed nor suggested in the references of record, is the provision of circuitry in the subject invention that allows the portable radio to operate off of various types of conventional, portable tool battery packs, regardless of output voltage. This feature not only provides operational versatility, but an inherent side benefit is that the present invention can also be employed for charging portable tool battery packs of numerous sizes and voltages. This feature is particularly beneficial to tradesworkers, such as carpenters, who frequently use battery powered power tools

of various types in the field that periodically require recharging. For these individuals, the present invention serves not only a portable radio [sic], but also as a universal charger for their battery-powered tools.

(Id. FH059086.) Domes further provided that:

Original claim 19 was discussed during the interview as being directed to structure that facilitates the use of the subject invention with batteries of different voltages. [The Examiner] acknowledged the differences between claim 19 and the cited Bohnstedt et al. reference (U.S. Patent No. 3,458,794), and further acknowledged that not all of the features of claim 19 would probably be necessary to distinguish over the references of record.

(Id. FH059086.) Domes canceled his pending claims, replacing them with new claims 27-39. Domes explained the new claims as follows:

claim 27 recites a combination portable radio and battery charger that includes a radio, an AC powered DC power supply for powering the radio and charging a removable DC voltage power supply, a removable DC power supply for powering the radio and being charged by the AC powered DC power supply, and a power conversion circuit to enable the removable DC power supply to power the radio and be charged by the AC powered DC power supply, regardless of the output voltage magnitude from the removable DC power supply. The AC powered DC power supply generates an output voltage having a magnitude sufficient to power the radio, while the removable DC power supply is selected to generate an output voltage having a magnitude in a range that includes voltages both lower and higher than the magnitude of the output voltage from the AC powered DC power supply. The power conversion circuit is disposed between the AC powered DC power supply and the removable DC power supply, and between the radio and the removable DC power supply, to accommodate the voltage output or requirement variations among these three elements.

As stated previously, the invention recited in claim 27 is advantageous in that the removable power supply, which may be a portable power tool battery pack, for example, can be of any desired output voltage, and still be employed either to power the radio or to be charged by the AC powered DC power supply. This is made possible by provision of the power conversion circuit that adjusts the voltage that is either supplied by the AC powered DC power supply to the removable power supply, or supplied by the removable power supply to the radio. In the preferred embodiment, the power conversion circuit is implemented by a pair of DC/DC converters, one which adjusts, up or down, the output voltage from the AC powered DC power supply to the removable DC power supply, and the second that adjusts, up or down, the voltage supplied from the DC removable power supply to the radio.

(Id. FH059086-87.) In distinguishing the Bohnstedt reference, Domes argued that:

The aforementioned Bohnstedt et al. reference, though disclosing a power supply that can be used to recharge the radio's batteries, does not include any power conversion circuitry for adjusting the DC output voltage of either the recharging unit 80 or the batteries 70-72. It is clear from Bohnstedt's disclosure that there is no disclosure or suggestion that battery packs of different voltages can be used to power the radio.

(Id. FH059088.) The Examiner issued a Notice of Allowability on June 28, 2001, allowing Domes' new claims. In doing so, the Examiner provided reasons for allowance. The Examiner first addressed the teachings of the prior art, explaining that:

although there is another portable radio battery charger recently patented (Smith-U.S. Patent number 6,215,276), its file date is later than applicant's file date and it does not have provisions for a removable DC power supply, nor the power conversion circuits for allowing various DC output voltages from the removable DC power supply.

(Id. FH059093.) The Examiner continued to discuss other teachings from the prior art. The Examiner concluded by stating that:

Thus, there are aspects of the applicant's invention that appear in all of the above inventions, but none in combination would meet applicant's claim limitation in total and would not be obvious to combine to produce applicant's invention. In particular, no combination AC powered radio/battery charger that containing [sic] a removable DC power supply with DC to DC converters producing various higher and lower voltage outputs than the DC output produced by the fixed-in enclosure AC powered DC output was neither found, suggested, nor made evident by the prior art.

(Id. FH059093.) Thereafter, the '059 patent issued.

ANALYSIS

I. The Agreed-Upon Terms

The parties agree upon the construction for the term "power tool battery pack" in claim 6 of the '059 patent as "a battery comprised of one or more cells that can be used in a portable power tool." The Court adopts this agreed-upon construction as set forth in the parties' Final Joint Claim Construction Chart, filed on August 31, 2005. (R. 71-1.)

II. The Disputed Terms

The parties dispute the meaning of the following terms from the asserted patents: "radio," "radio receiver for receiving radio signals and generating audio output signals responsive thereto," "an AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio," "a power conversion circuit," "first converter circuit for receiving," "power tool," "an automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply," "an AC powered DC charger for powering said radio and charging a removable DC voltage power source," "radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto," "ventilation opening," "first power source including an electrical cord engageable with an electrical outlet," "an adaptor," "charger," and "operating range."

III. The Level Of Ordinary Skill In The Art

The Court must construe the claims from the vantage point of a person of ordinary skill in the art. Phillips, 415 F.3d at 1313. The Court, therefore, must determine the level of ordinary skill in the art for purposes of this motion. At the Markman hearing, Black & Decker took the position that a person of ordinary skill in the art has an electrical engineering degree, or the equivalent through work in the field, and that also has worked with the construction or design of power tools within the construction industry. (Markman Transcript at 9:24-10:3.) Although it claimed to need further discovery on the issue, Bosch's counsel did not disagree with Black & Decker's proposed level of ordinary skill in the art, at least for purposes of claim construction. (Id. at 41:4-13.) Accordingly, for purposes of construing the claims, the Court adopts Black & Decker's proposal and finds that a person of ordinary skill in the art has an electrical engineering degree, or

the equivalent through work in the field, and that also has worked with the construction or design of power tools within the construction industry.

IV. "Radio"

[6] Headnote Citing References The Court first turns to the term "radio." This term appears in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing "radio" as "radio receiver and an audio output component." Bosch proposes that "radio" means "radio receiver and a loudspeaker device used to project audible sound."

B. The Construction Of "Radio"

The parties agree that the term "radio" includes a "radio receiver" plus at least one other component. The parties disagree on what that additional component must include. Bosch argues that in order to be a "radio," a "radio receiver" must be combined with "loudspeakers." The Court disagrees and finds that a person of ordinary skill in the art at the time of the invention, after having read the intrinsic record, would have understood the term "radio" to not require the presence of loudspeakers. The plain claim language does not mention loudspeakers or any similar component. Rather, the claim language merely requires that the "radio" is enclosed and that it includes a "radio receiver." Although the specification mentions "loudspeakers" it does not contain any language indicating that they are a required component of a radio. FN4 It would be improper for the Court to incorporate the additional structure of loudspeakers into the plain claim language of "radio." *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1325 (Fed.Cir.2001).

FN4. The Court notes that Bosch's position would require that a person of ordinary skill in the art would not consider a "Walkman radio" a "radio" unless the headphones were connected. Bosch has not convinced the Court that this should be the case. In fact, at the Markman hearing, counsel for Bosch referred to an audio car stereo, not connected to any loudspeakers, as a "radio." (Markman Transcript at 58:4.)

The portions of the intrinsic and extrinsic record relied on by Bosch also support a construction of "radio" that does not require loudspeakers. Bosch relies on the declaration from its expert, Harvey A. Brodsky ("the Brodsky Declaration"). As Black & Decker points out, the Brodsky Declaration suffers from several deficiencies. First, it states its opinions of the understanding of one of ordinary skill in the art in the present tense. Federal Circuit law is clear that the Court is to construe the claims from the vantage point of a person of ordinary skill in the art at the time of the alleged invention, which in this case is around 1997. Phillips, 415 F.3d at 1313 (citing *Innova*, 381 F.3d at 1116). Next, the Brodsky Declaration does not provide that Mr. Brodsky ever reviewed the intrinsic record. Phillips, 415 F.3d at 1313 (citing *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed.Cir.1998)). Rather, the Brodsky Declaration contains conclusory unsupported opinions. See Phillips, 415 F.3d at 1318. Accordingly, the Court assigns this declaration very little probative value. Even if the Court did give weight to the Brodsky Declaration, his testimony confirms that a "radio" does not necessarily include loudspeakers. Referring to various possible components of a radio, Brodsky states that "[w]ithout any one of these circuits, the tuner circuit, the voltage regulator circuit, or the amplifier circuit, the radio device will not operate properly." (Brodsky Decl. para. 12.) Brodsky, therefore, concedes that even in the absence of one of these components, the device is still a "radio" device, even if he opines that it will not work properly. Accordingly, under Brodsky's opinion, even if given significant weight, a radio does not necessarily include loudspeakers.

Bosch further relies on the specification, arguing that the "Summary of Invention" section states that one of the goals of the claimed invention is to overcome ambient noise present in construction sites. This stated objective, however, does not require that the "radio" limitation, itself, be capable of overcoming ambient noise. Rather, the claimed invention, comprised of all claimed components, should be capable of achieving this objective.FN5

FN5. Bosch concedes that the term "radio" as used in the preamble is different than the term "radio" as used in the claim body.

Next, Bosch relies on U.S. Patent No. 6,427,070 (the '070 patent), filed on March 4, 1999, by a Black & Decker engineer, Roger Q. Smith. The '070 patent provides that "radio circuitry may include an FM Front End integrated circuit, [], in combination with a low frequency power amplifier integrated circuit, []." (R. 54-1; Ex. D, col. 3, ll.63-67.) The '070 patent continues that "the radio circuitry may be replaced with other circuitry for producing audio signals to the speakers via circuitry used with a cassette deck, compact disk or other methods to play music." (Id. at col. 4, ll. 4-7.) The '070 patent is extrinsic evidence and the Court cannot use it to rebut a plain and ordinary meaning provided in the intrinsic evidence. Phillips, 415 F.3d at 1317. Even if the Court did rely on the '070 patent, the portions of the specification cited by Bosch do not require that a "radio" include loudspeakers. Most notably, the specification states that radio circuitry "may" be replaced with other circuitry for producing audio signals, and is therefore permissive. (R. 57-1; Ex. D., col. 3, ll. 54-60.)

Accordingly, neither the intrinsic or extrinsic evidence of record supports incorporating a limitation of "loud speaker" into the plain language of the claims and the Court construes the term "radio" as a "radio receiver and an audio output component."

V. "Radio receiver for receiving radio signals and generating audio output signals responsive thereto"
[7] Headnote Citing References The Court next turns to the term "radio receiver for receiving radio signals and generating audio output signals responsive thereto" from claim 1 of the '059 patent and claim 1 and claim 2 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing the term "radio receiver for receiving audio signals and generating audio output signals responsive thereto" as "a portion of the radio for receiving radio signals and converting the signals to audio output signals." Bosch argues that the term means "radio circuit board including at least a tuner circuit, having a voltage regulator, for receiving radio signals and an amplifier circuit for generating audio output signals responsive thereto."

B. The Court's Construction

Here, the language of the claims plainly defines the term "radio receiver." Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc., 334 F.3d 1294, 1299 (Fed.Cir.2003) (finding that a patentee defined a term by how he used the term in the claims themselves). Because the "radio" includes the "radio receiver," the receiver is a portion of the radio. Further, the claim language specifies that the "radio receiver" receives radio signals and generates audio output signals responsive thereto.

[8] Headnote Citing References Bosch argues that the claimed "radio receiver" must include at least a tuner circuit, having a voltage regulator, for receiving radio signals and an amplifier circuit for generating audio

output signals responsive thereto. Bosch, however, does not point to any part of the claim language requiring the structure of an "amplifier circuit" and a "voltage regulator" within the scope of the claimed "radio receiver." Instead, Bosch relies on extrinsic evidence. Extrinsic evidence, however, cannot trump the plain meaning of a term set forth in the intrinsic evidence. Phillips, 415 F.3d at 1317.

Further, even if the Court relied on Bosch's extrinsic evidence, such evidence does not support a construction of the claimed "radio receiver" limited to having an amplifier and a voltage regulator. Bosch first relies on the Brodsky Declaration. As discussed above, however, the Court gives the Brodsky Declaration little weight.

Bosch next argues that the '070 patent from a Black & Decker engineer confirms that a "radio receiver" necessarily includes an amplifier circuit and a voltage regulator. The '070 patent, however, actually evidences that a "radio receiver" is not limited as Bosch suggests. As Black & Decker points out, the '070 patent provides that "Amplifier 46 may also amplify signals received from an auxiliary input 13, allowing a user to play a separate cassette disk or compact disk player through the radio." (R. 57-1; Ex. D.) The fact that an amplifier can receive signals from a cassette disk or compact disk suggests that the amplifier does not necessarily have to be included with the radio receiver. Further, the '070 patent states:

Persons skilled in the art should recognize that the specific circuitry for each component is well known in the art. For example, the radio circuitry 44 may include an FM Front End integrated circuit, such as the Sanyo LA1186N used in a well-known manner, in combination with a low frequency power amplifierintegrated circuit, such as the Toshiba TA8227P used in well-known manner.

(Id. at col. 3, ll.61-68.) This permissive language suggests that a radio receiver is not limited as Bosch proposes.

Last, at the Markman hearing, Bosch introduced various dictionary definitions FN6 of the term "radio receiver." The McGraw-Hill Dictionary of Scientific and Technical Terms (5th Edition) defines "radio receiver" as "a device that converts radio waves into intelligible sounds or other perceptible signals," but that definition goes on to state that a "radio receiver" is a "[a]lso known as radio." (Markman Hearing, Bosch Ex. 100.) Because the parties agree that the claim language requires that the terms "radio receiver" and "radio" have different scopes, this definition does not reflect the view of one of ordinary skill in the art after reviewing the intrinsic record. The Illustrated Dictionary of Electronics (1994) defines "radio receiver" as "[t]he complete apparatus that selects, demodulates, and reproduces a radio signal for purposes of communication []." This dictionary, however, also defines "radio" as "2. Radio receiver," and therefore suffers from the safe defect as the McGraw-Hill definition. Further, the definition from the Illustrated Dictionary of Electronics, actually supports Black & Decker's proposed construction. Although that dictionary definition states that a "radio receiver" "selects, amplifies, demodulates, and reproduces a radio signal," the plain claim language of the asserted patents states a "radio receiver for receiving radio signals and generating audio output signals responsive thereto." It does not make sense that the inventor would specify two of the functions of a radio receiver (as set forth in the Illustrated Dictionary of Electronics), if he intended for all of those functions to necessarily be present in structures that were part of the claimed "radio receiver." Rather, the Court finds that one of ordinary skill in the art at the time of the invention would understand that the inventor was setting forth the requirements of the claimed "radio receiver" in the claim language itself. Accordingly, the Court construes the term "radio receiver for receiving radio signals and generating audio output signals responsive thereto" as "a portion of the radio for receiving radio signals and converting the signals to audio output signals."

FN6. The Federal Circuit recently clarified the role of dictionaries in the claim construction process. See Phillips, 415 F.3d at 1322-24. There, the Federal Circuit confirmed that "judges are free to consult dictionaries and technical treatises." Id. at 1322. Although, a claim "should not rise or fall based upon the preferences of a particular dictionary editor, or the court's independent decision, uninformed by the specification, to rely on one dictionary rather than another." Id.

VI. "An AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio."

[9] Headnote Citing References The Court next construes the term "an AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio" from claim 1 of the '059 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing the term "an AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio" as "a direct current power supply in the enclosure powered by alternating current that generates a direct current output voltage sufficient to power the radio." Bosch argues that the term means "a power supply that receives an AC voltage and transforms that voltage into a DC output voltage, the DC output voltage being of a voltage equal to the input voltage of the radio."

B. The Court's Construction

At the Markman hearing, Bosch's counsel conceded that its proposed construction was too narrow to the extent it sought to require a DC output voltage being of a voltage equal to the "input" voltage of the radio. Rather, Bosch's counsel stated that voltage could merely be equal to the "nominal" voltage of the radio. Black & Decker still could not agree to this construction, arguing that the intrinsic record did not indicate that the DC output voltage be "equal" to anything and instead provided a variety of ranges and magnitudes. Bosch, on the other hand, contends that there is no support in the intrinsic record for a meaning of this term and instead resorts to extrinsic evidence. The Brodsky Declaration, however, is unreliable as discussed above. Even if the Court relied on that Declaration, the paragraph cited by Bosch does not support its assertion that the DC output voltage must be "equal" to any particular value.

[10] Headnote Citing References Black & Decker contends that the Court should construe this term to require only a DC output voltage "sufficient to power the radio." According to Black & Decker, claim 8 of the '059 patent, which depends from claim 1 of that patent, requires that "the magnitude of said first DC output voltage from the AC powered DC power supply is greater than 9.6 volts and less than 18 volts." Under Federal Circuit law, the Court presumes that this range is not a limitation in independent claim 1, Phillips, 415 F.3d at 1314-15 (citing Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed.Cir.2004)), and that independent claim 1 has a broader scope than dependent claim 8, Phillips, 415 F.3d at 1324-25 (citing Dow Chem. Co. v. United States, 226 F.3d 1334, 1341-42 (Fed.Cir.2000)).FN7

FN7. The Court recognizes that the doctrine of claim differentiation and other claim construction guides related to the comparison between independent and dependent claims are not hard and fast rules, but instead mere presumptions that a Court may apply. See Fantasy Sports Props., Inc. v. Sportsline.com, Inc., 287 F.3d 1108, 1115 (Fed.Cir.2002). Nonetheless, here, Bosch fails to rebut the presumption that a DC output voltage sufficient to power the radio is not limited to any particular value or range.

The specification further supports Black & Decker's contention that the patentee did not limit the claimed "DC output voltage sufficient to power the radio" to a particular range or value. The specification provides various embodiments of the claimed invention where the voltage supplied to the radio is not equal to any particular value. ('059 patent; col. 4, ll. 43-45 ("approximately 13.6 volts"); col. 4, ll. 52-55 ("a nominal 12 volts (i.e., 12 to 13.2 volts), is supplied to radio circuit board 33"); col. 4, ll.22-24 ("Modern battery operated professional power tools use battery packs ranging from 9.6 to 18 volts").) Further, in the prosecution history, the inventor provided that the "AC powered DC power supply generates an output voltage having a magnitude sufficient to power the radio," but did not provide that the DC output voltage be equal to any particular value or within any particular range. (*Id.* at FH059087.) Accordingly, the intrinsic record is clear that the term "an AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio" means "a direct current power supply in the enclosure powered by alternating current that generates a direct current output voltage sufficient to power the radio." In particular, the intrinsic record provides that the phrase "sufficient to power the radio" means just what it says, and the Court rejects Bosch's attempt to incorporate limitations from the extrinsic record into the plain language of the claims.

VII. "Power conversion circuit"

[11] Headnote Citing References Next, the Court addresses the term "power conversion circuit" in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker argues that the term "power conversion circuit" means "a circuit that changes electrical energy." Bosch proposes construing the term "power conversion circuit" as: "A plurality of DC/DC converters that convert DC at one voltage to DC at a different voltage, either higher or lower. A converter is distinctly different from a voltage regulator that holds the output voltage to a constant value under varying line or input voltage conditions or output current conditions."

B. The Court's Construction

Bosch makes two general arguments related to its proposed claim construction. First, Bosch argues that the Court should limit the term "power conversion circuit" to "a plurality of DC/DC converters that convert DC at one voltage to DC at a different voltage, either higher or lower." Second, Bosch contends that the Court should expressly exclude a voltage regulator from the scope of the "power conversion circuit" claim term.

The plain language of the claim term, and its surrounding claim language, do not mention any DC/DC converters. Rather, than claiming a DC/DC converter, or a combination of multiple DC/DC converters, the patentee, in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent chose to claim a type of a circuit. In the claims that depend from claim 1 of the '059 patent, however, the patentee further limited the "power conversion circuit." Claim 2 of the '059 patent requires that the "power conversion circuit" include a "first converter circuit for receiving the second DC output voltage from the removable DC power supply and generating a third DC output voltage having a magnitude sufficient to power the radio." Also, claim 3 depends from claim 2 and requires that the "power conversion circuit" further include a "second converter circuit for receiving the first DC output voltage from the AC powered DC power supply and generating a fourth DC output voltage that is suitable for charging the removable DC power supply." Further, claims 4 and 5 both depend from claim 3 and further limit whether each respective conversion circuit includes an "up-converter" or a "down-converter." Accordingly, the Court presumes that claim 1 is broader than its

dependent claims and does not contain the dependent limitations. See *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed.Cir.2003).

Bosch relies on the preferred embodiment described in the specification for its proposed construction. Bosch, however, does not point to any specific language in the specification requiring that the "power conversion circuit" contain the limitations of the preferred embodiment. Nor does Bosch point to any express disclaimer or disavowal of "power conversion circuits" other than those taught in the preferred embodiment. The Court declines to incorporate limitations from the preferred embodiment into the plain claim language. See *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1370 (Fed.Cir.2003) (holding that the district court improperly limited the claims according to the preferred embodiment).

The prosecution history of the '059 patent also discusses the "power conversion circuit" limitation. In overcoming the Examiner's rejection, Domes specifically explained the importance of "the provision of circuitry in the subject invention that allows the portable radio to operate off of various types of conventional, portable tool battery packs, regardless of output voltage." (R. 53-1; FH059086.) After explaining that claim 27 (in the application) provides for a "power conversion circuit," Domes proceeded to make clear that "[i]n the preferred embodiment, the power conversion circuit is implemented by a pair of DC/DC converters, one which adjusts, up or down, the output voltage from the AC powered DC power supply to the removable DC power supply, and the second that adjusts, up or down, the voltage supplied from the DC removable power supply to the radio." (*Id.*) Accordingly, Domes made it clear in the public record that the pair of DC/DC converters was merely the preferred embodiment of the claimed "power conversion circuit."

Bosch contends that Domes acquiesced to a construction of the "power conversion circuit" limited to a pair of DC/DC converters during the application process. In his reasons for allowance, the Examiner stated that "no combination AC powered radio/battery charger that containing [sic] a removable DC power supply with DC to DC converters producing various higher and lower voltage outputs than the DC output produced by the fixed-in-enclosure AC powered DC output was neither found, suggested, nor made evident by the prior art." (R. 53-1; FH059093.) Bosch contends that this reason for allowance demonstrates that the Examiner limited the construction of the term "power conversion circuit" to a pair of DC/DC converters. According to Bosch, because Domes failed to object to this reason for allowance, he acquiesced to this construction. Bosch's argument fails. The Examiner's statement, followed by Domes' silence, does not reflect a clear disavowal of any "power conversion circuit" other than a pair of DC/DC converters sufficient to rebut the presumption that a "power conversion circuit" has its plain and ordinary meaning. *Aquatex Indus., Inc. v. Techniche Solutions*, 419 F.3d 1374, 1381 (Fed.Cir.2005.) Earlier in the prosecution history, Domes plainly identified a pair of DC/DC converters as merely the preferred embodiment, and not a limitation to the claimed "power conversion circuit." (*Id.* at FH059087.) In the Examiner's reasons for allowance, the examiner noted that the Chen reference did not disclose "converter circuits" without specifying that those "converter circuits" had to be a pair of DC/DC converters. (*Id.* at FH059093.) Therefore, the Examiner was looking in the prior art for structures other than DC/DC converters that constituted the claimed "power conversion circuit." Further, the Examiner did not identify any prior art reference as disclosing a "power conversion circuit" other than a pair of DC/DC converters, such that Domes' claims were only patentable because they required DC/DC converters. Accordingly, the Examiner's reasons for allowance did not specifically limit a "power conversion circuit" to a pair of DC/DC converters.

[12] Headnote Citing References In light of the ambiguity in the Examiner's statement as well as Domes' previous prosecution history statement that the pair of DC/DC converters was merely a preferred

embodiment, Domes' failure to respond to the Examiner's reasons for allowance does not amount to acquiescence to the narrower construction proposed by Bosch. Congress amended the patent rules, on September 8, 2000, deleting the sentence that previously stated: "Failure to file such a [statement in response to the Examiner's reasons for allowance] does not give rise to any implication that the applicant or patent owner agrees with or acquiesces in the reasoning of the examiner." 37 C.F.R. s. 1.104; 65 Fed.Reg. 54671 (2000). Congress did not, however, include a requirement that an applicant must respond to an Examiner's reasons for allowance in order to avoid acquiescing to those reasons. Rather, the plain language of those rules does not address the issue of acquiescence to such reasons for allowance. Bosch relies on the legislative history of Congress's amendment to the rules, and the associated comments. The comments, however, provide that Congress's "revision of s. 1.104(e) does not provide any new policy, but rather tracks the state of the case law established in the decisions of the Supreme Court and the Federal Circuit." 37 CFR s. 1.104(e), comments; 65 Fed.Reg. 54633 (2000). Bosch does not point to any case law where the court found that an applicant acquiesced to a narrow limitation for a claim by failing to respond to an Examiner's reasons for allowance, when the reasons for allowance did not amount to a clear disclaimer of claim scope. Accordingly, while certain circumstances may require the Court to find that an applicant acquiesced to a narrow construction of a claim term set forth in the Examiner's reasons of allowance, the circumstances here, as discussed above, do not require or support such a finding.FN8

FN8. In particular, because claims depending from issued claim 1 contain limitations on the claimed "power conversion circuit," the Court presumes that those limitations are not incorporated into claim 1. Although a party may overcome that presumption by showing that the applicant disclaimed subject matter, *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1115 (Fed.Cir.2002), Bosch has failed to show that Domes ever disclaimed "power conversion circuits" other than a pair of DC/DC converters. Also, as discussed, earlier in the prosecution history, Domes plainly set forth that the DC/DC converters were a preferred embodiment, and not a limitation.

The Court next addresses Bosch's proposal that a "voltage regulator" is not within the scope of the claimed "power conversion circuit." The language of the claims does not discuss a "voltage regulator," nor does Bosch point to any portion of the intrinsic record that addresses such a device. Bosch fails to prove that the applicant ever expressly disclaimed or disavowed a "voltage regulator" as being a "power conversion circuit." Accordingly, the Court does not have to address this issue in construing the claims as a matter of law. Rather, whether or not a "voltage regulator" falls within the scope of the claimed "power conversion circuit," as construed by the Court, is a question of fact for the jury to decide. *Cybor*, 138 F.3d at 1454 (the comparison of the construed claims to the accused device is a question of fact).

Accordingly, the Court construes the term "power conversion circuit" as a "circuit that changes electrical energy." This construction closely tracks the plain language of the claim and is supported by the intrinsic record, specifically the language of other claims, such as the dependent claims, and Domes' statements in the prosecution history identifying the importance of a "power conversion circuit" and identifying a pair of DC/DC converters as the preferred embodiment.FN9

FN9. Bosch attacks Black & Decker's proposed construction as having less detail than the claim term. The Court notes that the detail that Bosch contends is absent from this construction is provided by the language of the claims following the "power conversion circuit" term.

VIII. "First converter circuit for receiving"

[13] Headnote Citing References The Court next turns to the term "first converter circuit for receiving" from claim 2 of the '059 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes that "a first converter circuit for receiving" is "a circuit included as part of the power conversion circuit." Bosch argues that "a first converter circuit for receiving" is "one of the plurality of DC/DC converters that adjusts, higher or lower, the second DC output voltage supplied from the battery and outputs a DC output voltage being of a voltage equal to the input voltage of the radio."

B. The Court's Construction

For the reasons discussed above regarding the term "power conversion circuit," the Court rejects Bosch's attempt to limit this term to a DC/DC converter. Further, for the reasons discussed in Section VI.B above, the Court declines to incorporate Bosch's proposed limitation of "equal to the input voltage of the radio" into this term. Claim 2 depends from claim 1, and the plain language of the claim specifies that the "first converter circuit" is part of the "power conversion circuit" of claim 1. Further, the surrounding language in claim 2 provides further definition for the function of the "first conversion circuit." Based on the language of the claims, a person of ordinary skill in the art at the time of the invention would understand the "first converter circuit" of claim 2 of the '059 patent to be "a circuit included as part of the power conversion circuit."

IX. "Power tool"

[14] Headnote Citing References The Court next addresses the term "power tool" from claim 7 of the '059 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing the term "power tool" as "an electrically powered tool." Bosch proposes that the term "power tool" means "a device that aids in accomplishing a task that is powered by an energy source."

B. The Parties Arguments

The Court agrees with Black & Decker that Bosch's proposed construction is overly broad because it would cover devices such as a bicycle or a toothbrush. Bosch derives its proposed construction from the dictionary definition of the word "tool" (i.e., a device that aids in accomplishing a task). The Federal Circuit in its en banc decision in Phillips recently warned against using dictionary definitions to construe claims when the intrinsic evidence would be clear to one of ordinary skill in the art. Phillips, 415 F.3d at 1321 ("The main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent").

The intrinsic record does not support the broad construction proposed by Bosch. The "Objects Of The Invention" section of the specification provides that: "It is yet another object to be able to power the radio with modular batteries normally used in professional portable power tools." ('059 patent, col. 1, ll. 55-57.) Further on, the specification states that the invention may include "an adapter engageable with a secondary direct current power source, such as a tradesworker's hand tool battery pack." ('059 patent, col. 2, ll. 28-30.) Black & Decker also points out that The New Shorter Oxford English Dictionary (1993) defines "power tool" as "an electrically powered tool." This confirms the understanding that one of ordinary skill in the art would have of the term "power tool" based on a reading of the intrinsic record, and specifically the

specification. Accordingly, the Court construes the term "power tool" as "an electrically powered tool."
FN10

FN10. Although this construction essentially recites the claim term itself, counsel for Bosch conceded at the Markman hearing that people understand what a "power tool" is. (Markman Transcript at 69:17-20.) Accordingly, the Court does not find it necessary to further define a term that the trier of fact will already understand.

X. "An automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply"
[15] Headnote Citing References Next, the Court turns to the term "an automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply" from claim 13 of the '059 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes that the term "an automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply" means:

At least one diode in conjunction with other components that supplies voltage to the radio from either the alternating current powered direct current power source or the removable direct current power supply. The diode component also supplies the removable direct current power supply with a voltage from the alternating current powered direct current power supply.

Bosch proposes construing the term as:

A first diode that receives a voltage from the AC powered DC power supply, a second diode that supplies an appropriate charge voltage to the removable DC power supply, and a third diode that feeds current from the removable DC power supply to the radio such that the three diodes operate the radio through the AC powered DC power supply, the removable DC power supply, or to simultaneously power the radio and charge the battery.

B. The Court's Construction

Bosch points to the three diodes in Figures 6, labeled 54, 55, and 56, that perform the three functions of this claim term and therefore require that the Court adopt its proposed construction. Bosch, however, does not point to any portion of the intrinsic record that requires that the Court limit this claim term to the embodiment disclosed in the specification.FN11 The Court rejects Bosch's attempt to limit this claim term according to the preferred embodiment disclosed in the specification. *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1286 (Fed.Cir.2005) ("it is axiomatic that without more the court will not limit claim terms to a preferred embodiment described in the specification"). The plain meaning of the claim does not in any way restrict this claim to the three particular diodes required by Bosch's construction. Further, the specification discloses an alternative embodiment of the claimed invention where the radio uses two diodes for power steering and two diodes for DC/DC converter isolation. ('059 patent, col. 5, ll. 6-10.) Therefore,

the specification does not limit automatic steering and isolation diode networks to the three diodes, each having a specific function, that Bosch's proposed construction requires. Accordingly, the Court rejects Bosch's construction because it is not supported by the intrinsic evidence and attempts to limit the claims to the preferred embodiment.

FN11. Bosch, in essence, wants the Court to construe this claim as if it were a means-plus-function limitation under 35 U.S.C. s. 112, para. 6, limiting the claimed structure to the disclosed structure in the specification corresponding to the claimed function. But, Bosch fails to argue, or in any way point out, how this claim term invokes s. 112, para. 6. Even if Bosch did make such an argument, that argument would fail. First, because this claim term does not recite the term "means," the Court presumes that this term does not invoke s. 112, para. 6. *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed.Cir.2004) ("the presumption flowing from the absence of the term 'means' is a strong one that is not readily overcome"). Next, this term expressly includes "an automatic steering and isolation diode network," and therefore identifies sufficient structure such that it does not invoke s. 112, para. 6. *Id.* at 1358-1363.

Black & Decker, on other hand, contends that a "diode network" can simply be "at least one diode in conjunction with other components." The Court finds that this proposed construction is too broad and not supported by the intrinsic record. In the Summary of Invention, the patentee explains that the automatic steering and isolation network has a "plurality of diodes" rather than a single diode. First, the patentee summarizes how one can use a single diode in the claimed invention: "A button causes the power supply to supply voltage through the diode, and the diode feeds current from the power supply to the radio receiver." ('059 patent, col. 2, ll.49-52.) Notably, the patentee does not use the term "automatic steering and isolation network" in the context of disclosing the use of a single diode. The patentee then goes on to explain that "alternatively" one could use a "plurality of diodes," which the patentee refers to as "an automatic steering and isolation network." The specification provides: "Alternately, a plurality of diodes may act as an automatic steering and isolation network to supply either AC supplied current, battery power or simultaneous power and battery charging from AC power." ('059 patent, col. 2, ll. 53-56.) Accordingly, the "Summary of Invention" provides that "an automatic steering and isolation diode network" must have more than one diode. FN12 See *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 864 (Fed.Cir.2004) (noting that statements that "describe the invention as a whole, rather than statements that describe only preferred embodiments" are commonly found in the "Summary of Invention" section of the specification and "are more likely to support a limiting definition of a claim term"). In addition, there is no teaching in the specification of using a single diode for the purposes required by this claim term. *Boss Control, Inc. v. Bombardier Inc.*, 410 F.3d 1372, 1378 (Fed.Cir.2005) ("While it is of course improper to limit the claims to the particular preferred embodiments described in the specification, the patentee's choice of preferred embodiments can shed light on the intended scope of the claims"). The Court construes the term "an automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply" as "a group or system of at least two diodes that supplies voltage to the radio from either the alternating current powered direct current power source or the removable direct current power supply and also supplies the removable direct current power supply with a voltage from the alternating current powered direct current power supply." FN13

FN12. This understanding is supported by the extrinsic evidence. Various patents in this field from slightly before and after the time of the invention, use the terms "network of diodes" and "diode network"

interchangeably, and therefore indicate that a "diode network" must contain multiple diodes, rather than a diode in connection with other components. (See U.S. Patent Nos. 4,492,935, 4,712,184, 6,055,180, and 6,172,383). Although the Court does not give this extrinsic heavy weight, the Court notes that this extrinsic evidence confirms the understanding of one of ordinary skill in the art based on reading the intrinsic record.

FN13. In addition, there is no teaching in the specification of using a single diode for the specific purposes required by this claim term.

XI. "An AC powered DC charger for powering said radio and charging a removable DC voltage power source"

[16] Headnote Citing References The Court next construes the term "an AC powered DC charger for powering said radio and charging a removable DC voltage power source" from claims 1 and 2 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker contends that the term "an AC powered DC charger for powering said radio and charging a removable DC voltage power source" means "a direct current charger powered by alternating current that is capable of powering the radio and is capable of charging the removable direct current voltage power source." Bosch proposes construing the term as "a charger that receives an AC voltage and transforms the AC voltage into a first DC output voltage, the first DC output voltage being of a voltage equal to the input voltage to power the radio and the first DC output voltage being transformed to a second DC output voltage equal to the input voltage of the battery to charge the battery."

B. The Court's Construction

As discussed above in Section VI.B., there is no support in the intrinsic record for requiring that any DC output voltage be equal to any particular value. Accordingly, Bosch's attempt to incorporate the limitation "equal to" into the plain and ordinary meaning of the claim language fails. Black & Decker's proposed construction closely tracks the claim language and is supported by the intrinsic record as discussed in Section VI.B. Accordingly, the Court construes the term "an AC powered DC charger for powering said radio and charging a removable DC voltage power source" as "a direct current charger powered by alternating current that is capable of powering the radio and is capable of charging the removable direct current voltage power source."

XII. "Radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto"

The term "radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto" appears in claims 9 and 10 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker asserts that the term "radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto" is a means-plus-function term under 35 U.S.C. s. 112, para. 6. Black & Decker contends that the claimed function is "receiving radio signals and generating electronic audio output signals responsive thereto" and the claimed structure is a "radio circuit board or the corresponding structure thereof." Bosch proposes construing this term as a "radio circuit board including at least a tuner circuit, having a voltage regulator, for receiving radio signals and an amplifier circuit for

generating audio output signals responsive thereto."

B. The Court's Construction

[17] Headnote Citing References [18] Headnote Citing References The parties agree that the term "radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto" is a "means-plus-function" limitation, invoking section 112, paragraph 6. That section of the Patent Act provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. s. 112, para. 6. The Federal Circuit has held that "[c]laim construction of a s. 112, para. 6 limitation includes identifying the claimed function and determining the corresponding structure or act disclosed in the specification." *Versa Corp. v. Ag-Bag Intern. Ltd.*, 392 F.3d 1325, 1328 (Fed.Cir.2004).

The parties agree that the claimed function is "receiving radio signals and generating electronic audio output signals responsive thereto." Further, the parties agree that the corresponding structure in the specification for performing this claimed function is the radio circuit board, identified as reference number 33 in Figures 6 and 7. The parties disagree, however, on whether the radio circuit board must necessarily include a tuner circuit, having a voltage regulator, that receives signals and an amplifier circuit that generates audio output signals. As discussed above in Section V.B. with respect to the term "radio receiver," there is no support in the intrinsic record for the Court limiting the radio receiver or the radio circuit board 33 to having an amplifier and a voltage regulator. Accordingly, the Court construes the term "Radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto" as a s. 112, para. 6 claim term where the claimed function is "receiving radio signals and generating electronic audio output signals responsive thereto" and the claimed structure is "the radio circuit board disclosed as item 33 in Figures 6 and 7, and any equivalent structure thereof."

XIII. "Ventilation opening"

[19] Headnote Citing References The term "ventilation opening" appears in claims 9 and 10 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker construes the term "ventilation opening" as "a permeable opening [may include air or moisture permeable material]." Bosch counters that the term means "an opening in the enclosure so constructed as to provide for the circulation of external air through the enclosure to remove heat, fumes, or vapor."

B. The Construction Of "ventilation opening"

Bosch argues that Black & Decker's construction of "ventilation opening" is too broad because it would include any opening in the exterior surface of the radio allowing air or water to pass through. As an example, Bosch explained that the mere fact that a radio would fill with water if dropped into a lake would indicate that it had a ventilation opening under Black & Decker's proposed construction. Indeed, Black & Decker's construction is broader than the meaning of "ventilation opening" to a person of ordinary skill in the art at the time of the invention, based on the intrinsic record.

On the other hand, Bosch seeks to incorporate into the term "ventilation opening" the requirement that the opening provide for the circulation of external air through the enclosure to remove heat, fumes, or vapor. Bosch, however, does not point to any portion of the intrinsic record that specifically requires the circulation of external air. Both sides reference Figure 2 in the specification, showing a louver 25 that has a layer of hydrophobic air permeable material. While this embodiment shows that the ventilation opening allows air to pass through it, it does not expressly require from where the air comes, or how the air is used. Both sides also reference the prosecution history of the '059 patent, where the examiner states that "the use of such ventilation is well known [to] reduce the build up of heat within the radio enclosure." (R. 53-1; FH059072.) This statement reflects the understanding of the examiner as to the meaning of "ventilation opening" and closely tracks the last portion of Bosch's proposed construction, "to remove heat, fumes, or vapor." The Court adopts the construction as set forth in the prosecution history, modified slightly to track Bosch's proposed construction. The Court does not include any requirement that the opening circulate external air, because the intrinsic record does not support that specific requirement. Also, the Court rejects Black & Decker's attempt to broaden the term "ventilation opening" to specifically allow for an opening that allows water to pass through it. Black & Decker does not point to any portion of the intrinsic record that supports such a construction. Conversely, the specification of the '925 patent emphasizes the importance of the radio enclosure being "moisture resistant" (col. 2, ll.25-27), "waterproof" (col. 2, ll.28-31), and "prevent[ing] moisture buildup" (col. 2, ll.32-34).

Accordingly, the Court construes the term "ventilation opening" as "an opening in the enclosure to provide for reducing the buildup of heat, fumes, or vapor, within the radio enclosure."

XIV. "First power source including an electrical cord engageable with an electrical outlet"
[20] Headnote Citing References The Court next turns to the term "first power source including an electrical cord engageable with an electrical outlet" from claims 9 and 10 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing the term "first power source including an electrical cord engageable with an electrical outlet" as "a power source having an electric cord." Bosch argues that the term means "an AC/DC power supply that receives an AC voltage through an electrical cord engageable with an electrical output and transforms that AC voltage into a DC output voltage powering said radio receiver means."

B. The Court's Construction

The Court agrees with Black & Decker and construes the term "first power source including an electrical cord engageable with an electrical outlet" as "a power source having an electric cord engageable with an electrical outlet." FN14 Bosch's only support for requiring that the first power source be an "AC/DC power supply that receives an AC voltage through an electrical cord" is from the discussion of the preferred embodiment in the specification. Bosch, however, does not point to any language in the specification requiring that the first power source be limited in such a way. The Court rejects Bosch's attempts to improperly limit this term to the embodiment disclosed in the specification. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed.Cir.2004) ("[T]his court has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.") Accordingly, the Court construes this term according to Black & Decker's proposed construction.

FN14. Although Black & Decker did not include the phrase "engageable with an electrical outlet" in its

proposed construction, it explained at the Markman hearing that this was only because it was construing the term, without that phrase. Black & Decker agreed that phrase should be part of the Court's construction if it is part of the term that the Court is construing.

XV. "An adapter"

[21] Headnote Citing References The term "an adapter" appears in claims 9 and 10 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker argues that the term "an adapter" means "a structure to accommodate different batteries." Bosch counters that the term means "a device for connecting parts that will not otherwise mate, so as to transform the contact configuration of a battery pack from a different manufacturer to fit in a socket."

B. The Court's Construction

At the Markman hearing, Bosch's counsel indicated that it could drop from its proposed construction the requirement that the battery pack be "from a different manufacturer." Black & Decker agrees with the first portion of Bosch's proposed construction-"a device for connecting parts that will not otherwise mate." Black & Decker, however, argues that Bosch's proposed limitation-"so as to transform the contact configuration of a battery pack to fit in a socket"-improperly limits the term "adapter." Black & Decker contends that the specification discloses two embodiments of an adapter: (1) a device that mates with batteries from different manufacturers; and (2) a device that accommodates battery packs with different voltages. Therefore, according to Black & Decker, Bosch's proposed construction is too narrow because it does not cover a device that accommodates battery packs with different voltages. The Court disagrees that the term "adapter" is so broad. The portion of the specification relied on by Black & Decker ('059 patent, col. 4, ll. 55-64) for supporting an adapter that accommodates battery packs with different voltages plainly provides for a DC/DC converter to change the voltage from the batteries, not the adapter. That portion of the specification teaches that the adapter 61 mates with the six contacts on socket 70 in order to match the requirements of particular battery pack 60. ('059 patent, col. 4, ll. 58-60.) It then continues to disclose a DC/DC converter. (Id. at col. 4, ll.61-64.) Black & Decker concedes that the use of DC/DC converters is a preferred embodiment of a "power correction circuit" that changes the electrical energy flowing to or from a battery pack. Accordingly, with respect to this embodiment relied on by Black & Decker, it is the DC/DC converter 68 that accommodates voltage of different voltages, and not the adapter 61. Therefore, the specification only discloses an adapter that mates with batteries with different contact configurations. (Id. at col. 4, ll. 34-39; ll.57-60.)

Black & Decker also relies on the doctrine of claim differentiation in arguing for a construction of "adapter" broader than the one proposed by Bosch. Claim 12 of the '925 patent requires a "means to permit use of battery packs lower or higher than the nominal operating voltage to be used by said radio, said means comprising a socket having a plurality of contacts mating with an adapter matching predetermined requirements of a DC source power battery pack, and a double pole single throw on/off switch controlling a DC/DC power source converter for supplying power to said radio." ('059 patent, col. 8, ll.36-35.) This claim language does not further limit the claimed adapter. Rather, it merely provides that an adapter is part of the claimed "means to permit use of battery packs lower or higher than the nominal operating voltage." The means also includes a DC/DC power source converter, which, as discussed above, is the portion of the "means" that converts the voltage. Nothing in this claim language requires that the "adapter" do anything other than accommodate batteries with different contact configurations. Accordingly, the Court does not find support in the intrinsic record for Black & Decker's broad construction of adapter and construes "adapter" as

"a device for transforming the contact configuration of a battery pack so as to connect parts that will not otherwise mate." FN15

FN15. The Court slightly varies Bosch's proposed construction to remove the requirement of a "socket." The Court does not find any support in the intrinsic record for incorporating the requirement of that additional structure into the plain claim language.

XVI. "Charger"

[22] Headnote Citing References The Court next turns to the term "charger" from claims 9 and 10 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker asserts that the term "charger" simply means "charger" and notes that it adopts the plain and ordinary meaning. Bosch argues that the Court should construe the term as "a device that receives the DC output voltage from the first power source and transforms that DC output voltage to a voltage equal to an input voltage of the battery to charge the battery."

B. The Parties' Arguments

Claim 9 of the '925 patent requires a "charger to charge said secondary rechargeable direct current power source from said first power source." Black & Decker contends that "charger" should simply have its plain and ordinary meaning, which Webster's New World College Dictionary, 4th Ed. (1999) provides as "an apparatus used to charge storage batteries." Bosch agrees that the "charger" charges batteries, but seeks to include additional limitations. Bosch, however, fails to point to any portion of the intrinsic record that requires a limitation on the term "charger" beyond its plain and ordinary meaning. The language of the claim itself plainly sets forth the scope of the term "charger"-an apparatus that charges the secondary rechargeable direct current power source from the first power source. Adopting Bosch's proposed construction would render claim 9 of the '925 patent nonsensical and incorporate limitations into the claim that are not present. Accordingly, the Court adopts Black & Decker's proposed construction of "charger" which is "'charger,' having its plain and ordinary meaning, which is 'an apparatus used to charge stored batteries.'" FN16

FN16. The Court provides the construction in this format because the surrounding claim language of the term "charger" in claim 9 so thoroughly defines that term, that any proposed construction other than the term "charger," itself, would render the claim redundant when the factfinder substituted the Court's construction into the claim.

XVII. "Operating range"

[23] Headnote Citing References The Court next construes the term "operating range" from claim 11 of the '925 patent.

A. The Parties' Proposed Constructions

Black & Decker proposes construing the term "operating range" as a "range typically required to operate radio." Bosch argues that the term "operating range" means "the voltage at which the radio operates."

B. The Court's Construction

The Court agrees with Black & Decker's proposed construction. Although the parties' proposed constructions are similar, substituting Bosch's proposed construction into the claim language would render the claim nonsensical because it would require a "voltage within the nominal voltage at which the radio operates." Based on the surrounding claim language, the term "operating range" must reflect a range, or some other disbursement of voltages, within which the claimed voltage can exist. Accordingly, the Court construes the term "operating range" as the "range typically required to operate the radio."

CONCLUSION

The Court construes the disputed terms from the asserted patents as follows:

The term "radio" in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent means "a radio receiver and an audio output component."

The term "radio receiver for receiving radio signals and generating audio output signals responsive thereto" in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent means "a portion of the radio for receiving radio signals and converting the signals to audio output signals."

The term "an AC powered DC power supply disposed in said enclosure for powering said radio and generating a first DC output voltage having a magnitude sufficient to power said radio" in claim 1 of the '059 patent means "a direct current power supply in the enclosure powered by alternating current that generates a direct current output voltage sufficient to power the radio."

The term "a power conversion circuit" in claim 1 of the '059 patent and claims 1 and 2 of the '925 patent means "a circuit that changes electrical energy."

The term "first converter circuit for receiving" in claim 2 of the '059 patent means "a circuit included as part of the power conversion circuit."

The term "power tool" in claim 6 of the '059 patent means "an electrically powered tool."

The term "an automatic steering and isolation diode network for supplying voltage to said radio from either said AC powered DC power supply or said removable DC power supply, and also for automatically supplying charging voltage from said AC powered DC power supply to said removable DC power supply" in claim 13 of the '059 patent means "a group or system of at least two diodes that supplies voltage to the radio from either the alternating current powered direct current power source or the removable direct current power supply and also supplies the removable direct current power supply with a voltage from the alternating current powered direct current power supply."

The term "an AC powered DC charger for powering said radio and charging a removable DC voltage power source" in claims 1 and 2 of the '925 patent means "a direct current charger powered by alternating current that is capable of powering the radio and is capable of charging the removable direct current voltage power source."

The term "radio receiver means for receiving radio signals and generating electronic audio output signals responsive thereto" in claims 9 and 10 of the '925 patent is a s. 112, para. 6 claim term where the claimed function is "receiving radio signals and generating electronic audio output signals responsive thereto" and the claimed structure is "the radio circuit board disclosed as item 33 in Figures 6 and 7, and any equivalent

structure thereof."

The term "ventilation opening" in claims 9 and 10 of the '925 patent means "an opening in the enclosure to provide for reducing the buildup of heat, fumes, or vapor, within the radio enclosure."

The term "first power source including an electrical cord engageable with an electrical outlet" in claims 9 and 10 of the '925 patent means "a power source having an electric cord engageable with an electrical outlet."

The term "adapter" in claims 9 and 10 of the '925 patent means "a device for transforming the contact configuration of a battery pack so as to connect parts that will not otherwise mate."

The Court construes "charger" in claim 9 of the '925 patent as " 'charger,' having its plain and ordinary meaning, which is 'an apparatus used to charge stored batteries.' "

The term "operating range" in claim 11 of the '925 patent means "range typically required to operate the radio."

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