King's Head - Portland, ME

Booster Power Supply #1 Standby Battery Calculations

	G1RF-HDVM (20v)			757	G1RF-VM (20v)		CGF-VMH	AB4GT	AB4G	Quiescent Current	Alarm Current	Remaining % of Ckt Capacity
	15cd	30cd	75cd	110cd	15cd	30cd	177cd	Sounder	Sounder			
(mA)	88	109	193	188	71	98	429	1.46/31	1.46/24			
Panel										0.0700		
Circuit 1	1		1		2					0.0000	0.4230	83.08 %
Circuit 2	1	2	1							0.0000	0.4990	80.04 %
n/a										0.0000	0.0000	100.00 %
n/a										0.0000	0.0000	100.00 %
										0.0700	**0.9220**	
										Total Quiescent	Total Alarm	

85.82 %	Remaining % Panel

All currents are expressed as mA.

Max current per ckt = 2.5 Amps. Max current per panel = 6.5 Amps.

Total Quiescent Amp x Time Required (24 Hours)	1.680	AmpHr
Total Alarm Amp x Time Required (5 Minutes)	0.077	AmpHr
Total Battery Required	1.757	AmpHr
Battery Supplied	**7.2**	AmpHr

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))

R_t = Total Circuit Resistance
D = Total Circuit Length (Feet)
R_w = Wire Resistance (Ω) per 1000' Pair (Ohms)
V_D = Circuit Voltage Drop (Max allowed is 4.0Vdc)

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 20Vdc.**

STROBE CIRCUIT MAX WIRE LENGTH CALCULATION

	G1RF-HDVM (20v)			757	G1RF-VM (20v)		CGF-VMH	AB4GT	AB4G	Total Circuit Current	Ω per 1000' Pair
	15cd	30cd	75cd	110cd	15cd	30cd	177cd	Sounder	Sounder		
	88	109	193	188	71	98	429	1.46/31	1.46/24		14AWG (5.2)
Circuit 1	1	0	1	0	2	0	0	0	0	0.4230	1818.51 Ft
Circuit 2	1	2	1	0	0	0	0	0	0	0.4990	1541.54 Ft
n/a	0	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft
n/a	0	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft