

# Creative Inquiry Course TA Manual

## Component for Semester I Labs

All the components required for the semester I lab is available in the Snap Circuit and myDAQ kit.

## Components for Karaoke Circuit

Some of the following components are generally available with Mr. John Hicks at Riggs 202. TA must contact him before the start of the semester with the list of required components. If Mr. Hicks does not have the required components, TA will need to work with him to place an order. Following are the possible online links for respective components. Some of the components may need to be soldered with connecting wires. TA may arrange timing with Mr. Hicks and the students to use soldering iron available in Riggs 202.

Component	Model/Part No.	Supplier	Cost per Unit	Quantity per group
Operational Amplifier (LF 356N)	10 356	Electronix Express	\$0.88	5
20K Resistance Trip Pot	18MPT20K	Electronix Express	\$0.65	1
100K Resistance Trim Pot	18MPT100K	Electronix Express	\$0.65	1
Resistors: Two 100 K $\Omega$ , Eleven 10 K $\Omega$ , One 1 K $\Omega$		Riggs 202		
Capacitors: Four 10 $\mu$ F, One 4.7 $\mu$ F, One 0.1 $\mu$ F		Riggs 202		
3.5 mm Sub-miniature Stereo Socket or Jack	0702JA68	Electronix Express	\$0.45	3
Bread Board		myDAQ Kit		
Connecting Wires		Riggs 202		

## Components for LASER Listener

Some of the following components are generally available with Mr. John Hicks at Riggs 202. TA must contact him before the start of the semester with the list of required components. If Mr. Hicks does not have the required components, TA will need to work with him to place an order. Following are the possible online links for respective components. Some of the components may need to be soldered with connecting wires. TA may arrange timing with Mr. Hicks and the students to use soldering iron available in Riggs 202.

Component	Model/Part No.	Supplier	Cost per Unit	Quantity per group
LASER Pointer	<a href="#">Any LASER pointer as shown here, will work</a>			
Operational Amplifier (LF 356N)	10 356	Electroinix Express	\$0.88	1
Photo-sensor or Photo-transistor	08LPT80	Electronix Express	\$0.80	1
100K Resistance Trim Pot	18MPT100K	Electronix Express	\$0.65	1
Resistance		Riggs 202		
Capacitors ( 1 $\mu$ F and 10 $\mu$ F)		Riggs 202		
Holder for Photo-diode	<a href="#">An example holder</a>		\$8.49	1
Bread Board		myDAQ Kit		1
Connecting Wires		Riggs 202		

## Components for Air Guitar

Some of the following components are generally available with Mr. John Hicks at Riggs 202. TA must contact him before the start of the semester with the list of required components. If Mr. Hicks does not have the required components, TA will need to work with him to place an order. Following are the possible online links for respective components. Some of the components may need to be soldered with connecting wires. TA may arrange timing with Mr. Hicks and the students to use soldering iron available in Riggs 202.

<b>Component</b>	<b>Model/Part No.</b>	<b>Supplier</b>	<b>Cost per Unit</b>	<b>Quantity per group</b>
Two axis Accelerometer	<a href="#">ADXL335</a>	ADA FRUIT	\$14.95	1
Gloves		e.g. Walmart	\$10.00	1
Speakers with reflective surface	Logitech LS11	e.g. Target	≈ \$20.00	1
Resistance (eight 12K)		Riggs 202		
Push Buttons (normally open)	17DTS62K	Electronix Express	\$0.30	8
Bread Board		myDAQ Kit		1
Connecting Wires		Riggs 202		
8 Pieces (about 15x15mm) of PCB Test Board		Riggs 202		
Multi-Conductor Electronic Wire Shielded		Riggs 202		