Riley Franco Power Budget

Team Number:	207
Project Name:	**Trash Canner**
Name:	**Riley Franco**
Version:	**2**

All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	H-bridge	FAN8100N	+2.2V-9V	1	65	65	mA
	Brushed DC motor	Pololu 4754	+12V	1	1600	1600	mA
	Curisoity nano microcontroller	PIC18F57q43	+1.8V - 5.5 V	1	50	50	mA
	Test LED	Built-in-LED	+3V-3.6V	1	20	20	mA
	5V regulator	LM7805T	+7V - 35V	1	1000	1000	mA

+12V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Brushed DC motor	Pololu 4754	+12V	1	1600	1600	mA
	5V regulator	LM7805T	+7V - 35V	1	135	135	mA
					Subtotal	1735	mA
					Safety Margin	25%	
					Total Current Required on +12V Rail	2168.75	mA
c1. Regulator or Source Choice	+12V power supply	Tri-Mag 12V Power Supply	+12V - 35V	1	3000	3000	mA
					Total Remaining Current Available on +12V Rail	831.25	mA

+5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	H-bridge	FAN8100N	+2.2V-9V	1	65	65	mA
	Curisoity nano microcontroller	PIC18F57q43	+1.8 - 5.5 V	1	50	50	mA
	Test LED	Built-in-LED	+3-3.6V	1	20	20	mA
					Subtotal	135	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	168.75	mA
c2. Regulator or Source Choice	+5V Regulator	LM7805T	+7V-35V	1	1000	1000	mA
					Total Remaining Current Available on +5V Rail	831.25	mA

External Power Source 1	Component Name	Part Number	SupplyVoltageRange	Output Voltage	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply		120VAC	+24V	15000	15000	mA
Power Rails Connected to External Power Source 1	+12V power supply	ALITOVE 12V Power Supply	+12V - 35V	1	5000	5000	mA
	+5V Regulator	LM7805T	+7V-35V	1	1000	1000	mA
					Total Remaining Current Available on External Power Source 1	9000	mA