Criteria	Ratings				Pts
2.1.1	**7 pts** **Full Marks** Submitted circuit diagram/schematic with all relevant components (switch, resistor, Teensy ports, LED) correctly.	**5 pts** **Mostly complete** Incomplete or errors in circuit diagram/schematic.	**3 pts** **Partially complete** Attached switch and LED but no circuit diagram/schematic submitted	**0 pts** **No Marks** No submission	7 pts
2.1.2 Debouncing switch	**7 pts** **Full Marks** Has cutoff frequency calculation and circuit diagram with lowpass filter	**4 pts** **Partially complete** Has one of cutoff frequency calculation or circuit diagram with lowpass filter		**0 pts** **No Marks** No submission	7 pts
2.1.2 Input capture	**13 pts** **Full Marks** Submitted working code correctly timing presses using interrupts/input capture	**7 pts** **Partially complete** Submitted working code but incorrect timing strategy		**0 pts** **No Marks** No submission	13 pts
2.1.2 Extra Credit	**0 pts** **Full Marks** Submitted code with implementation.		**0 pts** **No Marks** No submission		0 pts
2.2.1 Phototransistor behavior	**5 pts** **Full Marks** Complete explanation	**2 pts** **No Description** Recognize relationship but no explanation		**0 pts** **No Marks** No submission	5 pts
2.2.1	**15 pts** **Full Marks** Submitted working code, a complete circuit diagram (resistors, LED, teensy ports, etc.) and video	**8 pts** **Partial completion** Submitted working or partially working code and incomplete circuit diagram/schematic.		**0 pts** **No Marks** System Doesnt Work	15 pts

Criteria	Ratings				Pts
2.2.2	**10 pts** **Full Marks** Working system that responds to hand motion 20 cm above Sensor. Includes Schematic and Code	**3 pts** **No Description** Video of working system or partially working system, incomplete schematic or code		**0 pts** **No Marks** System Doesnt Work	10 pts
2.3.1	**6 pts** **Full Marks** Correct resistor value, correct current, explained/work shown	**4 pts** **No Description** Correct answer (or close to correct), incomplete explanation/work shown		**0 pts** **No Marks** Incorrect	6 pts
2.3.2	**15 pts** **Full Marks** Clear and correct circuit diagram, screen shot that clearly shows detection of signal close to 23 and 200 Hz.	**10 pts** **Partial** Both frequencies shown, but circuit diagram incomplete or missing	**8 pts** **No Description** One part missing	**0 pts** **System doesn't work**	15 pts
2.3.3	**15 pts** **Full Marks** Checked off by TA, submitted working code, a complete circuit diagram, full description of approach, and video	**10 pts** **No Description** Submitted working code, a complete circuit diagram, incorrect description of approach, and video	**6 pts** **No Description** Submitted working code, incorrect/incomplete circuit diagram, or not checked off by TA	**0 pts** **System doesn't work**	15 pts
2.4.1	**20 pts** **Full Marks** Checked off by TA, submitted correct circuit diagram	**10 pts** **No Description** Missing circuit diagram		**0 pts** **No Marks** Not checked off	20 pts
2.4.2	**20 pts** **Full Marks** Circuit diagram, o-scope picture showing correct output, checked off by TA	**10 pts** **No Description** Missing circuit diagram or picture		**0 pts** **No Marks** Not checked off	20 pts

Criteria	Ratings				Pts
2.4.3	**25 pts** **Full Marks** Checked off, exceeding 1M. Well-commented code, circuit diagram, and clear description	**20 pts** **No Description** Checked off, exceeding 1M. Code is not well commented, or description or circuit diagram is unclear	**10 pts** **No Description** Missing a component above	**0 pts** **No Marks** No submission	25 pts
2.4.3+ Extra Credit	**0 pts** **Full Marks** Checked off able to exceed 3M, 5 pts extra credit		**0 pts** **System doesn't work**		0 pts
				Total Points: 158	