

Bill of Materials

Component	Description	Manufacturer	Reference	Value	Quantity	Datasheet	Cost per Unit (USD)
nmos MOSFET	2N700 N-Channel T092	Fairchild Semico	Q1	N/A	1	https://eecs.oregonstate.edu/~ee461/fairchild/2N700.pdf	\$0.36
GM3 Plastic Gear	DC Brushed Motor	Solarbotics	M1	N/A	1	https://www.pololu.com/product/1212	\$5.95
Mic	Electret Microphone	N/A	J1	15 mV	1	N/A	\$1.50
Resistor	Carbon Film Resistor	Austor	R1	2.2kΩ	1		\$0.01
Resistor	Carbon Film Resistor	Austor	R2	1kΩ	1		\$0.01
Resistor	Carbon Film Resistor	Austor	R3	4.7kΩ	1		\$0.01
Resistor	Carbon Film Resistor	Austor	R4,R5,R9-R13	220kΩ	2		\$0.01
Resistor	Resistor	Austor	R6, R14-R16	100Ω	3		\$0.05
Capacitor	Electrolytic Capacitor	Swpeet	C1,C4,C7	100uF	3	http://products.nichicon.com	\$0.04
Capacitor	Electrolytic Capacitor	Swpeet	C3	1mF	1	http://products.nichicon.com	\$0.04
Capacitor	Polarized capacitor	Swpeet	C2	1uF	1	https://www.nichicon.com	\$0.05
Capacitor	Polarized capacitor	Swpeet	C5	10uF	1	https://industrial.panasonic.com	\$0.24
Capacitor	Ceramic Capacitor	AVX	C6	100nF	1	https://eecs.oregonstate.edu/~ee461/fairchild/2N700.pdf	\$0.16
LDO	UCC381DPTR-5	Texas Instrumen	U1	N/A	1	https://media.digikey.com	\$5.14
Op-Amp	LM386 Low Voltage Audio Power Amplifier	Texas Instrumen	U2, U3	N/A	2	http://www.ti.com	\$0.09
Speakers	Full Range 3w Speaker	Gikfun	RS1, LS1	4Ω	2	https://www.ama.com	\$5.00
Triple Color com	RGB LED	Edgelec	D1-D6	N/A	6	https://www.sparco.com	\$0.08
16mm Rotary Po	Potentiometer	KLS Electronic	POT1-POT3	0-5kΩ	3	https://www.rcscc.com	\$0.50
Arduino UNO r3	Microcontroller from Arduino: UNO type, r3 revision	Arduino	A1	N/A	1	https://www.farnell.com	\$23.00
MicroSD Card Ac	MicroSD Card Reader and Adapter for use with wav playing library on Arduino	HiLetgo	SD1	N/A	1	https://www.ama.com	\$0.72
Power Switch	Round Rocker Power Switch	ZF Electronics	S1	125V 10A	1	https://www.alliedelec.com	\$1.20
Battery Case	9V battery holder	Eagle Plastic De	BT1, BT2	9V	2	https://www.mouser.com	\$1.71
Push Buttons	Momentary Mini Push Buttons	Cylewet	B1-B5	250V 1A	5	https://www.ama.com	\$0.49