

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

ORANGE ELECTRONIC CO. LTD.,

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*Plaintiff,*

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v.

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CIVIL ACTION NO. 2:21-CV-00240-JRG

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AUTEL INTELLIGENT TECHNOLOGY,  
CORP., LTD.,

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*Defendant.*

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**CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER**

Before the Court is the Opening Claim Construction Brief filed by Orange Electronic Co. Ltd. (“Orange”) (Dkt. No. 61), the Responsive Claim Construction Brief filed by Autel Intelligent Technology Corp., Ltd. (“Autel”) (Dkt. No. 69), and Orange’s Reply Claim Construction Brief (Dkt. No. 70). The Court held a hearing on December 16, 2022. (Dkt. No. 78).

On June 30, 2021, Orange filed a Complaint, asserting infringement against Autel Intelligent Technology Corp., Ltd. (“Autel”) of U.S. Patent No. 8,031,064 (the “’064 Patent”). Generally, the ’064 Patent relates to “an identification rewritable tire pressure detecting apparatus.” ’064 B1 Patent at 1:10–11. The parties dispute the scope of five terms from five claims, and Autel challenges two of the terms as indefinite.<sup>1</sup> Having considered the parties’ briefing and arguments of counsel at the hearing, the Court resolves the disputes as follows.

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<sup>1</sup> The briefing addresses a sixth term (i.e., “identification”), but the parties advised the Court before the hearing that they resolved the dispute.

## I. BACKGROUND

### A. The Technology

FIG. 4 (below) of the '064 Patent shows a prior-art tire pressure detecting system and setting apparatus. '064 B1 Patent at 2:29–30. At the time of the application, tire pressure monitoring systems typically included a pressure detector (74) in each tire (82) and a monitoring apparatus (72) that receives wireless signals from the detectors (74). *See* '064 B1 Patent at 1:25–39. The detectors must sometimes be replaced, such as if a detector fails. *See id.* at 1:18–20 (noting the average lifetime of a detector is five years). If a detector fails, a setting apparatus (90) is used to inform the monitoring apparatus (72) of the replacement detector's identification. A receiving module (92)<sup>2</sup> receives wireless signals from the new detector (74D) and sends the signal to the controller (94), which provides the necessary information to the monitoring apparatus (72). *See id.* at 1:39–51.

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<sup>2</sup> The text identifies (92) as a “receiving module,” but FIG. 4 labels (92) as a “low frequency transmitter.” This appears to be a drafting mistake given that (a) the connected antenna is receiving a signal from (74D) and (b) the presence of a “low-frequency transmitter” with its own antenna to the left of (92).

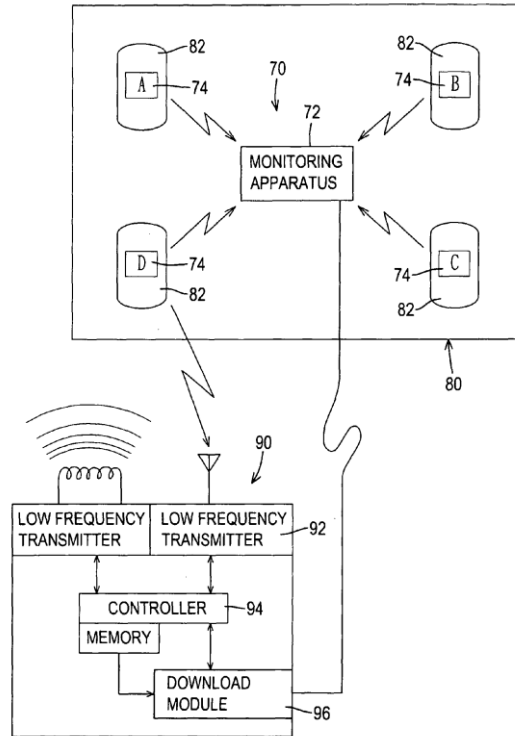


FIG.4

According to the '064 Patent, prior-art setting devices are specific to the manufacturer of the detector, which is inconvenient. *Id.* at 1:52–57. The '064 Patent addresses that problem by teaching a detector to which can be written the identification of the detector to be replaced. *Id.* at 1:65–2:2. While the prior art of FIG. 4 teaches reconfiguring the monitoring apparatus, the '064 Patent teaches configuring the new detector with the replaced detector's information.

### **B. The Prosecution History**

The prosecution history of the '064 Patent includes three reexaminations and a petition for *inter partes* review (“IPR”). In October 2011, the '064 Patent issued with 13 claims. '064 B1 Patent at 4:61–6:42. Over the next three years, the United States Patent and Trademark Office (the “PTO”) issued first and second reexamination certificates cancelling, adding, and amending claims. '064

C1 Patent at 1:1–2:59<sup>3</sup>, <sup>4</sup>; '064 C2 Patent at 1:1–4:52.<sup>5</sup> In May 2020, the PTO issued a third reexamination certificate with the claims now at issue. '064 C3 Patent at 1:1–8:35.<sup>6</sup> Finally, in September 2021, Autel petitioned for IPR, but the Patent Trial and Appeal Board (the “PTAB”) denied institution. (*See generally* Dkt. No. 66-10, Decision Denying Institution of *Inter Partes* Review (Apr. 8, 2022)).

### C. The Claims at Issue

The disputed terms and phrases appear in Claim 23 and Claims 26–29 as found in the third reexamination certificate. Claims 23, 28, and 29 are directed to “[a] tire pressure detector identification updating method,” with each generally reciting the steps used by a setting apparatus to update the identification of a new detector. *See, e.g.*, '064 C3 Patent at 4:4–64 (Claim 23); *see also id.* at 7:19–8:29 (Claim 28). Claims 26–27 recite the structure of a tire pressure detector and a portable setting apparatus. *See id.* at 5:3–6:7 (Claim 26); *id.* at 6:8–18 (Claim 27).

The parties dispute the scope of five terms or phrases from these claims:

- “judging, by the setting apparatus, consistency of the update identification” in Claim 23;
- “transmitting module” and “receiving module” in Claims 26–27, which Autel challenges as indefinite; and

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<sup>3</sup> Exhibit A to Orange’s opening brief includes the '064 Patent as issued and each of the three reexamination certificates. To differentiate between the patent as issued and the certificates, this Opinion will include the kind codes (e.g., B1, C1, C2, C3) in citations.

<sup>4</sup> (Dkt. No. 61-1 at 10–11).

<sup>5</sup> (*Id.* at 12–14).

<sup>6</sup> (*Id.* at 15–19).

- “RF signal” and “records”/“recorded” in Claims 23 and Claims 26–29.

## II. GENERAL LEGAL STANDARDS

“[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). As such, if the parties dispute the scope of the claims, the court must determine their meaning. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1317 (Fed. Cir. 2007); *see also Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996), *aff’g*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc).

Claim construction, however, “is not an obligatory exercise in redundancy.” *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Rather, “[c]laim construction is a matter of [resolving] [] disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims . . . .” *Id.* A court need not “repeat or restate every claim term in order to comply with the ruling that claim construction is for the court.” *Id.*

When construing claims, “[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13). Courts must therefore “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Id.* (citations omitted). The “ordinary and customary meaning of a claim term 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, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313. This “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1312). For certain claim terms, “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314; *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (“We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history.”). For claim terms with less-apparent meanings, courts consider “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean . . . [including] the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*

### **III. THE LEVEL OF ORDINARY SKILL IN THE ART**

The level of ordinary skill in the art is the skill level of a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In resolving the appropriate level of ordinary skill, courts consider the types of and solutions to problems encountered in the art, the speed of innovation, the sophistication of the technology, and the education of workers active in the field. *Id.* Importantly, “[a] person of ordinary skill in the art is also a person of ordinary creativity, not an automaton.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Here, only Autel proffers a level of ordinary skill for claim-construction analysis, which Orange does not dispute. Specifically, Autel contends that a skilled artisan “would have had at

least a bachelor’s degree in electrical engineering, computer engineering, or a related subject, as well as two or more years of experience in the field.” (Dkt. No. 69 at 5). The Court adopts Autel’s proposed level of ordinary skill for purposes of construing the disputed terms and phrases.

**IV. THE DISPUTED TERMS**

**A. “judging, by the setting apparatus, consistency of the update identification” (Claims 23, 29)**

Orange’s Construction	Autel’s Construction
Plain and ordinary meaning.  Alternatively, “the setting apparatus determines if the identification stored into the new tire pressure detector is consistent with the old identification read from the old tire pressure detector”	“comparing, by the setting apparatus, the update identification newly recorded in the rewritable memory unit with the old identification of the old tire pressure detector and determining whether they are the same”

This phrase is the last limitation of Claim 23. ’064 C3 Patent at 4:57–60. It is part of an earlier-recited “verifying” step, whereby after recording “update information” in the new detector the setting apparatus receives a wireless signal from the new detector and then “judges . . . consistency” of the new information and the old. *Id.* at 4:52–60.

The specification references this concept in connection with FIG. 3.

[A]fter the external identification of the old tire pressure detector has been memorized in the new identification rewriteable tire pressure detector, the serviceman may use the setting apparatus (20) to receive wireless signals from the new . . . detector. The setting apparatus (20) judges the consistence [sic] of the identifications acquired from the old tire pressure detector and the new [detector]. When the identifications is not consistence [sic], the setting apparatus performs the step of writing the old identification into a new identification rewriteable tire pressure detector (62) again.

’064 B2 Patent at 4:33–44.

The dispute centers on the meanings of “judging” and “consistency.” According to Autel,

Orange “intends to argue that the device doing the judging (i.e.,] the ‘setting apparatus’) does not itself need to compare (i.e.,] ‘judge’) the relevant information to come to a conclusion on consistency.” (Dkt. No. 69 at 6). Autel asserts that, for example, Orange might argue that the setting device could obtain information about consistency from another device and still meet this limitation. (*Id.*). Autel also argues that “consistency” should be construed as “the same” to avoid confusion and provide a “logical limit” on the phrase’s scope. (*Id.* at 8 n.4). Orange contends that Autel’s construction imports “comparing” and “the same” into the claim and runs contrary to the position that it took in its petition for IPR. (Dkt. No. 61 at 15). Also, during the hearing, Orange informed the Court that Orange does not contend something other than that the setting device does the “judging.” (Trial Tr. 12/16/2022 at 2:13–16).

The Court agrees with Orange. Regarding “consistency,” the plain meaning of that term is not “the same.” Autel concedes as much by contending that the term should be construed to avoid indefiniteness. Here, “consistency” only means “compatibility,” and Autel points to nothing in the record that changes that meaning.<sup>7</sup> In fact, during the hearing, Autel suggested the proper construction might be “the same or similar enough” so that the new detector is seen as the old detector. (Trial Tr. 12/16/2022 at 7:13–23).

The Court finds no reason to construe “judging” as “comparing.” The applicable meaning of “judging” is “to form an opinion.” Comparing the old identification with the new identification may be one way to “judge the consistency,” but the Court is not persuaded that it is the *only* way. Autel correctly concludes that the setting apparatus must do the “judging.” Each of Claim 23’s recited steps requires that it be performed “by the setting apparatus.” Thus, the setting apparatus

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<sup>7</sup> Autel does not argue lexicography.



cannot simply obtain the judgment or determination about consistency from another device.

The Court accordingly construes this term to have its plain and ordinary meaning.

**B. “transmitting module” (Claims 26, 27)**

Orange’s Construction	Autel’s Construction
<p>35 U.S.C. § 112(f) does not apply.</p> <p>Plain and ordinary meaning. In the alternative, “transmitter circuit.”</p>	<p>Indefinite.</p> <p>This term should be construed in accordance with 35 U.S.C. § 112(f) and is indefinite under 35 U.S.C. § 112(b).</p> <p><b>Function:</b> transmitting a radio frequency (RF) signal</p> <p><b>Structure:</b> No corresponding structure disclosed in the specification, and therefore indefinite.</p>

*1. Whether “transmitting module” is governed by § 112 ¶ 6<sup>8</sup>*

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112 ¶ 6 (pre-AIA); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Under 35 U.S.C. § 112 ¶ 6, a structure may be claimed as a “means . . . for performing a specified function,” and an act may be claimed as a “step for performing a specified function.” *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002). When it applies, § 112 ¶ 6 limits the scope of the functional term “to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.” *Williamson*, 792 F.3d at 1347.

Section 112 ¶ 6 does not apply to all functional claim language. There is a rebuttable

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<sup>8</sup> Autel references 35 U.S.C § 112(f). Given that the patent has an effective filing date before March 16, 2013, the Court references the pre-AIA version of the statute.

presumption that § 112 ¶ 6 applies when the claim language includes “means” or “step for” terms, and a rebuttable presumption that it does *not* apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. These presumptions stand or fall according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (noting that § 112 ¶ 6 does not apply when “the claim language, read in light of the specification, recites sufficiently definite structure” (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (noting that § 112 ¶ 6 does not apply when “the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure”); *Masco Corp.*, 303 F.3d at 1326 (observing that § 112 ¶ 6 does not apply when the claim includes an “act” corresponding to “how the function is performed”); *Personalized Media Commc’ns, LLC v. I.T.C.*, 161 F.3d 696, 704 (Fed. Cir. 1998) (highlighting that § 112 ¶ 6 does not apply when the claim includes “sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term means.” (internal quotation marks and citation omitted)). *See also Williamson*, 792 F.3d at 1350 (noting that “[m]odule’ is a well-known nonce word that can operate as a substitute for ‘means’ in the context of § 112, para. 6”).

Here, Orange contends, “[T]he transmitting module would have been understood by a person of ordinary skill in the art to have definite meaning as the name for structure.” (Dkt. No. 61 at 15). Notably, Orange does not identify that structure in its briefing. Instead, Orange argues that, during prosecution and reexamination proceedings, the examiners, PTAB, and requestors all

understood the structure of the “transmitting module.” (*Id.* at 15–16). Further, Orange emphasizes that Autel failed to argue that the term is a means-plus-function limitation during the previous proceedings. (*Id.* at 16).

Autel responds that “‘transmitting module’ is nothing more than a verbal construct devoid of structure” and is shown in the patent “only as a nondescript black box.” (Dkt. No. 69 at 10–11 (citing ’064 B1 Patent at 2:65–3:1, fig. 2)). With respect to Orange’s arguments, Autel counters that the PTO had no reason to address whether the term was governed by § 112(f) and that it did not seek a construction of the term in its petition for IPR. (*Id.* at 12).

The Court finds that Autel’s position is more persuasive. Under *Williamson*, the question is whether a skilled artisan would understand “transmitting module” not just as structure, but as *the name* for structure. See *Williamson*, 792 F.3d at 1349 (noting that § 112 ¶ 6 does not apply when “the words of the claim are understood by persons of ordinary skill in the art *to have sufficiently definite meaning as the name for structure*” (emphasis added)). In this case, Orange proffers no evidence of how such a person would understand “transmitting module.” Instead, Orange points to the *absence* of evidence for support, noting that during the various proceedings no stakeholder suggested this term was a means-plus-function term.

Regarding its alternative construction of “transmitter circuit,” Orange provides no basis for that construction either from the specification or the prosecution history. Orange appears to rely on U.S. Published Application 2007/0055411 (Nihei), which Autel cited in its petition for IPR, but Orange fails to explain why a skilled artisan would understand “transmitting module” that way. Accordingly, given that Orange has not shown this term would be understood by a skilled artisan as having sufficiently definite meaning as *the name for structure*, “transmitter module” must be considered a means-plus-function limitation.

2. *Whether the specification clearly links or associates structure with the recited function*

a. The recited function

Construing a means-plus-function limitation involves two steps. “The first step . . . is a determination of the function of the means-plus-function limitation.” *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). Based on the express words of the claims at issue, the recited function is “transmitting a radio frequency (RF) signal, wherein the RF signal comprises the detection result and the identification of the identification rewritable tire pressure detector.” *See, e.g.*, ’064 C3 Patent at 5:13–17; *see also id.* at 6:18–23 (same).

b. The corresponding structure

“[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof.” *Medtronic*, 248 F.3d at 1311. A “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.” *Id.* The focus of the “corresponding structure” inquiry is not merely whether a structure is capable of performing the recited function, but whether the corresponding structure is “clearly linked or associated” with that function. *Id.* The corresponding structure “must include all structure that actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). Section 112 does not permit “incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

The disclosure of corresponding structure need not be express. *See, e.g.*, M.P.E.P. § 2185 (June 2019) (noting that “[u]nder certain limited circumstances, the written description does not

have to explicitly describe the structure (or material or acts) corresponding to a means- (or step-) plus-function limitation to particularly point out and distinctly claim the invention”). “Disclosure of structure corresponding to a means-plus-function limitation may be implicit in the written description if it would have been clear to those skilled in the art what structure must perform the function recited in the means-plus-function limitation.” *Id.*

For example, in *In re Dossel*, the limitations at issue read “*means for reconstructing* the current distributions of the volume elements which are situated on said surfaces on the basis of said measured values,” and “*reconstruction means* for determining the current distributions at said predetermined volume locations from said stored values.” 115 F.3d 942, 946 (emphasis added). The court considered whether the structure underlying the “reconstructing” function was “adequately described in the written description such that the invention is particularly pointed out and distinctly claimed.” *Id.*

Concluding that the underlying structure was adequately described as a “computer,” the court reasoned:

Neither the written description nor the claims use[] the magic word “computer,” nor do they quote computer code that may be used in the invention. Nevertheless, when the written description is combined with [the claims], the disclosure satisfies the requirements of § 112 P 2. As the written description discloses, the clauses in question claim a device that receives digital data words from a memory and data input from a user. The device then computes, from the received data, the current distribution by mathematical operations . . . , and then outputs the result to a display . . . .

Clearly, a unit which receives digital data, performs complex mathematical computations and outputs the results to a display must be implemented by or on a general or special purpose computer (although it is not clear why the written description does not simply state “computer” or some equivalent phrase). To bolster this result we note that, in the medical imaging field, it is well within the realm of common experience that computers are used to generate images for display by

mathematically processing digital input. Therefore, because of the specific facts in this case, the structure underlying the function recited in [the limitations] is adequate for us to hold that the requirements of § 112 P 2, that the invention be particularly pointed out and distinctly claimed, are satisfied.

*Id.* at 946–47. *See also Atmel Corp. v. Info. Storage Devices*, 198 F.3d 1374, 1378 (Fed. Cir. 1999) (“For purposes of § 112 P 2, it is the disclosure in the specification itself, not the technical form of the disclosure that counts.”).

Here, not only are a transmitter and antenna necessary “to transmit a radio frequency (RF) signal” that comprises usable data, but transmitters (and for that matter, receivers) are inherent to the art or, in the words of *In re Dossel*, “well within the realm of common experience.” 115 F.3d at 947; *see, e.g.*, ’064 B1 Patent fig.4; (Dkt. No. 69-3, U.S. Patent 6,927,679 fig.2 (showing a tire pressure monitoring apparatus 50 with a transmit/receive circuit 51 and antenna 52, and four tire pressure sensors 10, 20, 30, 40, each with a connected antenna 16, 26, 36, 46)); (Dkt. No. 69-4, U.S. Patent 6,920,785 fig.3 (disclosing a sensor with a transmitter 12 connected to an antenna 31)). Further, transmitters and antennas are inherently disclosed in FIGS. 1–3 given the representation of electromagnetic waves between the setting apparatus (20) and the detector (10).

The specification also discloses the necessary interface between the transmitter and the control and data lines. As explained by the specification, “the transmitting module is controlled by the micro-processing module,” and the transmitted RF signal comprises “detection results” and may have a present “identification.” ’064 B1 Patent at 2:65–3:2. The transmitted RF signal cannot be modulated to carry data without first receiving that data from some source.

“[I]nterpretation of what is disclosed must be made in light of the knowledge of one skilled in the art.” *Atmel Corp.*, 198 F.3d at 1380. Autel’s position is devoid of any analysis explaining how a skilled artisan would understand the disclosure. Instead, it simply alleges that the patent

never “identifies” any structure for performing the function. However, as noted in *In re Dossel*, the question is disclosure to a skilled artisan. 115 F.3d at 946.

Although it is not clear why the written description does not simply state “transmitter” or “antenna,” based on the intrinsic record, a skilled artisan would understand the “transmitting module” as a transmitter with a control and data interface and a connected antenna. As a result, the term is not indefinite because the specification adequately discloses that structure to a person of ordinary skill in the art.

**C. “receiving module” (Claims 26–27)**

Orange’s Construction	Autel’s Construction
<p>Plain and ordinary meaning: in the alternative, “receiver circuit”</p> <p>In addition, this element is not a means-plus-function element or indefinite</p>	<p>This term should be construed in accordance with 35 U.S.C. § 112(f) and is indefinite under 35 U.S.C. § 112(b).</p> <p><b>Function:</b> receiving radio frequency (RF) signals</p> <p><b>Structure:</b> No corresponding structure disclosed in the specification, and therefore indefinite.</p>

The parties’ arguments concerning this term track those made for “transmitting module,” and the Court reaches a similar conclusion. First, Orange provides no evidence or argument as to how a skilled artisan would understand “receiving module” as having sufficiently definite meaning as the name for structure. Accordingly, under *Williamson*, this term is governed by 35 U.S.C. § 112 ¶ 6.

Second, the specification adequately discloses to a skilled artisan that the receiving module is a receiver with a connected antenna and an interface. For example, “[t]he receiving module (23) is electronically connected to the control module (21),” ’064 B1 Patent at 3:35–36, which requires

a control interface. Further, the module “receives the RF signal from the . . . tire pressure detector (10) [and] sends the received RF signal to the control module (21),” *id.* at 3:39–40, which a skilled artisan as defined by Autel would understand requires an RF receiver and an antenna.

Finally, this inherently disclosed structure is clearly associated with the recited function of “receiv[ing] the RF signal . . . and send[ing] the RF signal to the control module.” *Id.* at 5:35–38 (Claim 26); *see also id.* at 6:41–44 (Claim 27). Accordingly, the term is not indefinite.

**D. “RF signal” (Claims 23, 26–29)**

Orange’s Construction	Autel’s Construction
Plain meaning applies and no construction necessary. Alternatively, “a signal in the radio frequency range.”	“wireless signal using radio frequencies”

This term appears in all five claims. Claim 23, for example, recites “receiving [a] radio frequency (RF) signal from [an old detector] by the receiving module and retrieving the old identification . . . from the RF signal, and storing the old identification in the setting apparatus.” ’064 C3 Patent at 4:13–17. Similarly, Claims 26 and 27 require a tire-pressure detector with a transmitting module to transmit an RF signal comprising a detection result and the identification of the detector. *Id.* at 5:13–17; *see also id.* at 6:19–23. These claims also require a setting apparatus with a receiving module to receive the RF signal from the detector and send the RF signal to a control module. *Id.* at 5:35–38; *see also id.* at 6:41–44. Autel contends that, according to the claim language, sending the RF signal from the receiving module to the control module must happen wirelessly.

The Court rejects Autel’s contention. A skilled artisan would understand from the context of the claims and the specification that “send[ing] the RF signal to the control module” concerns



the usable data transferred from the detector to the setting device—that is, the “detection result” and the “identification” of the detector. *See, e.g.*, ’064 B1 Patent at 3:39–42 (noting “[t]he receiving module (23) sends the received RF signal to the control module (21) thereby the control module (21) has the preset identification of the . . . tire detector”). The RF signal itself is not useful to the control module, which is not described as having an RF receiver nor is the receiving module disclosed as having an RF transmitter to *send* the signal to the control module. Finally, nothing in the specification suggests that the communication link between the receiving module and control module is wireless.

The Court construes “send the RF signal to the control module” in Claims 26–27 as “send the detection result and the identification of the identification rewritable tire pressure detector to the control module.” Otherwise, the Court construes “RF signal” to have its plain and ordinary meaning.

**E. “records” and “recorded” (Claim 23, 26–29)**

Orange’s Construction	Autel’s Construction
Plain and ordinary meaning. Alternatively, “records” means “stores or saves information,” and “recorded” means “having been stored or saved”	“recording information without replacing other information”

The parties dispute whether the scope of “recording” information includes overwriting old information with new information. According to Autel, “record” and “overwrite” do not overlap. (Dkt. No. 69 at 27). Orange, however, contends “without replacing other information” improperly narrows the meaning of the term. (Dkt. No. 61 at 25 (arguing that Autel’s construction “would read words into the claim”)).

By using “recording” in its construction, Autel implicitly acknowledges that the plain and

ordinary meaning of “record” does not include “without replacing other information.” Otherwise, there would be no need to include a variation of the disputed term in the construction itself. *See also Overwrite*, YOURDICTIONARY, <https://www.yourdictionary.com/overwrite> (last visited Dec. 22, 2022) (“To record (data) in a file, on a disk, etc. in such a way as to replace data that is already there.”). Thus, Autel’s position must be based on disavowal or lexicography, which it must show clearly and unambiguously. *See Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (noting that the only exceptions to words of claims having their plain and ordinary meaning are “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution,” and “[b]oth exceptions require a clear and explicit statement by the patentee”).

Autel relies on the claims and prosecution history. Regarding the claims, Autel points to the uses of “record” and “overwrite” in Claims 16 and 18. Claim 16 requires the detector to either (1) *record* the updated information in memory or (2) *overwrite* the preset identification in the memory. (Dkt. No. 69 at 28 (citing ’064 C3 Patent at 2:16–23)). Similarly, Claim 18 recites either (1) *overwriting* the preset identification in the memory unit or (2) *recording* the updated information. (*Id.* (citing ’064 C3 Patent at 3:36–45)). Autel argues that the foregoing shows that these terms have distinct meanings without any overlap. *Id.*

As to the prosecution history, Autel points to Orange’s addition of conditional statements to claim language in an August 14, 2014 amendment to overcome an obviousness rejection. (Dkt. No. 69 at 29). According to Autel, adopting Orange’s construction would lose meaning and “fly in the face of the argument Orange used to save its patent during reexamination.” (*Id.*).

Autel does not show clear and unambiguous disavowal or redefinition of the terms. Contrary to Autel’s assertion, Orange’s position does not render any claim limitations superfluous.

For example, in Claim 18, if “the preset identification” is “stored therein,” it must be overwritten and will no longer exist. Yet, if “the preset identification” is not “stored therein,” there is no requirement to overwrite anything and the information may be recorded *anywhere* in the apparatus. Although these may be minor distinctions, such does not make these limitations superfluous.

Autel’s prosecution-history argument is not persuasive. Such argument is merely duplicative of its Claims 16/18 argument, which focuses on the conditional language added during the amendment. Autel makes no attempt to explain the substance of the referenced obviousness rejection or why Orange’s amendments and accompanying remarks give rise to disavowal or redefinition or how those amendments “saved the patent.” (*See* Dkt. No. 69 at 29).

Autel notes that “record” and “overwrite” presumptively have different meanings (Dkt. No. 69 at 30 (citing *Innova*, 381 F.3d at 1119 (Fed. Cir. 2004))), but that alone does not require the scope of one term to exclude the other. The Court rejects Autel’s construction as Autel has not shown clear and unambiguous disavowal or redefinition of the disputed terms. The Court construes this term to have its plain and ordinary meaning.

## V. CONCLUSION

Disputed Term	The Court's Construction
“judging, by the setting apparatus, consistency of the update identification” (Claims 23, 29)	plain and ordinary meaning
“transmitting module” (Claims 26, 27)	Governed by 35 U.S.C. § 112 ¶ 6 (pre-AIA) <b>Function:</b> transmitting a radio frequency (RF) signal, wherein the RF signal comprises the detection result and the identification of the detector <b>Structure:</b> a transmitter with a control and data interface, and an antenna connected to the transmitter
“receiving module” (Claims 26, 27)	Governed by 35 U.S.C. § 112 ¶ 6 (pre-AIA) <b>Function:</b> receiving the RF signal and sending the RF signal to the control module <b>Structure:</b> a receiver with a control and data interface, and an antenna connected to the receiver
“send the RF signal to the control module” (Claims 26–27)	“send the detection result and the identification of the identification rewritable tire pressure detector to the control module”
“RF signal” (Claims 23, 26–29)	plain and ordinary meaning
“records” / “recorded” (Claims 23, 26–29)	plain and ordinary meaning

The Court **ORDERS** each party not to refer, directly or indirectly, to its own or any other party's claim-construction positions in the presence of the jury. Likewise, the Court **ORDERS** the parties to refrain from mentioning any part of this opinion, other than the actual positions adopted by the Court, in the presence of the jury. Neither party may take a position before the jury that

contradicts the Court's reasoning in this opinion. Any reference to claim construction proceedings is limited to informing the jury of the positions adopted by the Court.

**So ORDERED and SIGNED this 18th day of January, 2023.**

  
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RODNEY GILSTRAP  
UNITED STATES DISTRICT JUDGE