Power Budget Example

Team Number:	211
Project Name:	**EGR303**
Team Member Names:	**Levi, Hafsa, Michael, Kelton**
Version:	**v1**

All Major Components	Component Name	Part Number	Supply Voltage	#	Maximum Current	Current (mA)	Unit
	Microcontroller	PIC18F57Q43	+1.8V - 5.5V	1	500	500	mA
	LCD	NHD-0216K1Z-NSW-BBW-L	+4.5V - 5.5V	1	40	40	mA
	Rotary Encoder	PEC11R-4220K-S0024	+5V	1	10	10	mA
							mA
							mA
							mA

+5V Power Rail	Component Name	Part Number	Voltage Range	#	Maximum Current	Current (mA)	Unit
	Microcontroller	PIC18F57Q43	+1.8V - 5.5V	1	500	500	mA
	LCD	NHD-0216K1Z-NSW-BBW-L	+4.5V - 5.5V	1	40	40	mA
	Rotary Encoder	PEC11R-4220K-S0024	+5V	1	10	10	mA
						0	mA
						0	mA
					Subtotal	550	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	687.5	mA
c2. Regulator or Source Ch	+5V Regulator	LM7805	+5v - 35V	1	1000	1000	mA
					Total Remaining Current Available on +5V Rail	312.5	mA

External Power Source 1	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current	Total Current (mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	YU0905	9VAC	+9V	5000	5000	mA
	+5V Regulator (Board 1)	LM7805	+5V - 35V	1	1000	1000	mA
Power Rails Connected to	+5V Regulator (Board 2)	LM7805	+5V - 35V	1	1000	1000	
External Power Source 1	+5V Regulator (Board 3)	LM7805	+5V - 35V	1	1000	1000	mA
	+5V Regulator (Board 4)	LM7805	+5V - 35V	1	1000	1000	mA
			Total Remaining Current Available on External Power Source 1			1000	mA

Notes

External Supply Voltage should be determined by the dropout voltage for highest-voltage regulator (e.g., +14V for a +12V regulator).
If you have multiple units in your design (e.g., a base unit and remote unit) then you need a separate power budget for each unit