

United States District Court
For the Northern District of California

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ACCO BRANDS USA, LLC,

No. C 11-04378 RS

Plaintiff

CLAIM CONSTRUCTION ORDER

v.

COMARCO WIRELESS
TECHNOLOGIES, INC.,

Defendant.

AND RELATED COUNTERCLAIMS

I. INTRODUCTION

In this patent case, both plaintiff Acco Brands USA, LLC (Acco) and defendant Comarco Wireless Technologies, Inc. (Comarco) are (or were) in the business of selling after-market power supplies that allow a user simultaneously to charge two different electronic devices of their choice, regardless of whether the two devices require the same energy voltage or accept a power charge via an adapter with the same physical configuration. Comarco holds five United States patents-in-suit relating to such devices: Nos. 6,831,848 ('848 patent), 7,863,770 ('770 patent), 7,495, 941 ('941 patent), 7,613,021 ('021 patent), and 7,999,412 ('412 patent). Acco sued Comarco, seeking a declaratory judgment that its products do not infringe on Comarco's patents, or in the alternative, that Comarco's patents are invalid or unenforceable against it. Comarco counterclaimed that Acco

1 is infringing each of the asserted patents. Pursuant to *Markman v. Westview Instruments, Inc.*, 52
2 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996), and Patent Local Rule 4-3, the
3 parties presented eleven terms found in the claims of the patents for construction by the Court. In
4 consideration of the briefing, the arguments presented at the *Markman* hearing, and for all the
5 reasons set forth below, the disputed terms are construed as follows.

6 II. BACKGROUND

7 Most portable electronic devices, such as laptop computers and cellular phones, require a
8 power supply to recharge them from time to time. A given device in the United States is typically
9 sold by the original equipment manufacturer (OEM) with a power supply that converts the
10 alternating current (AC) supplied by a wall outlet into the direct current (DC) and at the specific
11 voltage required by the device. Of course, the power supply must also plug into the device using
12 whatever adapter the device accepts. Different electronic devices require different types of current
13 at different voltages, and mate with power supplies using different adapters. Accordingly, it is
14 generally not possible to use the power supply purchased with, for example, one's laptop, to charge
15 one's cell phone. Indeed, if an individual owns two laptops from two different OEMs, the power
16 supplies that are provided by the manufacturer with the purchase of each device may be different
17 and may not be used interchangeably. This would normally require that individual to travel with a
18 separate power supply for each laptop, should they need to be charged.

19 The asserted patents provide improvements over the basic power supply such that one
20 utilizing each patent can power two separate electronic devices simultaneously, even where the
21 devices require current at different voltages and accept different physical adapters. The '021 patent
22 claims a "small form factor" power supply. It covers the power "brick," or rectangular box,
23 typically present as part of a power supply for charging portable electronic devices that houses the
24 necessary transformer(s) and circuit board(s) and teaches that the brick may be smaller than is
25 customary. The '848 patent discloses a programmable power supply for simultaneously providing
26 DC power to two different types of electronic devices simultaneously (i.e., a laptop and a cell
27 phone). The power supply can generate multiple output voltages as required by the devices to be
28 powered, and can be selected by the user.

1 The '941 patent concerns the use of the a single power supply to power, one at a time,
2 different models of electronic devices that may require different voltages and different physical
3 adapters. A number of different color-coded "tips" are provided along with the power supply, each
4 of which mates with the power supply to allow it to plug into a different electronic device. A switch
5 on the power supply allows a user to set the voltage of the DC output from the supply by selecting
6 the color-coded switch position that corresponds to the tip (and therefore device) being used.

7 The '770 patent allows the power supply simultaneously to provide different voltages of DC
8 power to two different devices by describing a y-cable that splits the power supplied by the brick,
9 such that one voltage travels down the first cable for connection with a first device and another
10 voltage travels down the second cable for connection with a second device. A tip detachably mates
11 with the end of each cable, allowing it to plug into the power input opening of a particular electronic
12 device. The '412 patent discloses a detachable tip that provides a signal to the electronic devices
13 representing the amount of power available to be supplied. Such a signal is necessary for use with
14 electronic devices that disable their battery charging function in its absence.

15 The parties have agreed upon the construction of twenty-four claim terms. They dispute the
16 construction of an additional eleven terms. In support of its proposed constructions, Comarco
17 presents a declaration of its President and Chief Executive Officer Thomas W. Lanni, who is also
18 the sole inventor of each of the patents-in-suit, which Acco moves to strike. At the *Markman*
19 hearing, the parties presented arguments on claim construction issues as well as on the motion to
20 strike. By a separate order issued contemporaneously, the motion to strike is denied.

21 III. LEGAL STANDARD

22 Claim construction is a question of law to be determined by the Court. *Markman*, 52 F.3d at
23 979. "Ultimately, the interpretation to be given a term can only be determined and confirmed with a
24 full understanding of what the inventors actually invented and intended to envelop with the claim."
25 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting *Renishaw PLC v. Marposs*
26 *Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). Accordingly, a claim should be
27 construed in a manner that "most naturally aligns with the patent's description of the invention." *Id.*

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1 The first step in claim construction is to look to the language of the claims themselves. “It is
2 a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the
3 patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water,*
4 *Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). A disputed claim
5 term should be construed in a manner consistent with its “ordinary and customary meaning,” which
6 is “the meaning that the term would have to a person of ordinary skill in the art in question at the
7 time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415
8 F.3d at 1312-13. The ordinary and customary meaning of a claim term may be determined solely by
9 viewing the term within the context of the claim’s overall language. *See id.* at 1314 (“[T]he use of a
10 term within the claim provides a firm basis for construing the term.”). Additionally, the use of the
11 term in other claims may provide guidance regarding its proper construction. *Id.* (“Other claims of
12 the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment
13 as to the meaning of a claim term.”).

14 A claim should also be construed in a manner that is consistent with the patent’s
15 specification. *See Markman*, 52 F.3d at 979 (“Claims must be read in view of the specification, of
16 which they are a part.”). Typically, the specification is the best guide for construing the claims. *See*
17 *Phillips*, 415 F.3d at 1315 (“The specification is . . . the primary basis for construing the claims.”);
18 *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“[T]he
19 specification is always highly relevant to the claim construction analysis. Usually, it is dispositive;
20 it is the single best guide to the meaning of a disputed term.”). This, however, “does not mean that
21 everything expressed in the specification must be read into all the claims.” *Raytheon Co. v. Roper*
22 *Corp.*, 724 F.2d 951, 957 (Fed. Cir. 1983). In limited circumstances, the specification may be used
23 to narrow the meaning of a claim term that otherwise would appear to be susceptible to a broader
24 reading. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341
25 (Fed. Cir. 2001); *Phillips*, 415 F.3d at 1316. Precedent forbids, however, a construction of claim
26 terms that imposes limitations not found in the claims or supported by an unambiguous restriction in
27 the specification or prosecution history. *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed.
28 Cir. 1998) (“[A] court may not import limitations from the written description into the claims.”);

1 *Comark Commc'ns., Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998) (“[W]hile . . .
2 claims are to be interpreted in light of the specification, it does not follow that limitations from the
3 specification may be read into the claims.”); *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d
4 1107, 1121 (Fed. Cir. 1985) (en banc) (“It is the *claims* that measure the invention”) (emphasis in
5 original). A final source of intrinsic evidence is the prosecution record and any statements made by
6 the patentee to the United States Patent and Trademark Office (PTO) regarding the scope of the
7 invention, if in evidence. *See Markman*, 52 F.3d at 980.

8 In most situations, analysis of this intrinsic evidence alone will resolve claim construction
9 disputes. *See Vitronics*, 90 F.3d at 1582 (Fed. Cir. 1996). The court may also, though, consider
10 extrinsic evidence, such as dictionaries or technical treatises, especially if such sources are “helpful
11 in determining ‘the true meaning of language used in the patent claims.’” *Phillips*, 415 F.3d at 1318
12 (quoting *Markman*, 52 F.3d at 980). Extrinsic evidence “consists of all evidence extrinsic to the
13 patent and prosecution history, including expert and inventor testimony.” *Id.* at 1317. All extrinsic
14 evidence should be evaluated in light of the intrinsic evidence. *See id.* at 1319. Ultimately, while
15 extrinsic evidence may aid the claim construction analysis, it cannot be used to contradict the plain
16 and ordinary meaning of a claim term as defined within the intrinsic record. *See Phillips*, 415 F.3d
17 at 1322-23. Once the proper meaning of a term used in a claim has been determined, that term must
18 have the same meaning for all claims in which it appears. *See Inverness Med. Switzerland GmbH v.*
19 *Princeton Biomeditech Corp.*, 309 F.3d 1365, 1371 (Fed. Cir. 2002).

20 IV. DISCUSSION

21 A. The ‘848 Patent

22 The ‘848 patent is directed to and claims a method for providing DC power to multiple
23 electronic devices. The parties dispute the meaning of the terms in bold in asserted method claim
24 33 of the ‘848 patent:

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26 33. A method of providing power to a plurality of electronic devices, comprising:
27 • receiving an input power from a power source;
28 • converting the input power by a **power conversion circuit** into an output power;

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- providing first operational power derived from the output power to a first electronic device corresponding to a first input power requirement of the first electronic device;
- providing simultaneously second operational power derived from the output power to a second electronic device corresponding to a second input power requirement of the second electronic device; and
- generating a **programming signal** for transmission to the **power conversion circuit** indicating the first input power requirement of the first electronic device to program the **power conversion circuit** to generate the first operational power.

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
1.	Power conversion circuit	A circuit which changes AC to DC to AC to DC; or DC to AC to DC.	A circuit converting electric energy from one form to another.

Comarco’s proposed construction reflects the two embodiments disclosed in Figures 7A and 51 of the ‘848 patent. Acco faults Comarco’s proposed construction for hewing too closely to these embodiments, cautioning that “a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.” *Superguide Corp. v. DirectTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). Acco argues that because the claim language does not require multiple conversions, it would be improper for Comarco to read in a limitation requiring them. Acco further faults Comarco’s proposed construction for its reliance on the Lanni declaration, in which the inventor states that he “used and understood the terms ‘converting’ and ‘conversion’ to mean changing AC to DC to AC to DC (or DC to AC to DC), as opposed to meaning that a circuit simply regulates a DC voltage, as in the case of a linear DC voltage regulator, or simply transforms the magnitude of an AC voltage by use of a transformer.” Lanni Decl. ¶ 8. Although the Lanni Declaration has not been stricken, as the inventor, his “subjective intent is of little or no probative value in determining the scope of the claims” and does not affect the construction given to this term. *Engel Indus. Inc. v. Lockformer Co.*, 96 F.3d 1398, 1405 (Fed. Cir. 1996).

That said, Comarco’s proposed construction has more support from the intrinsic record than Acco acknowledges. It is supported by the fact that for electrical power to pass from the input (primary) to the output (secondary) of any transformer, the input waveform must be an AC waveform. A person of ordinary skill in the art would therefore understand that, whether the input

1 is AC or DC, the power must be converted to AC form at some point before it can be accepted to the
2 transformer, hence the DC to AC to DC conversion included in Comarco’s construction.

3 By contrast, Acco’s proposed construction, “a circuit for converting electric energy from one
4 form to another” is much broader. The ‘848 patent, however, is consistently clear that it outputs
5 only DC power—the abstract describes “a programmable power supply for providing a regulated
6 DC output.” Both of Acco’s constructions would encompass a DC to AC conversion, which is
7 clearly not claimed by the patent, when read in light of the specifications. In comparison,
8 Comarco’s proposed construction is consistent with a device that only outputs DC power. Comarco
9 also argues that Acco’s proposed construction is inconsistent with the ‘848 patent specification
10 because it does not account for the situation in which the energy does not change “form,” but rather
11 both the input and output powers are DC (as in the embodiment disclosing a DC to AC to DC
12 conversion). At the claim construction hearing, Acco argued that the word “form” in its proposed
13 construction encompasses either changes between alternating and direct current or changes in the
14 magnitude of an alternating or direct current. At that time, Acco also offered an alternative
15 construction, “converting electric energy with one set of characteristics to electric energy with
16 another set of characteristics,” reflecting its understanding that the word “form” in its initial
17 proposed construction includes a conversion of electric energy from AC to DC (or vice versa) as
18 well as a change in the magnitude of a given AC or DC charge. Adopting this understanding, either
19 of Acco’s proposed constructions would include the DC to AC to DC embodiment because the
20 magnitude of the DC input is different from the magnitude of the DC output, therefore they would
21 be in different “form” or have a differing “characteristic.”

22 Ultimately, Acco’s proposed constructions are so broad that they find no grounding in the
23 patent’s specifications. For example, they encompass a device that outputs AC power, or one that
24 inputs DC power and outputs DC power simply by changing the magnitude of the DC power, thus
25 rendering the transformer that only accepts AC power unnecessary. Reading the patent as a whole,
26 Comarco’s proposed construction is the only one that does not contradict the specification. It
27 therefore will be adopted.

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No.	Claim Term	Comarco's Proposed Construction	Acco's Proposed Construction
2.	Programming signal	A control signal which sets the voltage magnitude or current magnitude of the output power.	A time dependent variation of a physical quantity used to represent a data signal to be interpreted and control an output.

The term “programming signal” appears in claim 33 of the ‘848 patent. Although the parties’ initial proposed constructions seem to differ, at oral argument the common ground between them became apparent. Comarco argues that its construction is directly supported by the ‘848 patent’s specification and its function in claim 33. For example, it is consistent with the formula for output voltage given as an example in the specification wherein output voltage equals 3.2 times the magnitude of the programming signal. Acco’s primary objection to Comarco’s proposed construction is that it could theoretically encompass a programming signal that permanently set, whereas Comarco’s proposed construction only describes a variable programming signal. Comarco argues that Acco’s proposed construction is misleading because the phrase “time dependent variation” implies that the signal varies as a function of time, while the programming signal in fact does not vary during the period of time that a given operational device is to receive a certain operational power. Comarco also believes the language “physical quantity used to represent a data signal” to be confusing and ambiguous. At oral argument, Comarco insisted that this phrase would restrict the claim to describing only a digital programming signal, and would improperly narrow claim 33 to exclude analog or resistive programming signals.

A proposed construction that would be consistent with the patent’s specification and the term’s function in claim 33 would indicate that while the programming signal is not permanently fixed, it does not vary as a function of time. Accordingly, the term “programming signal” will be construed as: “A control signal, subject to change, which sets the voltage magnitude or current magnitude of the output power.”

B. The ‘770 Patent

The ‘770 patent is directed to and claims a power supply for converting an input voltage into two different output voltages. The parties agree that claim 11 is representative of the asserted claims of the ‘770 patent, and dispute the meanings of the terms that are in bold:

11. **Power supply equipment**¹ comprising:

- **circuitry for converting** an input voltage to first and second DC voltages . . .
- a first cable . . . affixed with a first connector,
- a first connector adapter having a first plurality of contacts and a second plurality of contacts . . . , the first plurality of contacts being detachably mateable with the first connector, the second plurality of contacts . . . detachably mating with at least one particular model of a first electronic device;
- a second cable . . . affixed with a second connector; and
- a second connector adapter having a third plurality of contacts and a fourth plurality of contacts . . . , the third plurality of contacts being detachably mateable with the second connector, the fourth plurality of contacts . . . detachably mating with at least one particular model of a second electronic device,
- wherein the circuitry provides power sufficient to simultaneously power the first electronic device at the first DC voltage and the second electronic device at the second DC voltage.

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
3.	Power supply equipment	A portable power source, including accompanying cables, connectors and connector adapters, for providing DC power to portable electronic devices such as laptop/notebook computers and cellular telephones.	No construction necessary.

Generally, a claim preamble “is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” *Catalina Mkt’g Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). Where the preamble “adds no limitations to those in the body of the claim, the preamble is not itself a claim limitation and is irrelevant to proper construction of the claim.” *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434 (Fed. Cir. 2000). By contrast, “[i]f the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is necessary to give life, meaning, and vitality to the claim, then the claim preamble should be construed as if in the balance of the claim.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999). “The effect preamble language should be given can be resolved only on review of the entirety of the patent to gain an understanding of what the inventors

¹ The term “power supply equipment” also appears in asserted claims 21, 22, 27, and 28 of the ‘941 patent and asserted claims 21 of the ‘412 patent. The parties agree that the Court’s construction of this term as used in the ‘770 patent claims will apply to the term’s use in the other patents.

1 actually invented and intended to encompass by the claim.” *Corning Glass Works v. Sumitomo*
2 *Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989).

3 Here, the “Background of the Invention” section of the ‘770 patent “makes clear that the
4 inventor[] w[as] working on the particular problem of [a portable power source for use with portable
5 electronic devices] not on general improvements in conventional [power supply equipment].” *Id.*
6 That section of the patent describes the invention as one making improvements over “[p]rior art
7 power supplies . . . used for powering microelectronics such as the class of computers commonly
8 known as ‘notebook’ computers . . . [and] even smaller personal computers referred to as ‘sub-
9 notebooks.” ‘770 Patent, 1:55-62. The background also notes that “[c]ellular telephones are also
10 extensive users of batteries.” ‘770 Patent, 2:43. The “Summary of the Invention” further describes
11 the invention as providing “an improved small form factor power supply that is . . . programmable
12 to supply power for a variety of different devices.” ‘770 Patent, 2:52-54. “To read the claim in light
13 of the specification indiscriminately to cover all types of [power supply equipment] would be
14 divorced from reality.” *Corning Glass Works*, 868 F.2d at 1257.

15 When the patent is read in its entirety, it becomes apparent that the inventor intended to
16 cover a power supply that is lighter and more portable than the prior art chargers for portable
17 electronics such as laptop computers. Acco argues that the same considerations, such as small size,
18 that apply to the design of a power supply for portable electronics are equally applicable to non-
19 portable electronic devices with sleek and aesthetically pleasing form factors, such as Apple’s iMac
20 desktop computers. Acco’s argument ignores its own stated position that iMac computers contain
21 an integrated power supply and therefore are not compatible with inventions covered by the patent.
22 More to the point, if the term is not construed, as Acco prefers, the claims would not only cover
23 power supplies for non-portable consumer electronics, they would encompass power supply
24 equipment of *any* sort, including for industrial machinery, appliances, or building back-up systems.
25 As is evident from the terms of the patent itself, this was not the inventor’s intent.

26 Construing the preamble language “power supply equipment” is necessary to give life,
27 meaning, and vitality to the claim. Comarco’s proposed construction does so. It is also worth
28 noting that claim 11 of the ‘770 patent, as well as asserted claims 21 of the ‘941 patent and 21 of the

1 '412 patent, specifies that the power supply equipment is comprised of cables, connectors, and
 2 connector adapters. Comarco's construction of power supply equipment as "[a] portable power
 3 source, including accompanying cables, connectors and connector adapters, for providing DC power
 4 to portable electronic devices such as laptop/notebook computers and cellular telephones" is,
 5 therefore, adopted.

No.	Claim Term	Comarco's Proposed Construction	Acco's Proposed Construction
4.	Circuitry for converting	Circuitry which changes AC to DC to AC to DC; or DC to AC to DC.	Circuitry that receives and transforms input power.

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 9 Both parties agree that their construction arguments for "circuitry for converting" in the '770
 10 patent mirror those for "power conversion circuit" in the '848 patent. The specifications of these
 11 two patents are nearly identical, but their claims differ. Comarco has proposed a construction for
 12 "circuitry for converting" that is nearly identical to its proposed construction for "power conversion
 13 circuit." Acco, on the other hand, proposes two different definitions for these two terms, which it
 14 argues "reflect the differences between the claims of those two patents." Acco Opening Markman
 15 Brief, Dkt. 38, at 14. Yet, Acco does not explain how the claims are different or why those
 16 differences would require differing constructions. Given that the parties have repeated the same
 17 construction arguments that they presented over the construction of "power conversion circuit," the
 18 analysis and result is the same. Comarco's proposed construction is adopted for the reasons set
 19 forth in the discussion of "power conversion circuit," above.

20 C. The '941 Patent

21 The '941 patent is directed to and claims power supply equipment capable of providing two
 22 different output voltages selectable by a switch. The parties have agreed that claim 21 is
 23 representative of the asserted claims of the '941 patent (disputed terms are in bold):
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- 25 21. **Power supply equipment** comprising:
- 26 • a **power converter** which generates a first output voltage when a switch is in a first position
 and a second output voltage when the switch is in a second position;
 - 27 • a first converter indicator indicating that the switch is in the first position;
 - 28 • a second converter indicator indicating that the switch is in the second position;

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- a first connector adapter for mating the **power converter** with a first appliance which accepts as its input voltage the first output voltage, the first connector adapter bearing a first adapter indicator corresponding to the first converter indicator; and
- a second connector adapter for mating the **power converter** with a second appliance which accepts as its input voltage the second output voltage, the second connector adapter bearing a second adapter indicator corresponding to the second converter indicator.

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
5.	Power Converter	An assembled unit encasing a circuit which changes AC to DC to AC to DC; or DC to AC to DC; includes associated cables.	A unit that transforms electrical power having a first set of attributes into a second set of attributes.

The parties adopt the arguments they presented for the term “power conversion circuit” in the ‘848 patent and “circuitry for converting” in the ‘770 patent for the term “power converter” in the ‘941 patent. For this term, however, Comarco has added the phrases “an assembled unit encasing” and “includes associated cables” to its proposed construction. Comarco’s only evidence for adding the first phrase is the declaration of inventor Lanni of his subjective intent, which, as already discussed, is unpersuasive. As to the addition of the phrase “includes associated cables” the simple fact noted by Comarco that figure 27 of the ‘941 patent shows cables is an insufficient basis to import this single detail from the specification into the claim language. Accordingly, the Court adopts Comarco’s proposed construction without these two additional phrases: “a circuit which changes AC to DC to AC to DC; or DC to AC to DC.”

D. The ‘021 Patent

The ‘021 patent is directed to a “small form factor power supply” which is achieved through the use of a “low profile core.” The parties dispute the meaning of those terms, and initially the meaning of the term “enclosing,” though they now both acknowledge that it need not be construed. The initially disputed terms are in bold:

28. A **small form factor** power supply comprising:
- a switching transformer having a low profile core and primary and secondary coils;
 - a printed circuit board adapted to have circuit components mounted thereon, wherein the printed circuit board defines certain wiring patterns that are coupled to the primary and secondary coils of the switching transformer that are magnetically coupled to the **low profile core**;

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- a rectifier circuit that is coupled to the secondary coil to provide a DC power source capable of delivering at least seventy five watts; and
- a housing **enclosing** the switching transformer, the printed circuit board, the rectifier circuit, and the circuit components, wherein the product of the length and width of the housing is less than approximately fourteen square inches.

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
6.	Small form factor power supply	A portable power source, for providing DC power to portable electronic devices such as laptop/notebook computers and cellular telephones, which is small enough to fit in a shirt pocket or calculator pocket of a brief case.	The phrase “small form factor” is indefinite. A “power supply” is a circuit capable of supplying power to an electronic device.

Although, as discussed above, a claim preamble is generally not limiting, here both parties have requested that the term “small form factor power supply” from the preamble of claim 28 be construed. *Catalina Mkt’g Int’l, Inc.*, 289 F.3d at 808 (Fed. Cir. 2002). Acco argues that the phrase “small form factor” is indefinite, and therefore requests that all claims using the term “small form factor” should be found invalid for indefiniteness. In order for a patent to be valid, 35 U.S.C. § 112(b) (formerly § 112 ¶2) states that “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” The Federal Circuit has explained that this provision requires an applicant to set forth his invention “with sufficient particularity and distinctness.” *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1348 (Fed. Cir. 2002). “[T]he purpose of the definiteness requirement is to ensure that claims delineate the scope of the invention using language that adequately notifies the public of the patentee’s right to exclude.” *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007). As a patent is presumed to be valid, “[t]he burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.” 35 U.S.C. § 282(a). “[T]he evidentiary burden to show facts supporting a conclusion of invalidity is one of clear and convincing evidence.” *Young*, 492 F.3d at 1345.

Claims are indefinite only where they are “not amenable to construction” or are “insolubly ambiguous.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1373 (Fed. Cir. 2011). A claim is insolubly ambiguous when “it fails to provide sufficient clarity about the bounds

1 of the claim to one skilled in the art.” *Id.* at 1373. “If the meaning of the claim is discernible, even
2 though the task may be formidable and the conclusion may be one over which reasonable persons
3 will disagree, [the Federal Circuit has] held the claim sufficiently clear to avoid invalidity on
4 indefiniteness grounds.” *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1372, 1375 (Fed.
5 Cir. 2001). “[W]here a claim is ambiguous as to its scope [the Federal Circuit has] adopted a
6 narrowing construction when doing so would still serve the notice function of the claims.”
7 *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1253 (Fed. Cir. 2008).

8 Acco argues that the term “small form factor power supply” in the preamble of claim 28 is
9 indefinite because a person of ordinary skill in the art would have no way of knowing what
10 constitutes an infringing “form factor” as compared to one that does not infringe. Essentially, their
11 argument is that an inventor would have no way of knowing how small is small. To construe this
12 term and determine whether it is indefinite, the court considers “primarily the intrinsic evidence,
13 viz., the claim language, the specification, and the prosecution history.” *Young*, 492 F.3d at 1346.
14 The ‘021 patent specifies certain dimensions for the small form factor supply: it may be “mounted
15 within a high impact plastic container dimensioned for example, as a right parallelepiped of
16 approximately 2.85 x 5.0 x 0.465 inches, thereby providing a power supply that can readily be
17 carried in a shirt pocket.” ‘021 Patent, 3:14-23. The ‘021 patent also refers to the power supply
18 case as having a surface area “of about 14 square inches and a thickness of about 0.436 inches.”
19 ‘021 Patent, 17:40-42. Claim 28 reiterates that the width of the housing “is less than approximately
20 fourteen square inches.” The “Background of the Invention” section also states that it is “desirable
21 to have a package as thin as possible and designed to fit within a standard pocket on a shirt or a
22 standard calculator pocket on a brief case.” ‘021 Patent, 2:34-36. Given this intrinsic evidence
23 supplying greater specificity to the phrase “small form factor,” Comarco argues that the term is
24 subject to a narrowing construction.

25 In light of the elaboration on the size of the “small form factor” supplied by the patent itself,
26 Comarco proposes that the size of the “small form factor” should be construed to be “small enough
27 to fit in a shirt pocket or calculator pocket of a brief case.” “The fact that [Comarco] can articulate a
28 definition supported by the specification, however, does not end the inquiry.” *Halliburton Energy*

1 *Servs.*, 514 F.3d at 1251. Acco counters that such a construction would not serve to make the
2 meaning of the term “small form factor” any more definite because “it fails to clarify the scope” of
3 the invention covered. Acco Opening Markman Brief at 18. Acco argues that the size of the
4 comparison items are similarly ambiguous and would therefore fail to inform a person of ordinary
5 skill in the art of whether they were infringing on Comarco’s invention. After all, both shirt and
6 calculator pockets come in varying sizes. Acco is correct that “[e]ven if a claim term's definition
7 can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot
8 translate the definition into meaningfully precise claim scope.” *Halliburton Energy Servs.*, 514 F.3d
9 at 1251. Accordingly, Acco argues that because the ‘021 patent provides no guidance on what
10 actual measurements constitute either a “small form factor,” shirt pocket, or calculator pocket of a
11 briefcase, the term is indefinite.

12 The patent itself does supply some guidance as to the meaning of “small form factor.” The
13 ‘021 patent discloses in the “background of the invention” section that its purpose is to “reduce the
14 size and weight of the power supply” and describes the prior art over which it seeks to improve as
15 having the dimensions of “about eight inches long, four inches wide and about four inches high.”
16 ‘021 Patent, 2:23-24, 2:7-8. It would be apparent, therefore, to a person of ordinary skill in the art
17 that a “small form factor” is smaller than about eight inches long by four inches wide and four
18 inches high. In light of the statutory presumption of the validity of an issued patent, “close
19 questions of indefiniteness in litigation involving issued patents are properly resolved in favor of the
20 patentee.” *Exxon Research & Eng’g Co.*, 265 F.3d at 1380. Claims containing “technical terms are
21 not per se indefinite when expressed in qualitative terms without numerical limits.” *Modine Mfg.*
22 *Co. v. Int’l Trade Comm’n*, 75 F.3d 1545, 1557 (holding that the claim term “relatively small” is not
23 indefinite), *abrogated on other grounds by Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,
24 *Ltd.*, 234 F.3d 558 (Fed. Cir. 2000). Although “[i]t is usually incorrect to read numerical precision
25 into a claim from which it is absent,” the Federal Circuit has upheld claim constructions relying on
26 *approximate* dimensions included in the specification to construe terms of relative size. *Id.* at 1551
27 (construing “the claim term ‘relatively small’ as meaning a hydraulic diameter in the range of about
28 0.015-0.040 inch”). In light of the guidance provided by the specification of the ‘021 patent, “small

1 form factor” is therefore construed as “a portable power source, for providing DC power to portable
 2 electronic devices such as laptop/notebook computers and cellular telephones, that is smaller than
 3 existing power supplies of about eight inches long by four inches wide and four inches high, which
 4 is small enough to fit in a shirt pocket or calculator pocket of a brief case.”

5 This construction imposes an upper limit on the size of the claimed invention, but not a
 6 lower limit. Neither party has addressed the question of whether the term “small form factor” may
 7 be indefinite for failure to identify the bounds of its invention on the lower end. *See Halliburton*
 8 *Energy Servs.*, 514 F.3d at 1253. Questions of invalidity due to indefiniteness may again be
 9 considered after claim construction, however, so the Court need address the issue at this time. *See,*
 10 *e.g., id.* (affirming ruling on indefiniteness during summary judgment); *Honeywell, Int’l, Inc. v. ITC*,
 11 341 F.3d 1332, 1342 (Fed. Cir. 2003) (affirming ruling on indefiniteness reached after trial).

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
7.	Low profile core	A magnetic core which has a height smaller than its length or width.	The term is indefinite.

15 Acco again argues that the term “low profile core” is indefinite. Comarco proposes the
 16 construction, “a magnetic core which has a height smaller than its length or width.” Comarco
 17 contends that this construction is supported by Figures 12 through 16 of the ‘021 patent, which
 18 illustrate an improved transformer core in accordance with an embodiment of the invention and in
 19 which the transformer core has a length and width of 1.26 inches and height of 0.21 inches, as well
 20 as Figures 17 through 22, depicting an alternative embodiment in which each transformer core has a
 21 length and width of 1.113 inches and a height of 0.21 inches. The only argument Acco advances in
 22 favor of indefiniteness is that Comarco’s proposed definition relies too heavily on the examples
 23 provided in the patent’s figures. Acco notes that the claim, not the specification, distinguishes what
 24 infringes from what does not, and portrays Comarco as attempting to save the claim by providing
 25 examples in the specification of supposedly “low profile cores” without providing any guidance as
 26 to what makes these cores “low profile.” *See Johnson & Johnston Assocs., Inc. v. R.E. Serv. Co.,*
 27 *Inc.*, 285 F.3d 1046, 1052 (Fed. Cir. 2002) (“Consistent with its scope definition and notice
 28 functions, the claim requirement presupposes that a patent applicant defines his invention in the

1 claims, not in the specification. After all, the claims, not the specification, provide the measure of
2 the patentee's right to exclude.”).

3 Comarco’s proposed construction accords with the Federal Circuit’s longstanding
4 recognition that “[t]he descriptive part of the specification aids in ascertaining the scope and
5 meaning of the claims inasmuch as the words of the claims must be based on the description. The
6 specification is, thus, the primary basis for construing the claims.” *Phillips v. AWH Corp.*, 415
7 F.3d 1303, 1315 (Fed. Cir. 2005) (quoting *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448,
8 452 (Fed. Cir.1985)). The proposed construction of “a magnetic core which has a height smaller
9 than its length or width” is consistent with the embodiments described in the specification, which
10 both have a height smaller than their length or width. Furthermore, it is consistent with the
11 definition of “low profile” when used as an adjective for an object provided by the Oxford English
12 Dictionary, “lower or slimmer than is usual for objects of its type.” *See oxforddictionaries.com; see*
13 *also Phillips* 415 F.3d at 1318 (“Because dictionaries, and especially technical dictionaries,
14 endeavor to collect the accepted meanings of terms used in various fields of science and technology,
15 those resources have been properly recognized as among the many tools that can assist the court in
16 determining the meaning of particular terminology to those of skill in the art of the invention.”). As
17 the proposed construction is expressed in terms of a set of ratios rather than specific dimensions, it
18 may embrace some “low profile cores” whose height would make them unusable in the invention,
19 “[h]owever, that is an issue of enablement, and not indefiniteness.” *Exxon Research & Eng’g Co.*,
20 265 F.3d at 1382 (“there is nothing indefinite about the claim language at issue in this case simply
21 because it covers some embodiments that may be inoperable.”). Given the consistency between the
22 “ordinary and customary meaning” of the term and the embodiments in the specification, it would
23 be reasonable for a person of ordinary skill in the art to give “low profile core” the construction
24 proposed by Comarco. That construction is therefore adopted by the Court.

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No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
8.	Enclosing	Surrounding on all sides.	The term is indefinite.

In their briefing, the parties disagree over the construction of the term “enclosing,” which appears in claim 28 of the ‘021 patent. Comarco requests that the term be construed to mean “surrounding on all sides,” consistent with the dictionary definition of “enclosing.” *See American Heritage Dictionary of the English Language* 606 (3d Ed. 1992). Acco argues that all claims using the term should be held invalid for indefiniteness, because a person of ordinary skill in that art would have no way of knowing what was meant by the use of “enclosing” as the number of sides required to enclose something depends on the nature of the thing being enclosed. Acco provided an example of this supposed ambiguity—a fence enclosing sheep in a field would not effectively enclose pigeons. At the claim construction hearing, both parties conceded that the term did not need to be construed, as it could be understood in terms of its common usage. Accordingly, no construction is required.

E. The ‘412 Patent

Claim 21 of the ‘412 patent is directed towards power supply equipment utilizing a detachable tip that includes circuitry for telling a given electronic device how much power the power supply can provide. With the disputed terms in bold, it reads:

21. **Power supply equipment** comprising:

- an adapter to convert power from a power source, external to the adapter, to DC power for powering an electronic device;
- a cable having proximal and distal ends, the proximal end being electrically coupled to the DC power from the adapter and the distal end terminating in a connector; and
- a **tip** which includes:
 - an input connector which is detachably mateable to the connector to receive the DC power;
 - an output connector which is detachably mateable to the electronic device;
 - a plurality of conductors to transfer the DC power from the input connector to the output connector to provide the DC power to the electronic device; and
 - **power indication circuitry** to transmit to the electronic device via the output connector a **power output indication signal representative of an amount of power** available to be supplied to the electronic device by the adapter.

No.	Claim Term	Comarco's Proposed Construction	Acco's Proposed Construction
9.	Tip	Device that converts the mechanical configuration of one connector to that of another connector.	Device interposed between an adapter and an electronic device.

The term “tip” is used only in the ‘412 patent and is absent from the other patents-in-suit. The ‘770 patent, however, uses the term “connector adapter,” which the parties have agreed to construe as “a device that converts the mechanical configuration of one connector to that of another connector.” Comarco proposes to adopt the same construction for the term “tip” as for “connector adapter.” In support of this construction, Comarco points to the intrinsic evidence of the ‘412 patent’s specification in connection with Figure 3, which provides that the tip “may be inserted into a power output opening of the electronic device” and “may have different shapes and sizes, depending up[on] the shape and sizes of the power input openings of the respective electronic devices [] being powered.” ‘412 Patent, 3:42-53. Comarco also provides extrinsic evidence in support of its proposed construction in the form of a declaration from inventor Lanni stating that he used the term “connector adapter” in some earlier patents and “tip” synonymously in other later patents such as ‘412 to refer to the same device. Lanni explains, “[o]ne reason that I transitioned from using the term ‘connector adapter’ to the term ‘tip’ in my patent applications is that during the same timeframe, Comarco commercially used the term ‘tip,’ as evidenced by its U.S. Trademark Registration No. 2956150 for ‘SMARTTIP®’ on ‘connector adapters for use with programmable power supplies.’”

Acco, in support of its proposed construction, looks only to passages from the ‘412 patent itself, which state that a “tip includes an input connector which detachably mates with a connector which is electronically coupled to the power adapter,” while “[a]n output connector of the tip detachably mates with the electronic device.” ‘412 Patent, Abstract. Elsewhere in the patent, the tip is described as “coupling DC power adapters to electronic devices.” ‘412 Patent, 1:16-17. Acco argues that these passages only support a construction of the term tip describing it as a “device interposed between an adapter and an electronic device” but do not support the additional requirement included in Comarco’s proposed construction, that the tip “convert[] the mechanical

1 configuration of one connector to that of another connector.” While an inventor may act as his own
2 lexicographer, Acco disputes that the intrinsic record of the ‘412 patent reflects the
3 interchangeability of the terms “connector adapter” and “tip.” Nor does Acco agree that claim 21
4 necessarily requires that the tip perform the mechanical conversion described by Comarco’s
5 proposed construction.

6 Acco’s proposed construction ignores an important function provided by the tip described in
7 the ‘412 patent: to convert the mechanical configuration of a standard or universal connector to the
8 specific mechanical configuration of the connector serving as the power input opening of a
9 particular electronic device. This conclusion is apparent even if the Lanni declaration is considered
10 self-serving and therefore given little weight. The intrinsic evidence shows that a major function of
11 the tips described in the ‘412 patent is to allow a single connector from the power supply to mate
12 detachably with different electronic devices, requiring the tips to “have different shapes and sizes,
13 depending up[on] the shape and sizes of the power input openings of the respective electronic
14 devices [] being powered.” ‘412 Patent, 3:42-53. These different shapes and sizes constitute the
15 “conver[sion] of the mechanical configuration of one connector to that of another connector”
16 described in Comarco’s proposed construction. Essentially, putting different tips on the output of
17 the power supply allows it to connect to the different shaped holes into which the electronic devices
18 accept power. If the tips did not accomplish this mechanical conversion, the invention would not be
19 able to function as described in the patent’s specification because the user would be stuck trying to
20 put the same proverbial round peg into a square hole. If the power supply cannot be plugged into
21 the desired electronic device, it is useless. Accordingly, the Court adopts Comarco’s proposed
22 construction.

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No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
10.	Power indication circuitry	Elements of an electrical network that provide a power output indication signal.	This term is a means plus function limitation. The corresponding function is “transmit[ing] to the electronic device via the power output indication signal representative of the amount of power available to be supplied to the electronic device by the adapter. The corresponding structure is controller 950 and equivalents thereof.

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Acco argues that the term “power indication circuitry” should be construed as a “means plus function” limitation. Under 35 U.S.C. § 112(f) (formerly known as § 112 ¶ 6), “[a]n 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.” “[A] claim limitation that actually uses the word ‘means’ will invoke a rebuttable presumption that § 112 ¶ 6 applies. By contrast, a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112 ¶ 6 does not apply.” *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1319 (Fed. Cir. 2004) (internal quotation omitted). The claim term here lacks the word “means,” so, to prevail in its construction, Acco must “demonstrate[] that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*, 649 F.3d 1350, 1356 (Fed. Cir. 2011). “Thus, the presumption flowing from the absence of the term ‘means’ is a strong one that is not readily overcome.” *Id.*

Acco insists that the term “power indication circuitry” should be construed as a means plus function limitation because the element contains functional language and does not provide the structure to perform that function. Acco’s view is that the term explains nothing more than that there is something in this device that transmits information about the power. It contends that because the device is an electrical power supply, it is by definition made up of nothing but circuitry,

1 such that the use of the word “circuitry” adds nothing to the understanding of the structure required
 2 by the claim element.

3 The Federal Circuit has held “that a claimed ‘circuit,’ coupled with a description of the
 4 circuit’s operation in the claims, connoted sufficiently definite structure to skilled artisans to avoid
 5 the application of § 112, ¶ 6.” *Inventio*, 649 F.3d 1350 at 1358. In claim 21 of the ‘412 patent, the
 6 objective of the “power indication circuitry” is “to transmit to the electronic device via the output
 7 connector a power output indication signal representative of an amount of power available to be
 8 supplied to the electronic device by the adapter.” “The claim language here [] does not merely
 9 describe a circuit; it adds further structure by describing the operation of the circuit.” *Massachusetts*
 10 *Institute of Tech. v. Abacus Software*, 462 F.3d 1344, 1356 (Fed. Cir. 2006). The claim language
 11 itself describes the desired output of the circuit and the path over which the output is transmitted.
 12 The ‘412 patent discloses the use of a 950 controller as well as an alternative embodiment of the
 13 invention in which a tip transmits a power input indication signal without the use of a controller.
 14 See ‘412 Patent 4:35-63. Furthermore, Acco has failed to identify any cases in which the strong
 15 presumption that Section 112(f) does not apply when the terms “circuit” are used in the claim
 16 instead of “means for.” Accordingly, the Court finds that Comarco’s “description of the operation
 17 of the circuit is sufficient to avoid 112 ¶ 6” and adopts its proposed construction of “power
 18 indication circuitry.” *Id.*

No.	Claim Term	Comarco’s Proposed Construction	Acco’s Proposed Construction
11.	Power output indication signal representative of an amount of power	An analog or digital signal that provides information about the power output level of the adapter.	A character string representative of the maximum output power capable of being provided to an electronic device.

25 Acco’s proposed construction is too narrow, as the phrase “a character string representative
 26 of” would have the effect of limiting the claim to only digital signals. Acco argues that its proposed
 27 construction is consistent with the only embodiments disclosed by the specification, which have a
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1 controller 950 and use a character string or value to perform this task. Acco's contention is
2 inconsistent with the intrinsic evidence of the language of the '412 patent itself, which states that the
3 power output signal may be an analog voltage signal or a digital signal (including, but not limited to,
4 a character string), depending on the embodiment. See '412 Patent, 4:35-46. At oral argument,
5 Acco conceded that they would accept an alternative to their proposed construction that embraced
6 both digital and analog signals. As Comarco's proposed construction does so, consistent with the
7 language of the patent itself, the Court adopts its proposed construction.

8 V. CONCLUSION

9 The disputed claim terms of the patents-in-suit are construed as set forth above. A further
10 case management conference is hereby scheduled for Thursday, April 18, 2013 at 10:00 a.m. in
11 courtroom three of the above-captioned court.

12 IT IS SO ORDERED.

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14 Dated: 3/6/13

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16 RICHARD SEEBORG
17 UNITED STATES DISTRICT JUDGE
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