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Security Industry myths and misconceptions

It has recently come to my attention that there are a number of misconceptions held by many installers in the security industry. I will try to correct some of these, and explain the rationale.

Alarm panels supply 12v. No they don't, the most common on board supply for a panel is 1Amp 12v DC.

IS it OK to run 12v dome cameras from panel power…..NO it isn't. First of all many 12v dome cameras require 12v +\-10% so their maximum voltage is 13.2v. Secondly it will reduce the amount of time the panel will work for in the event of an AC fail.

Higher current power supplies are needed for long cable runs. WRONG, a higher voltage power supply may be required to overcome voltage drop on a long cable run. Current is not pushed out by the power supply, it is drawn by the powered device. Remember an earlier tech tip which discussed the relationship between voltage, resistance and current.

7/020 Cable cannot be used UNTRUE. The current Australian standard (AS2201.1 2007) specifically allows for 7/020 cable to be used in class 1 & class 2 systems. These classes would cover almost all domestic and many commercial installations. The standard is available on the net from http://www.standards.com.au .

14/020 Figure 8 has less voltage drop than 14/020 4 Core FALSE. The voltage drop over a length of cable is dependant upon the cables resistance. As both mentioned cables have 14 strands at 0.20mm diameter they both have the same resistance, and therefore the same voltage drop.

Backup batteries last to their Ah rating INCORRECT A batteries capacity is commonly given in Amp Hours, and most alarm backup batteries are 7Ah. Unfortunately this does not mean you can draw 700mA from the battery for 10 hours. The reason is twofold. Firstly the battery will not be in perfect condition, and secondly the battery does not go from supplying 13.8V to supplying 0V in an instant transition. The voltage supplied by the battery decreases over time and can be drawn as a curve which gets steeper with time. As such, a batteries capacity should always be downgraded by at least 20% in the real world.

Chris Henseleit

QLD:
Phone: (07) 3891 2222
Fax: (07) 3891 7722
salesqld@mainline.com.au

VIC:
Phone: (03) 9596 6688
Fax: (03) 9596 6138
sales@mainline.com.au