Connaughton Group LLC

A Product Integrity Consulting Firm

09/20/2019

Via E-Mail and Federal Express

Mr. Robert Kaye
Assistant Executive Director
Office of Compliance & Field Operations

U.S. Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814

cc. Jeffrey Zwirn, President, IDS Research & Development, Inc.; jeffzwirn@alarmexpert.com
Keith Jentoft, President, Interceptor Project.; keith.jentoft@outlook.com

Subject: Request for Investigation of Claims of Non-Conformity across the North American Household Fire & Burglar Alarm Control Units and the Commercial Burglar and Fire Alarm Control Panel Category.

Representative examples are provided within this request but are not exclusive to the industry wide single non-compliance dangers and vulnerabilities within Single Data-Bus Connected Control Units. Impacting both Underwriters Laboratories, Inc. (UL-certification mark) & Intertek Testing Services, NA. Inc. (ETL-certification mark) in that all of these Control Units **do** not comply with both UL and NFPA Standards

---

Dear Mr. Kaye:

Connaughton Group LLC, a Product Integrity Consulting Firm, has been retained by IDS Research and Development, Inc., in Tenafly, NJ to assist with the filing of a "Complaint of Non-Conforming Products" investigation.

This request is specific to all Underwriters Laboratories (UL) & Intertek Testing Services, NA. Inc. (ETL-certification mark) **LISTED - Residential "Hardwired" Household Fire & Burglar Control Panels which incorporate a dangerous and vulnerable single data-bus circuit**, which under a single fault condition, such as the introduction **of a short circuit to the data-bus circuit, renders the life safety and security control panel either fully or partially non-functional. Similarly, a significant majority of commercial burglary and fire alarm control units are also non-conforming as elaborated to above.**

Dangerously, the non-conforming control units are unable to communicate the alarm condition to the Central Monitoring Station and/or to audibly alert the property owner and their family within the household occupancy of the alarm or life safety emergency and dangers that the system has detected such as smoke detector alarm, carbon monoxide detector alarm and/or an burglar alarm sensor event which is in gross deviation to statutory requirements**,** UL and NFPA Standards.

In accordance with OSHA and their **Nationally** Recognized Testing Laboratory (NRTL) program Connaughton Group initiated written contact and notice with the representative NRTL's with which my client, IDS Research and Development, Inc. notified the NRTL laboratories of a "**Claim of Non-Conforming Product**" in accordance with this mandated procedure.

Prior to notification to your offices, this investigation has been underway within the Underwriters Laboratories, Inc. (UL-certification mark) & Intertek Testing Services, NA. Inc. (ETL-certification mark) investigation teams. Notwithstanding the foregoing, and despite the plethora of detailed scientific and testing documentation that was forwarded to both UL and ETL, including video(s) testing evidence and undeniable proof of the control panels failures to comply with both Statutory Requirements, UL and NFPA Standards; very little, communication in response has been received; as to the **"**status**"** of the investigation(s)**;** it has not been provided under the guise of "client confidentiality". Concurrently, with no defined completion date for acknowledgement of our claim(s) having been received, public safety dangers and our concerns remain**.**

Against the foregoing backdrop of the industry norm of **45 business days** to respond to an investigation request, it has been **77 business days since we notified UL and 76 business days since we notified ETL** respectively, both of which have acknowledged the investigation**,** initiated complaint tracking numbers (provided in this document) and a single (1) request for additional information being received from:

- UL on 08/16/2019, from Mr. Duane Johnson, UL Market Surveillance Report Investigator, and
- Intertek (ETL) on 09/02/2019, from Mr. Vince Mori, Intertek's Chief Engineer of Life Safety & Security Services.

Therefore, it is our expert opinion that these non-conforming control panels present a foreseeably dangerous and serious public safety hazard and risk to all of the unsuspecting consumers, their families and business owners who have these control panels installed in their homes and businesses. In the meanwhile, this communication includes documented losses of Life and Property where these control panels were installed and failed, and they were provided within our regulatory package as well.

In fact, it is estimated that the totality of the non-confirming control panels total hundreds of millions of units which were sold and installed across the country.

Included with this request for investigation is a comprehensive support folder which details our ongoing notification efforts for this investigation to include:

a. Initial Letter to Underwriters Laboratories, Inc. (UL-certification mark) requesting an investigation, dated 04/30/2019;
b. Initial Intertek Testing Services, NA. Inc. (ETL-certification mark) requesting an investigation, dated 05/01/2019;
c. NRTL Responses
    a. **UL Investigation Number:** **PIR 2019MS-940**
    b. **Intertek (ETL) Investigation Number:** **ID IPIR-2019-AMER-947**
d. Expert Forensic Report;
e. UL Standards Matrix;
f. NFPA Standards Matrix;
g. Videos demonstrating the failures of the non-conforming "Hardwired" and "Wireless Residential and Commercial Fire and Burglar Alarm Control Panels and Systems;
    a. https://www.dropbox.com/s/mxj8x20pwavd9f9/C0001.MP4?dl=0 (UL 1023 (1 of 2)[1]
    b. https://www.dropbox.com/s/tc3q3h9e0jagxrn/C0002.MP4?dl=0 (UL 1023 (2 of 2)
    c. https://www.dropbox.com/s/hp56137gy9wvngm/C0003.MP4?dl=0 (NFPA 72 (1 of 2)[2]
    d. https://www.dropbox.com/s/xnx9v5oe2tvv1i7/C0004.MP4?dl=0 (NFPA 72 (2 of 2)
    e. https://www.dropbox.com/s/9e9x55cn7pahh3z/C0005.MP4?dl=0 (UL 985 (1 of 1)[3]
h. Peer Review Report – Mr. Merton Bunker, PE- former veteran staff liaison to the National Fire Protection Association **(NFPA)**;
i. Subsequent letters to both NRTL's, and;
j. Documented life & property losses where these identified Control Panels were installed **and failed**;
k. https://www.dropbox.com/sh/3eke5eqxn5fw7fj/AAB5kSSLQ3Ka_eDVgizitLyTa?dl=0 *(Dropbox folder link)*

[1] UL 1023- Standard for Household Burglar-Alarm System Units
[2]NFPA-72 National Fire Alarm Code and NFPA 72-National Fire Alarm and Signaling Code
[3] UL 985 Standard for Household Fire Warning System Units

Below is a summary of our forensic findings, serious concerns and examples:

Nationally Recognized Manufacturers of Household **and Commercial** Burglar and Fire Alarm System Control Units have a duty to comply with their Equipment Manufacturer's Specifications, **Statutory Duties**, UL® Standards, NFPA® Standards, Nationally Recognized Industry Standards and Best Practices and The Authority Having Jurisdiction (AHJ).

The standard of care for equipment manufacturers is to have their control panels and other manufactured equipment listed for their intended purpose by a Nationally Recognized Testing Laboratory (NRTL) such as Underwriters Laboratories, Inc. or Intertek in accordance with UL Standards, NFPA-70 of the National Electrical Code, NFPA 72, Statutory Duties, Nationally Recognized Industry Standards and Best Practices and the Authority Having Jurisdiction.

All Household **and Commercial** Control Units shall comply with the equipment manufacturer's specifications, **UL Standards,** NFPA 72, National Fire Alarm Code and/or the more current editions of NFPA 72, National Fire Alarm and Signaling Code which is published by the National Fire Protection Association, Inc. Furthermore, all Household Control Units are required to be combination listed under UL 1023 and UL 985 respectively and Commercial Burglar and Fire Alarm Control Panels are required to be listed under UL 365 and UL 864.

Against the foregoing backdrop, **our** expert and forensic analysis in this matter has identified that under certain conditions of commonality, Household Burglar and Fire Alarm Control Units **and Commercial Burglar and Fire Alarm Control Units** both historically and those that are currently being manufactured and sold cannot and do not comply with its represented UL Standards, and NFPA 72 Standards.

The Standards & Sections of Non-Compliance are outlined below. Please refer to the complete 43-page, 2019 IDS Research & Development, Inc. Expert Forensic Report released as part of this investigation request package.

It is the firm belief and opinion of both IDS Research and Development, Incorporated, the Connaughton Group LLC and Mr. Merton Bunker, PE of Merton Bunker and Associates that these Dangerous and Foreseeable Vulnerabilities of non-conforming control units within the single data-bus circuit present a clear and present danger to the hundreds of millions of homes, families and businesses where all of these non-conforming control units are installed.

Accordingly, in the interest of public safety, health and welfare, these serious dangers must be addressed and remediated immediately, which is consistent and in accordance with local, state and federal certification, signaling requirements, statutory requirements and UL and NFPA Standards.

Representative UL and ETL Listed Models (sampled)

I. **HONEYWELL**

Website: www.Honeywell.com
Panels: Vista 15, Vista 20, Vista 30, Vista 50, Vista 32, Vista 128
**Vista 128 and Vista 32 are listed for Commercial Fire

II. **DIGITAL SECURITY CONTROLS (DSC)**

Website: www.dsc.com
Panels: 1616, 1832, 1834, 2016, 2032, 2064, 2128

III. **NAPCO**

Website: www.napcosecurity.com
Panels: 816, 1632, 1664, 3200, 9600

IV. **ELK Products**

Website: www.elkproducts.com
Panels: M1

V. **Interlogix United Technologies**

Website: www.interlogix.com
Panels: Concord III, Concord IV, Concord Express, Concord Ultrasync

Representative Intertek (ETL) Listed Models (copied from the Intertek On-Line Product Directory):

Title:	HOUSEHOLD FIRE WARNING SYSTEM UNIT
Company:	**AMERICAN MEDICAL ALERT CORP. - Pawtucket, RI USA**
Product Information:	Personal Emergency Response System, Model Nos. 700, 700-001, 700-002, 700-003, 700-004, 700-005, 700-006, 700-007, 700-008, 700-009, 700-E, 700-P, 700-S, 700-VC, 700-MT, 700-DL, 800, 800-001, 800-002, 800-003, 800-005, 800-006, 800-007, 800-008, 800-009, 800-E, 800-P, 800-S, 800-VC, 800-MT, 800- DL, 850XL, 900. Personal Emergency Response System & 4 Pendant Transmitters, Model Nos. 285, 290, 485, 490, 1100. Personal Emergency Response System, Voice of Help, Model No. 500B.

Title:	HOUSEHOLD FIRE WARNING SYSTEM UNIT
Company:	**VIVINT INC. - Provo, UT USA**
Product Information:	345MHz Repeater, Model No. V-RPTR1-345. Touchscreen Control Panel, Keyfob and PushButton, Model Nos. CP01, 2GIG-KEY2-345, V-SKEY1-345, V- PANIC2-345. Touchscreen Fire and Burglary Control Panel, Model No. CP04.

Title:	HOUSEHOLD FIRE WARNING SYSTEM UNIT
Company:	**ALULA - Hudson, WI** Product Information:
Trade Name(s):	Resolution. Fire and Burglar Alarm Control System, Model Nos. Base Control Panel: RE6100 followed by one letter; followed by -G, -C, -D, -W or -X. Model Nos. Helipad Keypad: RE656. Model No. PINpad Keypad: RE652. Model No. Control Panel RE6130P-XW-X. Model No. Control Panel RE6130P-LX-X. Panel Replacement Module, Model No. REHP1AZ0.

Title:	HOUSEHOLD FIRE WARNING SYSTEM UNIT
Company:	**UTC FIRE & SECURITY AMERICAS CORPORATION, INC - Costa Mesa, CA USA**
Product Information:	**Trade Name(s): GE Security.** Fire and Burglar Alarm Touchscreen Keypad, Model No. 60-924-3-C4TS5, 60-924-3-C4TS5-2 Fire and Burglar Alarm Touchscreen Keypad, Model No. 60-924-RF-TS5, 60-924-RF-TS5-2. Home Fire/Burglar System, Model Nos. Simon XT (600-1054-95R), Simon XT "New Look" (600-1054-95R-V2), Simon XT (600-1054-95R-11), Simon XTi (600-1054-95R-12). Talking Touch Screen Keypad, Model Nos. 60-924-RF-TS; may be followed by -N.

UL Standards Matrix

UL® 985-Household Fire Warning System Units, 5th Edition

Standard References	5th Edition
These requirements also apply to the use of combination systems, such as a combination fire-burglar alarm system control unit, which uses circuit wiring common to both systems. When common wiring is used for combination systems, it shall be connected in such a manner that internal fault conditions (shorts, opens, grounds) in the non-fire alarm (burglary) system circuit wiring, or faults between the fire and non-fire alarm system circuits, will not interfere with the supervision of the fire alarm system or prevent intended alarm signal transmission.	1.4
Fire alarm control unit	39.1
A household control unit shall be capable of operating reliably and uniformly for all conditions of its intended performance when used in conjunction with initiating devices and indicating devices to form a system combination of the type indicated by the installation wiring diagram and any supplementary information provided.	39.1.1
An open or ground fault in any circuit extending from a household control unit, other than the initiating device circuit, shall not affect the operation of the control unit except for the loss of the function extending from that circuit.	41.4
A fault condition, open, ground, or short of other than a fire alarm circuit of a combination control unit shall not affect the fire-alarm signaling.	41.6

Notably, the findings subsumed in the Expert Report are also based on exemplar control units that were tested and repeatedly failed in gross deviation to both UL and NFPA Standards.

UL® 985-Household Fire Warning System Units, 6th Edition, Effective May 15, 2019

Standard References	6th Edition, May 15, 2015
These requirements also apply to the use of combination systems, such as a combination fire-burglar alarm system control unit, which uses circuit wiring common to both systems. When common wiring is used for combination systems, it shall be connected in such a manner that internal fault conditions (shorts, opens, grounds) in the non-fire alarm (burglary) system circuit wiring, or faults between the fire and non-fire alarm system circuits, will not interfere with the supervision of the fire alarm system or prevent intended alarm signal transmission.	1.4
Fire alarm control unit	41.1
A household control unit shall be capable of operating reliably and uniformly for all conditions of its intended performance when used in conjunction with initiating devices and notification appliances and other devices to form a system combination of the type indicated by the installation wiring diagram and any supplementary information provided.	41.1.1
Combination control unit	41.3
Short circuit or open circuit single faults in the non-fire equipment or in the wiring between the non-fire equipment and the fire alarm system shall not impede or impair the monitoring for integrity of the fire alarm system, nor impede or impair any fire alarm signal transmissions or operations.	41.3.1.3
The required operation of the fire alarm equipment shall not be impaired by any failure of the non-fire alarm equipment hardware, software or circuits, or by any maintenance procedure, including removal or replacement of defective equipment or powering down of the non-fire equipment.	41.3.1.6
An open or ground fault in any circuit extending from a household control unit, other than the initiating device circuit, shall not affect the operation of the control unit except for the loss of the function extending from that circuit.	44.2.3
Keypads	44.4

Keypads and other operator interfaces shall be monitored for integrity so that within 200 seconds a distinctive audible trouble signal will indicate the occurrence of a single break (open) or single ground fault in the interconnections, which would prevent the intended operation of the system for alarms, alarm transmissions to a supervising station, or the signal representative of a failure to complete a signal transmission with a supervising station. The trouble annunciation shall be at an operator interface or audible at the operator interface. Prior to the application of a fault the control unit shall be energized in the intended standby condition while connected to a rated source of voltage and frequency. Exception: Supervision is not required for keypad interconnections to the control unit extending not more than 3 feet (0.91 m) from the control unit.	44.4.1
Annunciation of the audible trouble signal required by 44.4.1 is permitted to be remote from an operator interface, when the product's installation instructions alert the user that the product sounding the audible is to be installed in a location where the audible signal can be heard at the operator interface.	44.4.2

Notably, the findings subsumed in the Expert Forensic Report are also based on exemplar control units that were tested and repeatedly failed in gross deviation to both UL and NFPA Standards.

NFPA 72 Code Matrix

NFPA 72®-National Fire Alarm Code and
NFPA 72®-National Fire Alarm And Signaling Code

Code Reference	2019 Edition	2016 Edition	2013 Edition	2010 Edition	2007 Edition	2002 Edition
Faults in other systems or components shall not affect the operation of the fire alarm system	29.10.7.5	29.7.7.4	29.7.7.4	29.7.6.4	11.7.6.4	11.7.6.4
Where common wiring is employed for a combination system, the equipment for other than the fire alarm system shall be connected to the common wiring of the system so that short circuits, open circuits, grounds, or any fault in this equipment or interconnection between this equipment and the fire alarm system wiring does not interfere with the supervision of the fire alarm system or prevent alarm or trouble signal operation.	29.10.7.6	29.7.7.5	29.7.7.5	29.7.6.5	11.7.6.5	11.7.6.5
Equipment not required for the operation of the fire alarm system that is modified, removed, or malfunctioning in any way must not impair the operation of the fire alarm system. Commentary Text from NFPA 72® Handbook	29.10.7.6	29.7.7.5	29.7.7.5	29.7.6.5	11.7.6.5	11.7.6.5

Kindly note that the findings subsumed in the Expert **Forensic** Report are also based on exemplar control units that were tested and repeatedly failed in gross deviation to both UL and NFPA Standards.

In conclusion, I would like to thank you for your time and efforts in relation to this mission critical recall request. To the extent that you would like to have a conference call between CPSC, UL- Underwriters Laboratories, Inc., Intertek (ETL), OSHA investigation teams, Connaughton Group and our client IDS Research and Development Incorporated, regarding the comprehensive and detailed forensic 43-page, Expert Report and/or with regards to any other issue(s) please contact our offices.

Please note that all correspondence is to be communicated through Connaughton Group LLC for review and dissemination. We look forward to reply.

Very Kind Regards,

Thomas F Connaughton
President & CEO

Please direct all correspondence to:

Thomas F. Connaughton, President and CEO
Connaughton Group LLC
601 Rt. 206 Suite 26-122
Hillsborough, NJ 08844
telephone + 1 732 841 2119
email: www.Connaughton.Group@Outlook.com
web: www.ConnaughtonGroup.com