



# Fire Alarm System Modification Replacement Of Existing Fire Alarm Or Control Panel

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

## **3.2.4.5. Installation and Verification of Fire Alarm Systems**

(1) Fire alarm systems, including those with voice communication capability where provided, shall be installed in conformance with CAN/ULC-S524, “Standard for Installation of Fire Alarm Systems.”

(2) A fire alarm system shall be verified in conformance with CAN/ULC-S537, “Verification of Fire Alarm Systems”, to ensure satisfactory operation.

## **3.2.4.7. Signals to Fire Department**

(4) Notification of the fire department, as required by Sentences (1) to (3) shall be provided in conformance with CAN/ULC-S561, “Standard for Installation and Services for Fire Signal Receiving Centres and Systems”, (See Note A-3.2.4.7.(4))

## **Extract from CAN/ULC-S524**

### **3.4. Wiring**

3.4.2. When utilizing existing wiring, the wiring shall be in accordance with CSA C22.1, Canadian Electrical Code, Part 1, Safety Standards for Electrical Installations, section 32, and the requirements of Clauses 3.4.3. to 3.4.15.

## **Extract from CAN/ULC-S537**

## **4.Verification Procedure-Control Units & Transponders**

### **4.1. General**

4.1.1. Each control unit and transponder shall be inspected and tested to confirm operability, and that the installation is in accordance with the design and CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems. Refer to appendix C5, Control Unit or Transponder Record.



## 6. System Modifications

6.8. Where an existing fire alarm system control unit or transponder is replaced with a new control unit or transponder, it shall be verified in accordance with Subsection 4, Control Units & Transponder, and any existing devices shall be tested in accordance with Section 5.7 (Field Devices) of CAN/ULC-S536, Inspection and Testing of Fire Alarm Systems. (Refer also to Clause 6.11.)

6.11. Software modifications shall be tested by one of the following methods:

- A. Re-verifying all system functions that could be affected by the modifications with the exception of wiring supervision; or
- B. A comparison of the 'before' and 'after' software utilizing mediums such as a printout of compare program.

### Extract from CAN/ULC-S536

#### 5.7. Field Devices

##### 5.7.1. General

5.7.1.1. Each field device shall be inspected and tested to confirm the following, as applicable:

- A. Free of damage
- B. Free of foreign substances (e.g. paint);
- C. Mechanically supported independent of wiring; and
- D. Protective dust shields or covers removed

## OBJECTIVE

Fire alarm systems are an integral part of any life safety system installed in a building. When a fire alarm system is modified or altered by replacing the existing fire alarm panel, annunciator or control unit, a building permit must first be issued.

The new fire alarm panel, annunciator or control unit must;

- be installed according to CAN/ULCS524,
- be verified to CAN/ULC-S537 (C5.5 Control Unit Inspection), and
- have all existing devices tested in accordance with CAN/ULC-S536 (5.7 and E3.2 Individual Device Record testing report)



- A document or certificate of signals to a central station shall be provided through a ULC listed alarm company. Companies which are certified to CAN/ULC-S561 can be found on the ULC online directory at <http://database.ul.com/cgi-bin/XYV/template/LISCANADA/1FRAME/sh>

Compliance with the applicable provisions of the above Standards will ensure the new panel, annunciator and control panel have been installed correctly, are compatible with the existing devices and the fire alarm system continues to provide the minimum life safety features required by the Building Code.

**NEW FIRE ALARM PANEL**  
(Compatible with Existing Devices)

**EXISTING FIRE ALARM AND ANCILLARY DEVICES**  
(Audible & Visual Signalling Devices, Manual Station, Heat Detectors, Smoke Detectors, Air Duct Mounted Detectors, Hold Open Devices, Electromagnetic Locking Devices.) etc.



Diagram from CFAA Fire Alarm Systems Manual