External IR Sensor and UI LEDs Power Bud

Team Number:	202
Project Name:	**Autocan**
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Version:	**2**

A. List ALL major components (active devices, integrated circuits, etc.) except for pow

All Major Components	Component Name	Part Number	yVoltageRan	#	
	Photo Transistor	BPW96B	5V		1
	IR LED	TSAL6100	5V	1	
	Opamp	MCP6004-I/P	1.8 - 6V	1	
	RGB LED	QBL8RGB60D	2 - 5V	1	

B. Assign each major component above to ONE power rail below. Try to minimize the r

+5V Power Rail	Component Name	Part Number	yVoltageRan	#	
	Photo Transistor	BPW96B	5V		1
	IR LED	TSAL6100	5V	1	
	Opamp	MCP6004-I/P	1.8 - 6V	1	
	RGB LED	QBL8RGB60D	2 - 5V	1	
			Total Current Required		
c2. Regulator or Source Ch	+5V Regulator	LM7805	(range)	1	
			Total Remaining Current Available		

C. For each power rail above, select a specific voltage regulator using the same proces

D. Select a specific external power source (wall supply or battery) for your system, and

External Power Source 1	Component Name	Part Number	yVoltageRan	Outpu
Power Source 1 Selection	Plug-in Wall Supply	B09ZTKTLGW	110VAC	9V
Power Rails Connected to External Power Source 1	+5V Regulator	LM7805	7V to 35V	5V
	Total Remaining Current Available on External Pov			

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er sources, voltage regulators,		
axCurre	**Total**	**Unit**
100	100	mA
200	200	mA
170	170	microA
100	100	mA

number of different power rails in		
axCurre	**alCurrent(mA)**	**Unit**
100	100	mA
200	200	mA
170	170	microA
100	100	mA
	0	mA
Subtotal	570	mA
Safety Margin	25%	
l on +5V Rail	712.5	mA
1000	1000	mA
e on +5V Rail	287.5	mA

ss as for major component		

l confirm that it can supply all of		
axCurre	**alCurrent(mA)**	**Unit**
15000	15000	mA
1500	1500	mA
ver Source 1	13500	mA