The Ten Commandments of Wiring

1. **Use jacketed wire.** Using jacketed wire reduces the chance of minor abrasions from becoming a problem.

2. **Tape where wire may rub. UL requirements – 3 wraps minimum.** Tape the places where wiring might rub on corners of walls, running through walls or entering walls from ceilings are all possible areas for abrasion.

3. **Use conduit in high activity areas.** Using conduit or wire molding to protect wiring in high traffic areas will prevent problems. Loading docks, shipping and receiving areas or any area that has operating machinery can all be problem areas.

4. **Avoid running wires near or along AC lines. NEC - 2" min.** Running wiring too close to AC lines will cause induced current on your lines. This may be enough current to cause your user controls and control panel to operate inconsistently.

5. **Secure wiring to permanent structures.** Secure your wiring to the permanent walls and ceilings. Using temporary walls or conduits to secure your wiring may result in your wiring being disrupted when these items are moved or removed.

6. **All splices must be serviceable and accessible. NEC - 6" min.** Because many problems with security and fire systems can be traced to splices, keeping your splices accessible just makes common sense. Remember that all areas that are accessible during construction may not remain accessible later on.

7. **All wiring must be tagged or identified as to use or function,** including the grounding conductor.

8. **Do not attach to steam or water pipe**s. The heat and moisture from hot pipes is a problem for your wire's insulation. Even cold water can be a problem for some insulation. If piping is repaired or moved later on your wiring may be affected.

9. **Avoid mechanical stress.** Stretching your wiring may use a few inches less wire or look neater but can also result in too much stress on your wire and splices. Wiring under too much stress may develop cracks in the outer jacket and/or conductor insulation.

10. **Maintain service loops at both ends. (6" minimum).** Service loops at both ends of your wiring are essential. Wiring will need to be serviced at some point. Detection circuits may be changed. New equipment may be added. A new control panel may be installed. Service loops are helpful in all of these instances.