PHYS (222) Student kit parts list Spring

		Qty:	Used in lab #	DigikeyLinks, linked from first page
Bag 1	**Resistors: Less than 1K Ω**			
	10 Ω	2	1,3	RNF14FTD10R0 Stackpole Electroni
	100 Ω	2	1,2,3	RNF14FTD100R Stackpole Electroni
	220 Ω	2	2,7,8	RNMF14FTC220R Stackpole Electro
	330 Ω	2	2	RNMF14FTC330R Stackpole Electro
	470 Ω	2	2,3	RNF14FTD470R Stackpole Electroni
	820 Ω	2	1,3	RNMF14FTC820R Stackpole Electro
Bag 2	**Resistors: 1KΩ - 9.9KΩ**			
	1K Ω	4	2,3,5,6	RNF14FTD1K00 Stackpole Electroni
	2.2K Ω	2	6	RNMF14FAD2K20 Stackpole Electro
	3.3K Ω	4	2,3	RNMF14FTC3K30 Stackpole Electro
	4.7K Ω	2	5,7,8	RNMF14FTC4K70 Stackpole Electro
Bag 3	**Resistors: 10KΩ - 99 KΩ**			
	10K Ω	4	2,3,6,7,8	RNMF14FAD10K0 Stackpole Electro
	22K Ω	2	2	RNMF14FTC22K0 Stackpole Electro
	33K Ω	2	2	RNMF14FAD33K0 Stackpole Electro
	47K Ω	2	7,8	RNF14FTD47K0 Stackpole Electroni
Bag 4	**Resistors:100KΩ - 990 MΩ**			
	100K Ω	2	2,3,4,6	RNMF14FTC100K Stackpole Electro
	330K Ω	2	9,10	RNF14FTD332K Stackpole Electroni
	560K Ω	2	9,10	RNF14FTD562K Stackpole Electroni
	680K Ω	2	1	RNMF14FTC680K Stackpole Electro
Bag 5	**Resistors: Greater than 1 MΩ**			
	1M Ω	2	1,3	RNF14FTD1M00 Stackpole Electron
	3.32M Ω	2	1	RNF14FTD3M32 Stackpole Electron
	10M Ω	1	9,10	RNF14FTD10M0 Stackpole Electron
Bag 6	**Capacitors, Inductor**			
	0.01uF (10nF)	4	3,5,7,8	PHE840MK5100KK01R17 KEMET |
	0.1uF (100nF)	2	3,4,5	R71MF31004030K KEMET | Capacit
	100uF	1	6	https://www.digikey.com/en/products
	1uF Ceramic	2	7,8	FK18X5R1C105K TDK Corporation |
	4nF (3900pF)	1	9,10	R82EC1390AA50J KEMET | Capacit
	560nF (0.56uF)	2	9,10	B32529C0564K289 EPCOS - TDK E
	10mH Inductor	1	3,5	B82144A2106J000 EPCOS - TDK El
Bag 7	**Audio Connectors**			
	1/8" Jack to Breadboard	2	4	STX-3120-3B Kycon, Inc. | Connecto
	1/8" M Plug - M Plug Cable	1	4	770-10040-00100 CNC Tech | Cable

Bag	Category	Item	Qty	Ref	Link
Bag 8	**Diodes, LEDs, Photodiode**				
		1.8V Zener Diode	1	6	1N4614 TR PBFREE Central Semico...
		Rectifier Diode	1	6	https://www.digikey.com/en/products...
		Red LED	2	6	https://www.digikey.com/en/products...
		Blue LED	2	6	https://www.digikey.com/en/products...
		Green LED	2	6	C503B-GCN-CY0C0792 Cree Inc.	...
		Photodiode	1	6	https://www.digikey.com/en/products...
Bag 9	**OpAmps**				
		LM358	2	9,10	LM358AP Texas Instruments	Integr...
		TI UA741	2	7,8	https://www.digikey.com/en/products...
Bag 10	**Jumpers**				
		4" jumper	10		Amazon.com: EDGELEC 120pcs 20c...
		8" jumper	10		Amazon.com: EDGELEC 120pcs 10c...
		Alligator clip jumper	4		Amazon.com: Oiyagai 10PCS 2 in 1...
Bag 11	**MOSFET and Logic Gates**				
		MOSFET	1	Lect. Act.	CD4007UBE Texas Instruments	Int...
		XOR	1	Lect. Act.	SN74AHC86N Texas Instruments	I...
		NAND	1	Lect. Act.	SN74HC00N Texas Instruments	Int...
Bag 12	**Sensors**				
		Microphone	1	Projects	MO094204-1 DB Unlimited	Audio P...
		Temp Sensor	1	Projects	LM335Z STMicroelectronics	Senso...
Box	**Large components**				
		Breadboard	1		Amazon.com: DEYUE 3 Set Standar...
		USB cable	1		Must have both USB-C and USB-A optior...
		Meter mini grabber leads	1		HiLetgo 3Pair 4MM Banana Plug to T...
		Analog Devices ADALM2000	1		https://www.analog.com/en/design-cer...
		Digital Multimeter	1		https://www.amazon.com/Etekcity-MS...

ics Inc | Resistors | DigiKey
ics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
ics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey

cs Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey

onics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey
cs Inc | Resistors | DigiKey

onics Inc | Resistors | DigiKey
cs Inc | Resistors | DigiKey
cs Inc | Resistors | DigiKey
onics Inc | Resistors | DigiKey

ics Inc | Resistors | DigiKey
ics Inc | Resistors | DigiKey
ics Inc | Resistors | DigiKey

Capacitors | DigiKey
tors | DigiKey
/detail/w%C3%BCrth-elektronik/860040573004/5729158
Capacitors | DigiKey
tors | DigiKey
lectronics | Capacitors | DigiKey
lectronics | Inductors, Coils, Chokes | DigiKey

rs, Interconnects | DigiKey
Assemblies | DigiKey

onductor | Mouser

/detail/on-semiconductor/1N4002RLG/918018

/detail/cree-inc/C503B-RCN-CW0Z0AA2/6138549

/detail/cree-inc/C503B-BCN-CV0Z0462/6138534

Optoelectronics | DigiKey

/detail/osram-opto-semiconductors-inc/BPW34/607274

ated Circuits (ICs) | DigiKey

/detail/texas-instruments/UA741CP/382197

cm Breadboard Jumper Wires Male to Male Multicolored Dupont Wire 3.9 inch 1pin-1pin 2.54mm Connector for DIY

cm Breadboard Jumper Wires Male to Male Multicolored Dupont Wire 3.9 inch 1pin-1pin 2.54mm Connector for DIY

Alligator Clip to Dupont Wire 10pin 20cm Male, Crocodile Clip to Jumper Wire 10pin 20cm Male for Test Lead Ardui

egrated Circuits (ICs) | DigiKey

ntegrated Circuits (ICs) | DigiKey

egrated Circuits (ICs) | DigiKey

roducts | DigiKey

rs, Transducers | DigiKey

d Jumper Wires Plus 3 Set of Solderless Prototype Breadboard 830 tie Points Breadboard | 3 Set of M/F, M/M, F/F

ns

Test Hook Clip Test Lead Cable for Multimeter 1M: Amazon.com: Industrial & Scientific

ter/evaluation-hardware-and-software/evaluation-boards-kits/ADALM2000.html

SR-A600-Auto-Ranging-Multimeters-Capacitance/dp/B07DW681FQ/

[Arduino Raspberry PI 10 15 20 30 40 50 100cm Optional Ribbon Cables: Home Audio & Theater](#)
[Arduino Raspberry PI 10 15 20 30 40 50 100cm Optional Ribbon Cables: Home Audio & Theater](#)
[no/Raspberry Pi/Orange Pi: Electronics](#)

[- Each 40pin Electronic Jumpers Wire: Industrial & Scientific](#)