IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

PYROTECHNICS MANAGEMENT, INC.,)
)
      Plaintiff,)   Civil Action No. 2:19-cv-00893
)
  v.)
)
XFX PYROTECHNICS LLC and fireTEK,)
)
      Defendants.)

OPINION

Robert J. Colville, United States District Judge

On July 24, 2019, Plaintiff Pyrotechnics Management, Inc. ("Plaintiff" or

"Pyrotechnics") filed a Complaint (ECF No. 1, hereinafter "Compl.") against fireTEK and XFX

Pyrotechnics LLC ("XFX"). The Complaint alleges copyright infringement (Count I), tortious

interference with prospective contractual relations (Count II), and unfair competition (Count III)

arising out of Defendants' alleged unauthorized copying, distribution and sale of

command/control protocols in which Pyrotechnics owns the copyright; and arising out of the

unauthorized distribution and sale of fireTEK products that incorporate or reproduce such

command/control protocols.

This Court has original jurisdiction under 17 U.S.C. § 104 *et seq.* and 28 U.S.C.

§§ 1331 and 1338.

On May 28, 2020, Plaintiff filed a Motion for Preliminary Injunction with Brief in

Support (ECF Nos. 55, 56), to which both Defendants have responded. (ECF Nos. 59, 60, 67).

The Court entered a scheduling order setting forth deadlines for the filings of proposed findings

of fact and conclusions of law, as well as witness lists, exhibit lists, and stipulations. (ECF No.

66). On August 19, 2020, the Court held an evidentiary hearing on the motion for preliminary

injunction. Thereafter, the parties filed post-hearing proposed findings of fact and conclusions of

law. An official transcript of the hearing was prepared. (ECF No. 106). On February 18, 2021,

the Court heard closing arguments. (ECF Nos. 116, 117).

FINDINGS OF FACT AND CONCLUSIONS OF LAW

In accordance with Federal Rule of Civil Procedure 65, and based upon the pleadings,

record papers, affidavits, depositions, exhibits, stipulations of counsel and the evidence presented

at the hearing on August 19, 2020, as well as arguments of counsel, we make the following

Findings of Fact and Conclusions of Law.

I. FINDINGS OF FACT

A.   Procedural History

1.   Pyrotechnics filed the Complaint in this matter on July 24, 2019, alleging claims

of copyright infringement, tortious interference with prospective contractual relations, and unfair

competition against Defendants fireTEK and XFX. (ECF No. 1.)

2.   Plaintiff filed a motion seeking to enjoin Defendants from further infringement of

Plaintiff's copyrighted work simultaneously with its Complaint. (ECF No. 7.)

3.   Defendant XFX answered the Complaint on September 9, 2019, whereas

Defendant fireTEK filed a motion to dismiss the Complaint on October 15, 2019. (ECF Nos. 28,

34.)

4.   Plaintiff's Motion for Preliminary Injunction was administratively denied without

prejudice on February 3, 2020, pending resolution of the fireTEK's Motion to Dismiss. (ECF

No. 43.)

5.   On April 30, 2020, the Court denied fireTEK's Motion to Dismiss the Complaint. (ECF No. 49.)

6.   fireTEK answered the Complaint on May 13, 2020. (ECF No. 50.)

7.   Pyrotechnics then refiled the instant Motion for Preliminary Injunction on May 28, 2020. (ECF No. 55.)

8.   Defendants XFX and fireTEK filed briefs in opposition to Plaintiff's Motion for Preliminary Injunction on June 1, 2020 and June 11, 2020, respectively. (ECF No. 60, 67.)

9.   The Court held a hearing on the Motion for Preliminary Injunction on August 19, 2020 (ECF No. 89); supplemental briefing and transcripts were filed, and final argument was heard.

   B.   Factual Background

   1.   The Parties

10.   Plaintiff Pyrotechnics is a Pennsylvania corporation with a principal place of business at 863 Benner Pike Ste. 100, State College, PA 16801-7315.   Its owner is Daniel Barker.

11.   Pyrotechnics manufactures digital pyrotechnics firing systems and related products that are used to create fireworks displays. Pyrotechnics sells such systems and products worldwide, including in the Western District of Pennsylvania. Many of those systems and products incorporate the command/control protocols that Pyrotechnics authored and for which Pyrotechnics is sole owner of all copyrights.

12.   Defendant fireTEK is a Romanian corporation with a place of business at Strada Silvestru 24A, Iași, Romania.

13.   Defendant fireTEK is owned by Laurian Antoci.

14.   fireTEK sells digital pyrotechnic firing equipment and related products

worldwide, including in the United States.

15.   fireTEK is a competitor of Pyrotechnics in the distribution and sale of digital

pyrotechnics firing systems and related products.

16.   Defendant XFX is a Delaware limited liability company with a place of business

at 44 Ridgewood Drive, McDonald, Pennsylvania 15057.

17.   XFX distributes and offers for sale fireTEK's digital pyrotechnics firing systems

and related products in the United States.

2.   *The Copyrighted Protocol*

18.   Plaintiff Pyrotechnics has been a world leader in the manufacture and sale of

digital pyrotechnic firing systems for nearly twenty-five years.

19.   Pyrotechnics' digital pyrotechnic firing systems and related products are sold

under the brand name "FireOne" (herein "the FireOne Products"). FireOne systems and products

are also sometimes referred to as "F1" systems and products.

20.   The FireOne brand is used in connection with a variety of digital pyrotechnic

firing systems and related products. Certain FireOne systems include FireOne field modules

which are used for remote ignition of pyrotechnic products such as fireworks.

21.   FireOne field modules are activated through the use of FireOne's

command/control protocol (the "Protocol"). The FireOne field modules use the Protocol to

communicate with a FireOne control panel.

22.   In response to commands, the FireOne control panel uses the Protocol to

communicate to one or more FireOne field modules so as to cause the FireOne field modules to

execute certain predefined functions. Such functions include, but are not limited to, causing the

FireOne field modules to ignite pyrotechnic products that are electrically connected to the

FireOne field modules.

23.   The Protocol enables the operator to use the FireOne control panel and FireOne

field modules to execute fireworks displays in which fireworks are ignited in a particular order

and at specific times.

24.   Pyrotechnics has invested substantial time and money to develop the FireOne

system in which the Protocol is an integral and essential part.

25.   The Protocol was created by Pyrotechnics' engineers Daniel Barker, Elwood

Seifert, and Robert Ceschini in 1993. (Hr. Test. of Daniel Barker at 73-74).

26.   The Protocol was first published by Pyrotechnics embedded inside hardware in

1995.

27.   The Protocol includes command codes that are not the expression of the idea of

controlling pyrotechnics displays but are the author's original expression. (Hr. Test. of Daniel

Barker at 25-26, 31-32, 76, 82; Hr. Test. of Robert Capuro at 106-07)[1]; *see also* Conclusions of

Law, *infra*.

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[1] As Pyrotechnic's owner Daniel Barker explained, "It's actually the unique communications code that is expressed
by the control panel and is on this wire that goes to the field modules. It is, in fact, the message that flows from one
device to another to allow you to control a very complex [sy]stem. . . . In the development of the system and the
communications code that we used, we were concerned about having an extremely secure, extremely safe system.
So we used a lot of existing types of ideas that have been out there for years and years, and we modified them
significantly to make this system unique so we wouldn't have interference, we wouldn't have problems with
broadcasts from radio and TV and the cellular communications and that type of thing. So the two frequencies that
we chose were specifically chosen as nonstandard frequencies to be out of the band paths of typical devices that are
out around the world. . . . This is a very offbeat, very strange frequency standard that we devised specifically for
safety. This is information that was derived specifically to empower our system. And up until the time that we
placed it with the Copyright Office, it was not something that you could find anywhere. So the only way you could
get this information would be to use some sophisticated equipment to look at our hardware while it's operating and
decode it and, therefore, you could derive the information. . . . The only system I know of in the world that would
use this command structure would be FireOne, other than the attempt by fireTEK to pirate the information."
(Transcript, ECF No. 106 at 25-26, 31-32). He continued to explain that the purpose of the code was to control
Pyrotechnics proprietary hardware, specifically for the purpose to control its field modules. All of the codes were
not included in the Copyright registration because, he posed, "Can you imagine if we sent them four or five billion
pages? No. That would be nonsensical. What we sent them was the base code. And it said, look, here is how you talk

28.   The Protocol includes command codes whose expression is not limited by external factors that are inherent in the subject matter of pyrotechnics displays.

29.   The idea of controlling pyrotechnics displays can be expressed in many ways that are not linked to external factors that are inherent in the subject matter of pyrotechnics displays.

30.   The idea of controlling pyrotechnics displays can be expressed in many ways that are workable alternatives to Plaintiff's original, copyrighted expressions.

31.   Plaintiff's copyrighted command codes do not serve as a lock-out code as they permit communication with field modules.

32.   Plaintiff's Protocol is Plaintiff's original expression that includes creative organization and sequencing; they are unique expression which are necessary to the operation of the system and which uniquely communicate with the Plaintiff's field modules.

33.   Plaintiff's Protocol is an expression of alpha-numeric characters that are original with Plaintiff and that do not flow from considerations that are external to the author's creativity.

34.   Plaintiff's Protocol is an expression of alpha-numeric characters that are selected according to the author's creativity and not according to hardware standards, mechanical specifications, software standards, computer design standards, industry programming practices, or market factors.

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to a module. Here's how a module replies. Here's how you can turn on fire power. Here's how you can ask it to tell us what's connected to it. It's the base code that we registered, which everything is derived from. So based on the fact that there are lots and lots of variations of that, it should be very obvious to the casual observer. It's like publishing an alphabet and saying, you know, you can make words with this. . . . We published the alphabet and the words and the specific sentences that we're using to operate the firing modules. So it's very specific what we registered with them." (Transcript, ECF No. 106 at 76-77); *see also* Hearing Transcript of Robert Capuro, ECF No. 106 at 106-07.

35.   The Protocol is unique to Pyrotechnics' FireOne system; it is not a commonly used protocol for firing pyrotechnic products or communicating between remote ignition devices in the pyrotechnics industry.

36.   Prior to fireTEK's infringement of the Protocol, the Protocol was not used in any of the other dozens of similar pyrotechnics firing systems manufactured by Pyrotechnics' competitors; instead, those competitors developed their own command structures to fire their pyrotechnic devices.[2]

37.   Pyrotechnics deliberately employed an obscure command structure in its Protocol to prevent the inadvertent detonation of pyrotechnic products.

38.   Pyrotechnics has registered its copyright for the Protocol with the U.S. Copyright Office under Registration Number TX 8-738-709.   *See* Pl.'s Ex. 1 (ECF No. 94-1).

39.   The copyright deposit materials for the Protocol list the specific command sequences that are subject to Pyrotechnics' copyright.   *See* Pl.'s Ex. 1, 14 (ECF Nos. 94-1, 94-14).

40.   Pyrotechnics' command code is transmitted on wires to the field modules, and also occurs in the microprocessor of the Plaintiff's controller.[3]

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[2] In addition to the testimony of Daniel Barker, cited supra at fn. 1, specifically Transcript at p. 26-27, Robert M. Capuro, an electrical engineer who confirmed the fireTEK routers contained a copy of the Protocol, explained:

> Q. Is this basic message format [FSK or "frequency shift keying"] in any way an industry standard or a custom? Is this common in the industry?
> A. The use of FSK is common.
> Q. However, but the way that this basic message format, is it common or an industry standard?
> A. Not in the context within which FireOne has chosen those frequencies and used them to represent a digital 1 or digital 0 in the scheme of their command system.

(Transcript, ECF No. 106 at 107).

[3] Mr. Capuro explained, on cross-examination:

> Q. The output of those command codes is numbers; is that right?
> A. Well, they can be represented -- (Zoom froze) -- in a piece of electronic equipment, I don't see numbers. I see bits or letters or words. So part of that is broken down into the finer level that you're referring to.
> Q. But in a digital format, would it be numbers?

3.   *Defendants' Infringement of the Protocol*

41.   Defendant fireTEK is manufacturing, distributing, and selling fireTEK routers that fireTEK claims can control Pyrotechnics' FireOne field modules (the "fireTEK Routers").

42.   fireTEK further claims that purchasing fireTEK Routers eliminates the need to purchase FireOne control panels in order to use FireOne field modules to orchestrate a pyrotechnics display.

43.   fireTEK admitted at the hearing that it had created its router by reverse engineering FireOne's control panel. fireTEK copied Plaintiff's command codes in their entirety.

44.   On January 23, 2019, fireTEK posted information concerning its fireTEK Routers on several websites, including the fireTEK Facebook® page, the UK Fireworks Forum, and pyrofan.com, *inter alia*.

45.   Each of fireTEK's posts boasted that its new product "[c]an direct control F1 modules (no need F1 panels – it can replace it and add more useful features to end users" and that the "fireTEK router can control up to 50 F1 modules."

46.   When one user on pyrofan.com responded to the post requesting the price of the new fireTEK Routers, fireTEK responded, "[a]s price it will start from 1500 to 2000 depending on the options you want to add: GPS and DMX. And if you pay only 400 (500 with internal audio player and 550 with time code also) more for a fireTEK remote you can wireless control

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A. No. It would be a 1 or a 0.
Q. Are 1 and 0 numbers?
A. It's a binary system that is understood by the hardware.
Q. Okay. Would they be words?
A. What is your question?
Q. I understand you're not -- you're saying they're not numbers. Are they words or short phrases?
A. They're a method for the electronics to understand what we understand in words.

Q. But electronics use numbers to understand those features; right?

A. You can call it whatever you want. But I call them bits, 1s and 0s that are understood by standard processing systems. They don't learn a language from us. We create a language that they understand.

your F1 modules with centralized and local error reports and even with possibility to local

control of each F1 router. Think about how much it cost a F1 wireless solution and it is not so

good like fireTEK wireless."

47.   These posts also embed a video posted by fireTEK owner Laurian Antoci on

youtube.com, also uploaded on January 23, 2019, which demonstrates a fireTEK Router

controlling a FireOne field module (the "YouTube Video").

48.   The YouTube Video again acknowledged in the description of the video that

"[t]his device can direct control F1 modules and replace F1 panels and add more useful features

to your F1 system."

49.   In order to control the FireOne field modules (a/k/a "the F1 modules"), the

fireTEK Routers must incorporate the copyrighted Protocol. (Transcript, Daniel Barker, ECF

No. 106 at 31-32; Transcript, Robert Capuro, ECF No. 106 at 109-111,[4] 116-118, 119-120, 124,

128, 129, 131-132, 177; Pl.'s Ex. 7-8.)

50.   Pyrotechnics retained Robert M. Capuro, an electrical engineer with fifty years of

experience in his field, to conduct expert testing on the fireTEK Routers to confirm whether they

contained a copy of the Protocol. (Hr. Test. of Robert Capuro at 103-04; Pl.'s Ex. 7-8.)

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[4] Capuro explained his testing and conclusions:

> We utilized standard factory test equipment. As I said earlier, we captured realtime analog and digital signals that were monitored, captured and recorded. Those monitored, captured and recorded data were compared to provide conclusions. How were they compared? We compared FireOne to the copyrighted code. We compared fireTEK to the copyrighted code. We compared them to one another. And in each case they were identical. So my conclusions as an engineer evaluating the data that was acquired according to the approved test procedure, that the FireOne message format, as we all know, is copyrighted. . . . So my final conclusion based on the analysis of the data that was taken according to the test plan was that the fireTEK FXT-320FO router violated the FireOne copyrights. That is based entirely on my professional opinion and my observance of the test and my concurrence that it was conducted according to the approved test procedure.

Transcript, Robert Capuro, ECF No. 106 at 109-111).

51.   On November 7, 2019, Mr. Capuro conducted testing on the fireTEK Router, and concluded based upon the results of that testing that the fireTEK Routers contain an exact copy of Pyrotechnics' copyrighted Protocol.

52.   Defendants' copy of Plaintiff's copyrighted work is a literal copy.

53.   Pyrotechnics has never authorized fireTEK or XFX to copy, distribute, sell or use the Protocol.

54.   XFX is the official distributor of fireTEK's products in the United States and Canada.

55.   Ralph Piacquadio, the principal of XFX, is a pyrotechnician who has frequently used Pyrotechnics' FireOne firing system to choreograph and produce fireworks displays.

56.   Both XFX and fireTEK had access to FireOne's copyrighted Protocol via the FireOne firing system.

57.   XFX has unlawfully distributed at least one copy of the infringing fireTEK router to Zambelli Fireworks, a Pennsylvania-based fireworks company.[5] It took possession of and was prepared to give to Zambelli the router, which fireTEK labelled at one point a "gift" in conjunction with a potential order. Hr. Test. of Ralph Piacquadio at 198-199, 221, 224-226; Piacquadio Aff. (ECF Docket No. 31-1) ¶¶ 20-22; Pl.'s Ex. 15; XFX Ex. 4 (noting that Zambelli owned the router)

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[5] Counsel for XFX executed a "Receipt for Transfer of Possession of fireTEK Router" which states:

> NOW, this 3rd day of September 2019, Counsel for Plaintiff, Pyrotechnics Management Inc., took possession from counsel for Defendant, XFX Pyrotechnics LLC, one (1) functional router manufactured by Defendant fireTEK, Inc. and owned by Zambelli Fireworks (a non-party), in accordance with Judge Horan's Order of Court dated August 8, 2019." (ECF No. 94-21).

58.   In letters dated March 18, 2019, Pyrotechnics complained to XFX and fireTEK about their infringing activities with respect to the Protocol. (Pl.'s Ex. 4-5, ECF Nos. 94-4, 94-5).

59.   Neither XFX nor fireTEK has made any written response to the letters from Pyrotechnics.

60.   The principal of fireTEK, Laurian Antoci, told Daniel Barker, the owner of Pyrotechnics, that he had received the letters. He admitted that the Protocol had been taken from FireOne Products and incorporated into fireTEK products. Further, Mr. Antoci told Mr. Barker that he intended to continue to copy, distribute, sell and use the Protocol in fireTEK products with no accounting to Pyrotechnics. Mr. Antoci further informed Mr. Barker at that if Pyrotechnics brought any legal proceeding against fireTEK, Mr. Antoci intended to delay and forestall any final decision in such a proceeding for years and that, meanwhile, he would continue to copy, distribute, sell and use the Protocol throughout the course of the proceeding. [6]

61.   In July 2019, Pyrotechnics Guild International, Inc., a trade organization for pyrotechnicians in the United States, circulated its PGI Bulletin, a trade publication, which included an advertisement from Defendant fireTEK again highlighting its "fireTEK to F1 compatibility." It further claimed "fireTEK can control any F1 firing module and improve F1 system capabilities …. fireTEK firing modules can be controlled from any F1 control panel. Add to your F1 system the possibility to directly control any DMX device automatically or semiautomatically, increase firing accuracy and speed up to 1 ms, ensure 100% fire and more."

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[6] The court found the testimony of Mr. Barker particularly credible in this regard because Mr. Barker took handwritten notes after this conversation.

(Transcript, Daniel Barker, ECF No. 106 at 57-59; Pl.'s Ex. 6.) fireTEK asserts it created a

compatible product with additional features in order to fill a gap in the consumer market.

62.   Phone numbers for Mr. Piacquadio and another XFX employee are listed as the

United States contacts on the fireTEK advertisement circulated in the PGI Bulletin.

63.   By advertising the fireTEK Routers by reference to FireOne products, Defendants

hope to capitalize on FireOne's popularity in the marketplace to convince Pyrotechnics'

customers that there is no longer a need to purchase FireOne's more expensive control panels,

because the fireTEK Routers can communicate with FireOne field modules. *See* Pl's Ex. 2, ECF

No. 94-2).

64.   Should Defendants engage in infringing activity, Pyrotechnics faces severe

economic harm. (Transcript, Daniel Barker, ECF No 106 at 42, 93.)

65.   Defendants claim that they are not currently selling any of the infringing fireTEK

Routers in the United States. (Transcript, Ralph Piacquadio, ECF No. 106 at 191; Transcript,

Laurian Antoci, ECF No. 106 at 165).

II. CONCLUSIONS OF LAW

Pyrotechnics has requested that Defendants XFX and fireTEK be enjoined from

importing, distributing, or selling any products that infringe upon Plaintiff's copyrighted

command/control protocols as registered under Registration Number TX 8-738-709, including

but not limited to the fireTEK routers that incorporate or transmit those command/control

protocols.

A court should issue a preliminary injunction where a plaintiff can establish: (1)

likelihood of success on the merits; (2) likelihood that plaintiff will suffer irreparable harm if an

injunction is not issued; (3) the effect of the injunctive relief on the defendant; and (4) the public

interest. *Reilly v. City of Harrisburg*, 858 F.3d 173, 176–177 (3d Cir. 2017), *as amended* (June

26, 2017) (collecting cases).

> [A] movant for preliminary equitable relief must meet the threshold for the first two "most critical" factors: it must demonstrate that it can win on the merits (which requires a showing significantly better than negligible but not necessarily more likely than not) and that it is more likely than not to suffer irreparable harm in the absence of preliminary relief. If these gateway factors are met, a court then considers the remaining two factors and determines in its sound discretion if all four factors, taken together, balance in favor of granting the requested … relief.

 Id. at 178–179.

The Court begins by considering the reasonable probability of success on the merits of

Pyrotechnics' copyright infringement claim.

A. Pyrotechnics' Likelihood of Succeed on the Merits.

To establish a likelihood of success on the merits, a party must show its likelihood of

success is significantly better than negligible, but it need not establish that success on the merits

is more likely than not. *See Reilly*, 858 F.3d at 179 (*quoting Singer Mgmt. Consultants, Inc. v.

Milgram*, 650 F.3d 223, 229 (3d Cir. 2011) (*en banc*)). "A district court need only determine

that the moving party would likely succeed on one claim to issue injunctive relief." *Johnson v.

Wetzel*, 209 F. Supp.3d 766, 775 (M.D. Pa. 2016).

Pyrotechnics is likely to succeed on its claim for copyright infringement, and as such, has

satisfied this factor of the analysis. To succeed on the merits of its copyright infringement claim,

Pyrotechnics must demonstrate "(a) ownership of a valid copyright, and (b) unauthorized

copying of original elements of the plaintiff's work." *Dun & Bradstreet Software Servs., Inc. v.

Grace Consulting, Inc.*, 307 F.3d 197, 212 (3d Cir. 2002) (citing *Whelan Assocs., Inc. v. Jaslow

Dental Laboratory, Inc.*, 797 F.2d 1222, 1231 (3rd Cir. 1986)).

1. Whether Pyrotechnics Owns a Valid Copyright in the Protocol

The Copyright Act ("the Act") provides protection to "original works of authorship fixed

in any tangible medium of expression," including "literary works." 17 U.S.C. § 102(a).

Computer programs—defined in the Act as "a set of statements or instructions to be used

directly or indirectly in a computer in order to bring about a certain result," 17 U.S.C. § 101—

can be subject to copyright protection as "literary works." *See Atari Games Corp. v. Nintendo of*

Am., Inc., 975 F.2d 832, 838 (Fed. Cir.1992) ("As literary works, copyright protection extends

to computer programs."); *see Oracle Am., Inc. v. Google Inc*., 750 F.3d 1339, 1354 (Fed. Cir.

2014).

a. Whether Plaintiff's Copyrighted Command Codes are "Original Works."

The Court concludes that Plaintiff's command code is an original work of authorship that

is owned by Pyrotechnics and duly registered with the U.S. Copyright Office.[7] (FOF, ¶¶ 25-26,

32, 38.) Plaintiff's command code constitutes protected expression and Pyrotechnics' registered

copyright on the Protocol is valid. See 17 U.S.C. § 102. "In judicial proceedings, a certificate of

copyright registration constitutes prima facie evidence of copyrightability and shifts the burden

to the defendant to demonstrate why the copyright is not valid." *Bibbero Sys., Inc. v. Colwell*

Sys., Inc., 893 F.2d 1104, 1106 (9th Cir. 1990).

The Supreme Court has instructed that "[o]riginal ... means only that the work was

independently created by the author (as opposed to copied from other works), and that it

possesses at least some minimal degree of creativity," even if the work is not a "novel" one. *Feist*

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[7] The Act's regulations permits, for the copyright holder whose literary works exist only in machine readable form, to submit identifying material in the form of a deposit copy, as was done here. 37 C.F.R. 202.20. Contrary to Defendants' assertions, Plaintiff properly submitted identifying material to register its copyright, rather than the entire code.

Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 345-346 (1991) (originality

requires both "independent creation plus a modicum of creativity"). Although constitutionally

mandated, the threshold showing of originality is not a demanding one. *Id.* at 345 ("To be sure,

the requisite level of creativity is extremely low; even a slight amount will suffice."). Plaintiff

has met its burden as to originality.

It is black letter law that copyright law protects the expression of an idea, but not the idea

itself. *See Dun & Bradstreet,* 307 F.3d at 1234. "[T]he existence of … intellectual production, of

thought and conception" reflect originality in a work. *See Feist Publications*, 499 U.S. at 362

(quoting *Burrow-Giles Lithographic Co. v. Sarony,* 111 U.S. 53, 59-60 (1884). Arbitrary

selection of an expression weighs against a finding of originality. *Toro Co. v. R&R Prods. Co*.,

787 F.2d 1208, 1213 (8th Cir. 1986) (assignment of sequential part numbers to replacement parts

was arbitrary and not original).

For utilitarian works such as computer protocols, "the purpose or function of [the]

utilitarian work [is] the work's idea, and everything that is not necessary to that purpose or

function [is] part of the expression of the idea. Where there are various means of achieving the

desired purpose, then the particular means chosen is not necessary to the purpose; hence, there is

expression, not idea." *Id.* at 1236 (internal citation omitted).

Where there are a variety of program structures through which an idea can be expressed,

the structure and organization of a computer program, in addition to its object and source codes,

are protected by copyright law. *Id.* at 1240; *see also Oracle*, 750 F.3d at 1366. ("[T]he structure,

sequence, and organization of a computer program is eligible for copyright protection where it

qualifies as an expression of an idea.").

Here, the purpose or function of the Protocol is to communicate between the FireOne

control panel and the FireOne field module to permit the remote ignition of fireworks. (Findings

of Fact ("FOF"), ¶¶ 21-23.) The particular code and command structure embodied in the

protocol is not necessary to achieve that purpose. Moreover, Pyrotechnics created the

copyrighted command codes with attention to unique expressions that were not used by others

and were not intuitively obvious choices. External factors did not dictate the design of the

FireOne Protocol such that it is lacking in originality. (FOF, ¶¶ 27-30, 33-34.) *See Dun &*

Bradstreet, 307 F.3d at 215-16; *Atari*, 975 F.2d at 840. Pyrotechnics did not take its command

codes from the public domain. (FOF ¶¶ 27-30, 33-34).

 In fact, Plaintiff has incorporated in its copyrighted command codes creative

organization and sequencing that are unnecessary to the objective of controlling the ignition of

pyrotechnics. (FOF, ¶¶ 27-30, 35-37.) Rather, Plaintiff chose command code expressions and

arranged them in a unique sequence to create an original data stream. (*Id.*) Plaintiff may protect

this creative element of the command codes under copyright. *See Atari,* 975 F.2d 840; *Whelan*,

797 F.2d at 1238.

The precise alphanumeric expression selected by Pyrotechnics—the method by which it

chose to represent a digital 1 or a digital 0 within its system—also is uncommon, original, and

intentional. (FOF ¶¶ 32-36.) There are numerous ways to express a command control protocol

in the pyrotechnics industry, and Pyrotechnics' protocol is unique among them. (FOF ¶¶ 32-36.)

In addition, Pyrotechnics has further demonstrated that its selection of the two frequencies,

which are uncommon in the industry, was done deliberately and intentionally to avoid

interference with its system. (FOF ¶ 37.) Pyrotechnics' unique combination of alpha-numeric

expression at deliberate intervals and frequencies—that is, the expression of these ideas—renders

Pyrotechnics' command control protocol copyrightable. In sum, the original expression inherent in the Pyrotechnics' command control protocol renders it a protectable work of authorship.

Moreover, the Protocol's command signals are copyright protected because they are integral to the function of the Plaintiff's FireOne firing system and are not merely a lock-out subroutine that is intended to frustrate connections with unauthorized devices. (FOF, ¶ 31.) *See Atari*, 975 F.2d at 840 (finding that Nintendo's program was protected expression where it "incorporated… creative organization and sequencing unnecessary to the lock and key function… [and] chose arbitrary programming instructions and arranged them in a unique sequence to create a purely arbitrary data stream" and holding that "[t]he unique arrangement of computer program expression which generates that data stream does not merge with the process so long as alternate expressions are available").

Defendants rely on *Mitel, Inv. v. Iqtel, Inc*., 124 F.3d 1366 (10th Cir. 1997), wherein the court held that four-digit command codes were original because the values for the codes were not selected merely arbitrarily. However, the protocol employed here by Plaintiff lacked these characteristics.

b. Scenes a Faire Defense

Further, the Plaintiff's copyrighted command codes are not barred from copyright protection under the scenes a faire doctrine. "[W]hen certain commonplace expressions are indispensable and naturally associated with the treatment of a given idea, those expressions are treated like ideas and therefore [are] not protected by copyright." *Swirsky v. Carey*, 376 F.3d 841, 850 (9th Cir. 2004). In the computer context, "the scenes a faire doctrine denies protection to program elements that are dictated by external factors such as 'the mechanical specifications of the computer on which a particular program is intended to run' or 'widely accepted programming

practices within the computer industry.'" *Softel, Inc. v. Dragon Meed. & Scientific Commc'ns,* 118 F.3d 955, 963 (2d Cir. 1997). For computer-related applications, these external factors include hardware standards and mechanical specification, software standards and compatibility requirements, computer manufacturer industry programming practices, and practices and demands of the industry being serviced. *See Mitel,* 124 F.3d at 1375.

As discussed, however, scenes a faire doctrine does not apply to the Protocol. Rather, as the evidence supports, Pyrotechnic's unique combination of alpha-numeric expression at deliberate intervals and frequencies, uncommon in the industry, renders Pyrotechnics' command control protocol copyrightable.

c. The Merger Doctrine is Not a Bar to Copyrightability of the Protocol

Defendants argue that no copyright protection is available for the expression, because the author's expression had become indistinguishable from the idea he seeks to convey, such that the two merge. "Under the merger doctrine, courts will not protect a copyrighted work from infringement if the idea underlying the copyrighted work can be expressed in only one way, lest there be a monopoly on the underlying idea." *See Satava v. Lowry*, 323 F.3d 805, 812 n. 5 (9th Cir. 2003). Thus, merger cannot bar copyright protection for lines of source code unless the author had only one way, or a limited number of ways, to write them. *See Oracle* 750 F. 3d at 1361.

The relevant limitations here are those on the author at the time the work is created, not the party who copied the work. *See Apple Computer, Inc. v. Formula Int'l, Inc.,* 725 F.2d 521, 524 (9th Cir. 1984) (copyrightability and the scope of protectable activity are to be evaluated at the time of creation, not at the time of infringement). Based on the evidence presented thus far, nothing prevented the Defendants from writing their own code to achieve the same result

(control of pyrotechnics) as the Plaintiff. In such circumstances, the chosen expression simply does not merge with the idea being expressed. *See Oracle*, 750 F.3d at 1361.

The Third Circuit has held that where there are various means of achieving the desired purpose, then the particular means chosen is not necessary to the purpose; hence, "there is expression, not idea." *Whelan*, 797 F.2d at 1236. Such is the case here. In fact, fireTEK has a line of devices where it has its own routers and its own field modules that it can control.

A set of commands to instruct a computer to carry out desired operations may contain expression that is eligible for copyright protection. *See Oracle*, 750 F.3d at 1368. "That the words of a program are used ultimately in the implementation of a process should in no way affect their copyrightability." *Apple Computer*, 714 F.2d at 1252. "If other programs can be written or created which perform the same function as [the author's program], then that program is an expression of the idea and hence copyrightable." *Id.* at 1253. An original work—even one that serves a function—is entitled to copyright protection as long as the author had multiple ways to express the underlying idea. *See Oracle*, 750 F.3d at 1367.

Pyrotechnics' expression of its command control protocol has not "merged" into the concept of the communications protocol itself. Rather, Pyrotechnics' command control protocol is the mechanism by which Pyrotechnics is able to communicate with its modules. The two are not merged, and therefore, are capable of protection.

d. The Copyrighted Command Codes were Fixed in a Tangible Medium.

The Copyright Act extends protection to "original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 102(a). The evidence of record establishes that the Command Codes that

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are transmitted on wires to the field modules also occur in the microprocessor of the Plaintiff's controller. The computer program, when written, embodies expression; the Copyright Act does not require that the expression be communicated to a particular audience. *See Apple Computer*, 725 F. 2d at 525. It is unnecessary that users of Plaintiff's pyrotechnics system be exposed to (or even aware of) the copyrighted command codes. No authority requires that the copyrighted "expression" of a computer program is "expression" that must be communicated to the computer user when the program is run on a computer.

e. Plaintiff's Command Codes Cannot Properly be Broken intro Short Phrases Merely to Defeat Copyrightability.

Defendants argue that Plaintiff's codes have six numbers which are similar, but only 3 can be found in the copyrighted work; certain numbers in the report are marked with an X, and according to defendants they are not fixed and are ignored as they depend on external factors. However, Pyrotechnics argues that Defendants' attempt to fracture the command codes into individual, independent characters is improper. "Words and short phrases such as names, titles, and slogans" are not subject to copyright protection. 37 C.F.R. § 202.1(a).

The relevant question for copyrightability purposes is not whether the work at issue contains short phrases—as literary works often do—but, rather, whether those phrases are creative. *See Soc'y of Holy Transfiguration Monastery, Inc. v. Gregory*, 689 F.3d 29, 52 (1st Cir. 2012) (noting that "not all short phrases will automatically be deemed uncopyrightable"); *see also* 1 Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 2.01[B] (2013) ("[E]ven a short phrase may command copyright protection if it exhibits sufficient creativity.") *and Oracle*, 750 F.3d at 1362.

Every expressive work can be decomposed into elements not themselves copyrightable—the cars in a car chase scene, the kiss in a love scene, the dive bombers in a movie about Pearl Harbor, or, for that matter, the letters of the alphabet in any written work. *Bucklew v. Hawkins, Ash, Baptie & Co*., LLP., 329 F. 3d 923 (7th Cir. 2003). Yet dissecting individual lines of command codes into individual alpha-numeric characters fails to recognize that an original combination of elements can be copyrightable. *See Oracle*, 750 F.3d 1362; *Softel, Inc. v. Dragon Med. & Scientific Comm'ns*, 118 F.3d 955, 964 (2d Cir. 1997) (noting that, in *Feist*, "the Court made quite clear that a compilation of nonprotectible elements can enjoy copyright protection even though its constituent elements do not"). The question is not whether a short phrase or series of short phrases can be extracted from the work, but whether the manner in which they are used or strung together exhibits creativity. *See Oracle*, 750 F.3d at 1363.

We conclude that the Xs in the command code have meaning and Pyrotechnics exercised creativity when it wrote the relevant command codes. Accordingly, those codes contain protectable expression that is entitled to copyright protection. *See Atari*, 975 F.2d at 840.

f. Representation of Digital Messages is Protectable

It is well established that copyright protection can extend to both literal and non-literal elements of a computer program. *See Altai*, 982 F.2d at 702. The literal elements of a computer program are the source code and object code. *See Johnson Controls, Inc. v. Phoenix Control Sys., Inc.,* 886 F.2d 1173, 1175 (9th Cir. 1989).

Courts have defined source code as "the spelled-out program commands that humans can read." *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 533 (6th Cir. 2004). Object code refers to "the binary language comprised of zeros and ones through which the computer directly receives its instructions." *Altai*, 982 F.2d at 698. Both source and object code

"are consistently held protected by a copyright on the program." *Johnson Controls*, 886 F.2d at 1175; *see also Altai*, 982 F.2d at 702 ("It is now well settled that the literal elements of computer programs, *i.e.*, their source and object codes, are the subject of copyright protection."). *See Oracle*, 750 F.3d at 1348.

"[T]he Act makes no distinction between the copyrightability of those programs which directly interact with the computer user and those which simply manage the computer system." *Apple Computer*, 725 F.2d at 525. Nor does the Act require that a work be directly accessible to humans in order to be eligible for copyright protection. Rather, it extends protection to all original works "which ... can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." 17 U.S.C. § 102(a); *see Apple Computer*, 725 F.2d at 525.   Again, Pyrotechnic's representation of the command codes as stated in the copyright registration includes the equivalent object code that resides in the controller. (FOF ¶ 40.) It is protectable.

In conclusion, Pyrotechnics has shown ownership of a valid copyright to the degree necessary for the decision on the motion for preliminary injunction. Having thus so concluded, we next address whether there was unauthorized copying of Pyrotechnic's work

2. Defendants Engaged in Unlawful Copying of the Protocol.

The U.S. Copyright Act grants certain exclusive rights to the owners of copyrighted works. 17 U.S.C. § 106(1)-(5). "Copying is a shorthand reference to the act of infringing any of the copyright owner's five exclusive rights set forth at 17 U.S.C. § 106." *Dun & Bradstreet*, 307 F.3d at 212 (citation omitted). The U.S. Copyright Act grants to copyright owners the exclusive right to determine whether to license their works for copying and distribution, to whom they will grant such licenses, and terms on which they are willing to grant such licenses. 17 U.S.C. § 106.

Copying may either be proven through direct evidence, or "inferentially by showing that the defendant had access to the allegedly infringed copyrighted work and that the allegedly infringing work is substantially similar to the copyrighted work." *Whelan*, 797 F.2d at 1232; *see also Atari*, 975 F.2d at 837–38 (copying can be shown by "proving that [Defendant] made literal copies of the … program…. or by proving that [Defendant] had access to the program and that [Defendant's] work…is substantially similar to [Plaintiff's] work in ideas and the expression of those ideas.").

Where an infringing work copies original expression verbatim, that is known as "literal copying." *See Oracle*, 750 F.3d at 1356; *see also Atari*, 975 F.3d at 837.   This is what has happened in this case. There is no dispute that fireTEK's owner, Laurian Antoci, directly admitted that the Protocol had been taken from the FireOne products and incorporated into fireTEK's products, which were then distributed by XFX. (FOF, ¶¶ 57, 60.)

Likewise, both Defendants had access to the infringed work. The fireTEK Router manufactured and distributed by fireTEK contains or generates exact copies of the copyrighted FireOne Protocol, meaning that the works are identical. Moreover, it is uncontested that Pyrotechnics has not granted any license, permission, or authorization, either directly or indirectly, to fireTEK, XFX or any other party with respect to any Pyrotechnics' copyrighted work, including the Protocol. Pyrotechnics has not authorized fireTEK or XFX to make any use of Pyrotechnics' copyrighted work by copying, reproducing, importing, distributing or selling fireTEK routers that incorporate Pyrotechnics' copyrighted Protocol. As such, the protocols are either unlawful copies or unlawful derivative works. *See Dun & Bradstreet*, 307 F.3d at 212 (concluding that defendants' software was an infringing derivative work where defendant's software included plaintiff's copyrighted computer code).

As to XFX, the evidence of record supports a finding at this stage of the proceedings that it infringed on Plaintiff's copyright when it participated in the importation, distribution or gifting of the router to Zambelli. We note that in *Ford Motor Co. v. Summit Motor Prod., Inc.*, 930 F.2d 277, 299 (3d Cir. 1991) the court held:

> The term "other transfer of ownership" is broad enough to encompass gifts. In fact, the House Report on the 1976 Amendment to the Copyright Act states during the course of a discussion on section 106(3) that the copyright owner has the right to control public distribution, "whether by sale, gift, loan, or some rental or lease arrangement." H.R.REP. NO. 94–1476, 94th Cong., 2d Sess. 62, reprinted in 1976 U.S.Code Cong. & Admin.News 5659, 5675–76 and 17 U.S.C.A. § 106 (West 1977) (Historical Note) (emphasis added). This report clearly indicates legislative intent to include gifts within the scope of section 106(3).

Here, the evidence supports Plaintiff's contention that fireTEK gave the router to XFX as a gift for Zambelli; there is no dispute fireTEK had it in its possession and that the router was referenced in communications concerning possible orders. fireTEK shipped XFX an infringing router for distribution to Zambelli Firework. Thus, in effect, title passed from fireTek to XFX to Zambelli.[8] XFX has stated the router in its possession was owned by Zambelli, *see* footnote 5 *supra*. Hence, distribution can be said to have occurred. Accordingly, the first prong of the 4-prong test has been met with respect to defendant XFX. To establish a likelihood of success on the merits, a party must show its likelihood of success is significantly better than negligible, but it need not establish that success on the merits is more likely than not.[9] *See Reilly v. City of Harrisburg,* 858 F.3d 173, 179 (3d Cir. 2017.

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[8] "A finding of willfulness was not necessary in order for the district court to enter the injunction in the present case. It is settled that innocent intent is generally not a defense to copyright infringement, 3 Nimmer on Copyright s 13.08 (1981), and injunctions may be issued without a showing of willful or deliberate infringement." *Williams Elecs., Inc. v. Artic Int'l, Inc*., 685 F.2d 870, 878 (3d Cir. 1982).

[9] "The strength of a claim on the merits is in a kind of resonance with the balance of the harms: "the more net harm an injunction can prevent, the weaker the plaintiff's claim on the merits can be while still supporting some preliminary relief." *Reilly,* 858 F.3d at 179. (quoting *Hoosier Energy Rural Elec. Coop., Inc. v. John Hancock Life Ins. Co.*, 582 F.3d 721, 725 (7th Cir. 2009)). Here the irreparable injury if relief is not granted is high.

Defendants have no right as a matter of law to copy Plaintiff's protected Protocol for the purpose of creating a competitor product that is compatible with Plaintiff's work. *See Oracle*, 750 F.3d at 1370 (finding there is no "'interoperability exception' to copyrightability"); *Atari*, 975 F.2d at 844 (finding that "Atari could lawfully deprocess Nintendo's 10NES chips to learn their unprotected ideas and processes. This fair use did not give Atari more than the right to understand the 10NES program and to distinguish the protected from the unprotected elements of the 10NES program. Any copying beyond that necessary to understand the 10NES program was infringement. Atari could not use reverse engineering as an excuse to exploit commercially or otherwise misappropriate protected expression.").

a. Defendants' Copying of the Copyrighted Command Codes is Not Fair Use

Fair use is an affirmative defense to copyright infringement and is codified in Section 107 of the Copyright Act. *Golan v. Holder*, 565 U.S. 302, 328 (2012). "Section 107 requires a case-by-case determination whether a particular use is fair, and the statute notes four nonexclusive factors to be considered." *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 549 (1985).

The first factor in the fair use inquiry involves "the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes." 17 U.S.C. § 107(1). This factor involves two sub-issues: (1) "whether and to what extent the new work is transformative," *Campbell,* 510 U.S. at 579; and (2) whether the use serves a commercial purpose. *Golan*, 565 U.S. at 328.

As to the first sub-issue, courts have described new works as "transformative" when "the works use copyrighted material for purposes distinct from the purpose of the original material." *Elvis Presley Enters., Inc. v. Passport Video*, 349 F.3d 622, 629 (9th Cir. 2003). A use is

"transformative" if it "adds something new, with a further purpose or different character, altering

the first with new expression, meaning or message." *Campbell*, 510 U.S. at 579. A work is not

transformative where the user "makes no alteration to the *expressive content or message* of the

original work." *Seltzer v. Green Day, Inc.*, 725 F.3d 1170, 1177 (9th Cir. 2013). Here, the

Defendants' *verbatim* copy of Plaintiff's command codes intended for an identical purpose as

Plaintiff's work are not transformative.

Second, use of the copyrighted work that is commercial "tends to weigh against a finding

of fair use." *Harper & Row*, 471 U.S. at 562. "[D]irect economic benefit is not required to

demonstrate a commercial use." *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1015 (9th

Cir. 2001). The question "is not whether the sole motive of the use is monetary gain but whether

the user stands to profit from exploitation of the copyrighted material without paying the

customary price." *Harper & Row,* 471 U.S. at 562. Even though Defendants may contend that

they have not sold a controller with infringing command codes for value, their use of the

copyrighted work is purely commercial and does not support a finding of fair use.

The second factor in the fair use analysis—the nature of the copyrighted work—"calls

for recognition that some works are closer to the core of intended copyright protection than

others, with the consequence that fair use is more difficult to establish when the former works

are copied." *Id.* at 586. Although "software products are not purely creative works," it is well

established that copyright law protects computer software. *Wall Data Inc. v. Los Angeles County*

Sheriff's Dep't, 447 F.3d 769, 780 (9th Cir. 2006) (citing *Sega Enters. Ltd. v. Accolade, Inc.*, 977

F.2d 1510, 1519 (9th Cir. 1992).

The third factor in the fair use analysis asks the court to examine "the amount and

substantiality of the portion used in relation to the copyrighted work as a whole." 17 U.S.C. §

107(3). Analysis of this factor is viewed in the context of the copyrighted work, not the infringing work. Indeed, the statutory language makes clear that "a taking may not be excused merely because it is insubstantial with respect to the *infringing* work." *Harper & Row,* 471 U.S. at 565. "[C]opying an entire work militates against a finding of fair use." *Worldwide Church of God v. Phila. Church of God, Inc.*, 227 F.3d 1110, 1118 (9th Cir. 2000).

In this case, the Defendant fireTEK has copied the entire command codes of Plaintiff— *i.e.*, the entire copyrighted work. (FOF ¶¶ 43, 50-52.) Defendant made the copied material important to use of their controller. (FOF ¶ 61.) It cannot reasonably contend now that what was copied was qualitatively insignificant.

The fourth factor focuses on "the effect of the use upon the potential market for or value of the copyrighted work." *Harper & Row*, 471 U.S. at 566. This factor reflects the idea that fair use "is limited to copying by others which does not materially impair the marketability of the work which is copied." *Id.* at 566-67. This factor is "undoubtedly the single most important element of fair use." *Id.* at 566. It requires that courts "consider not only the extent of market harm caused by the particular actions of the alleged infringer, but also whether unrestricted and widespread conduct of the sort engaged in by the defendant ... would result in a substantially adverse impact on the potential market for the original." *Campbell v. Acuff Rose Music, Inc.*, 510 U.S. 569, 590 (1994).

Plaintiff testified that if Defendant fireTEK are allowed to copy Plaintiff's command codes, severe damage to Plaintiff's business will result. Plaintiff's market share is threatened by Defendant fireTEK's stated intent to sell the infringing product in the United States if there is no legal restriction.

Moreover, we find Defendants' reliance on Section 1201(f) of the Act is misplaced. Section 1201(f) allows software developers to circumvent technological protection measures in a lawfully obtained computer program in order to identify the elements necessary to achieve compatibility of an independently created computer program with other programs. 17 U.S.C. § 1201 (f). There is no evidence that Defendants conducted any reverse engineering process to enable identifying elements by which they could create an independently competing pyrotechnics system. Instead, Defendants have merely copied Plaintiff's command codes for their own commercial use with no pretense of creating any original work themselves. (FOF ¶¶ 43, 50-52.) Moreover, the protocol is not a lockout program, but rather a substantive program that allows for control and remote ignition of pyrotechnic products.

b. Defendants Have No Protectable Right to "Compatibility" With Plaintiff's Field Modules.

Both the literal and non-literal components of a software program are eligible for copyright protection. *See Whelan*, 797 F.2d at 1237. To determine "whether certain aspects of an allegedly infringed software are not protected by copyright law, the focus is on external factors that influenced the choice of the creator of the infringed product." *Dun & Bradstreet*, 307 F.3d at 215 (citing *Altai*, 982 F.2d at 714; *Mitel*, 124 F.3d at 1375).

It is the interoperability and other needs of the author—not those of the copier—that apply in the copyrightability context. *See Oracle*, 750 F.3d at 1371. When Plaintiff created the command codes at issue, it did so without regard to any compatibility requirements of other pre-existing programs or other external factors that were applicable at the time the command codes were created. (FOF ¶¶ 27-30, 33-34.)

Because copyrightability is focused on the choices available to the plaintiff at the time the command codes were created, the relevant compatibility inquiry asks whether the Plaintiff's

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choices were dictated by a need to ensure that its command codes worked with existing third-party devices. *See Dun & Bradstreet*, 307 F.3d at 215; *see also Atari*, 975 F.2d at 840 ("External factors did not dictate the design of the 10NES program."). Whether a defendant later seeks to make its system interoperable with the plaintiff's system has no bearing on whether the software the Plaintiff created had any design limitations dictated by external factors. *See Oracle*, 750 F.3d at 1370-1371; s*ee also Dun & Bradstreet*, 307 F.3d at 215 (finding an expert's testimony on interoperability "wholly misplaced" because he "looked at externalities from the eyes of the plagiarist, not the eyes of the program's creator"). In other words, the focus is on the compatibility needs and programming choices of the party claiming copyright protection—not the choices the defendant made to achieve compatibility with the Pyrotechnic's program. Here there is no protectable right to compatibility with Plaintiff's field modules. Finding a reasonable likelihood of success on the merits, the Court addresses the remaining elements for a preliminary injunction.

B.   Whether Pyrotechnics Will Suffer Irreparable Harm if a Preliminary Injunction Does Not Issue

In a copyright infringement action, a showing of a likelihood of success raises a presumption of irreparable harm. *See CMM Cable Rep. Inc. v. Keymarket Commc'ns, Inc.*, 870 F. Supp. 631, 639 (M.D. Pa. 1994) (citing *Marco v. Accent Publ'g Co.*, 969 F.2d 1547, 1553 (3d Cir. 1992)). Thus, the Court need not consider this prong of the preliminary injunction inquiry if it finds that Pyrotechnics is likely to succeed on the merits of its copyright infringement claim.

However, given the presentation of evidence at the hearing and in Plaintiff's submissions, we note the following.   "Grounds for finding irreparable injury include loss of control of reputation, loss of trade, and loss of good will." *Opticians Ass'n of Am. v. Indep. Opticians of Am.,* 920 F.2d 187, 195 (3d Cir. 1990 Although a prima facie case for copyright infringement,

alone, does not create a presumption of irreparable injury, "irreparable harm may be based on

past and future infringement' if a plaintiff can 'demonstrate a threat of future infringement

"beyond mere conclusory allegations.'" *Telebrands Corp. v. Newmetro Design*, LLC, No. 16-

1981, 2016 WL 8999932, at *17 (D. N.J. Nov. 10, 2016) (citing *Broad. Music, Inc. v. Publick*

House Partners, LLC, No. 13-3326, 2015 WL 3396804, at *4 (D. N.J. May 26, 2015); and

quoting *TD Bank, N.A. v. Hill,* No. 12-7188, 2015 WL 4523570, at *22 (D. N.J. July 27, 2015)).

Pyrotechnics has already suffered and will continue to suffer irreparable harm if a

preliminary injunction does not issue. Pyrotechnics has invested substantial time and money in

developing its copyrighted Protocol. fireTEK copied and marketed the infringing fireTEK

Routers to Pyrotechnics' customers, claiming that they are capable of effectively communicating

with FireOne field modules, and that there is no longer a need to purchase FireOne's more

expensive control panels. Should Pyrotechnics' customers be persuaded to purchase the

infringing fireTEK Routers on the basis that they can control Pyrotechnics' equipment, there is

necessarily a direct loss to Pyrotechnics. The projected loss of sales to Pyrtechnics has been

estimated and made part of the record under seal; suffice it to say without injunctive relief,

Pyrotechnics would suffer very significant damage to its business.   Loss of substantial sales will

diminish Pyrotechnics' competitive position in the market and the substantial investment it made

in developing the Protocols will be irretrievably lost. *See Apple Computer, Inc. v. Franklin*

Computer Corp., 714 F.2d 1240, 1254 (3d Cir. 1983) ("[E]ven without the presumption of

irreparable harm generally applied in copyright infringement cases, the jeopardy to [Plaintiff's]

investment and competitive position caused by [Defendant's] wholesale copying of many of its

key operating programs would satisfy the requirement of irreparable harm needed to support a

preliminary injunction."). Moreover, an injunction is necessary to prevent further harm in light

of Defendants' actions to promote the infringing fireTEK Routers even after Pyrotechnics sent

its cease and desist letters.

Therefore, the Court finds that Pyrotechnics has shown sufficient evidence of irreparable

harm if an injunction does not issue.

C.   Whether Defendants Will Not Be Harmed by the Grant of a Preliminary Injunction.

As to the balancing the hardships to the parties, this prong is designed "to ensure that the

issuance of an injunction would not harm the infringer more than a denial would harm the mark's

owner." *Opticians Ass'n of Am. v. Independent Opticians,* 920 F.2d 187, 197 (3d Cir. 1990).

"[T]he balance [of hardships] weighs strongly in favor of [an injunction] where all that is

requested is that Defendant comply with the Copyright Act." *Warner Bros. Records Inc. v.*

Walker, 704 F.Supp.2d 460, 469 (W.D. Pa. 2010) (quoting *Lava Records, LLC v. Ates*, No. 05-

1314, 2006 WL 1914166, at *4 (W.D. La. July 11, 2006)).

The Court finds a balance of the hardships weighs in favor of granting a preliminary

injunction. "It is axiomatic that an infringer of copyright cannot complain about the loss of

ability to offer the infringing product." *See WPIX, Inc. v. ivi, Inc.,* 765 F. Supp. 2d 594, 621

(S.D. N.Y. 2011), *aff'd*, 691 F.3d 275 (2d Cir. 2012) (citing *Apple Computer*, 714 F.2d at 1255).

While fireTEK and XFX's businesses will be theoretically "harmed" by their inability to market

or sell the infringing fireTEK Routers, that is not a legally recognized harm. *See id.* Defendants

have no legitimate interest in selling products that infringe upon Pyrotechnics' copyright, and no

doubt they can continue to sell other, non-infringing fireTEK products. Defendants claim that

they are not currently selling any of the infringing fireTEK Routers; thus a preliminary

injunction will simply maintain the status quo, which here, is the ability of Plaintiff to shield

itself from unfair competition. Therefore, Defendants' lawful business interests will not be

harmed by the grant of a preliminary injunction, and based on the evidence before us, the balance of the hardship weighs in Pyrotechnics' favor.

D.   Whether the Public Interest Supports an Injunction

As to the public interest, "[p]reliminary injunctions are a common judicial response to the ... infringement of an apparently valid copyright." *CMM Cable,* 870 F. Supp. at 640 (quoting *Dallas Cowboys Cheerleaders v. Scoreboard Posters*, 600 F.2d 1184, 1187 (5th Cir. 1979)). "Courts have repeatedly held that copyright and trademark law protects not only individual parties, but the public at large." *Sweet People Apparel, Inc. v. Fame of NY, Inc.,* No. 11-1666, 2011 WL 2937360, at *5 (D.N.J. July 19, 2011). "Since Congress has elected to grant certain exclusive rights to the owner of a copyright in a protected work, it is virtually axiomatic that the public interest can only be served by upholding copyright protections and, correspondingly, preventing the misappropriation of the skills, creative energies, and resources which are invested in the protected work." *Apple Computer*, 714 F.2d at 1255, (quoting *Klitzner Indus. v. H. K. James & Co*., 535 F. Supp. 1249, 1259–60 (E.D. Pa. 1982)). "The public interest will be served by upholding the copyright protection ...." *Value Grp., Inc. v. Mendham Lake Estates, L.P.,* 800 F.Supp. 1228, 1234 (D. N.J. 1992) ("The public has no interest in permitting one company to copy another company's work.").

In conclusion, the Court finds this element has been satisfied, and therefore, the strong public interest in upholding copyright protection supports the issuance of preliminary injunction in this case.

E. Requirement for Posting of Nominal Bond

Federal Rule of Procedure 65(c) "mandates that a court when issuing an injunction must require the successful applicant to post adequate security." *Frank's GMC Truck Ctr., Inc. v. Gen.*

Motors Corp., 847 F.2d 100, 103 (3d Cir. 1988); *see* Fed. R. Civ. P. 65(c) ("No restraining order or preliminary injunction shall issue except upon the giving of security by the applicant, for the payment of such costs and damages as may be incurred or suffered by any party who is found to have been wrongfully enjoined or restrained."). However, "the amount of the bond is left to the discretion of the court[.]" *Frank's GMC Truck Ctr., Inc.*, at 847 F.2d at 103. Here, because Pyrotechnics seeks relatively nonburdensome injunctive relief; Defendants face low risk of lost profits. Defendants did not any evidence they will suffer a financial loss as a result of the issuance of an injunction, in fact, they are not currently selling this product in the United States. Accordingly, the Court will require Pyrotechnics to post a nominal bond of $100 before the preliminary injunction will issue.

III. CONCLUSION

For the foregoing reasons, the Court grants Plaintiff's motion for a preliminary injunction and will require the issuance of a nominal bond.   Appropriate order to follow.

Dated: March 11, 2021

/s/ *Robert J. Colville*
Robert J. Colville
United States District Court Judge

CC: Record Counsel via CM-ECF