62 India Street
Portland, Maine
NAC Circuit Voltage Drop/Maximum Length Calculations

Formulas Used:

R_t = (D) x (R_w) / 1000'
V_d = (R_t) x (I_t)
Substitute for (R_t) and solve for D
D = ((4.0) x (1000)) / ((R_w) x (I_t))

Notes:

1 **NAC Circuit terminal voltage 24Vdc.**
2 **A maximum allowable voltage drop of 4Vdc will provide a minimum of 20 Vdc per circuit.**
3 **Current values listed per device are based on 24Vdc.**

STROBE CIRCUIT MAX WIRE LENGTH CALCULATION

	Ceiling Horn Strobe				Ceiling Strobe Only				Total Circuit Current	Ω per 1000' Pair
	15cd	30cd	75cd	95cd	15cd	30cd	75cd	95cd		
Panel	71	90	143	165	41	63	111	134		14AWG (5.2)
Circuit 1	0	0	0	6	0	0	0	0	0.9900	777.00 Ft
Circuit 2	2	1	0	0	2	1	0	0	0.3770	2040.40 Ft
Circuit 3	0	0	0	3	0	0	0	0	0.4950	1554.00 Ft
Circuit 4	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft