

## Bill Of Materials: Soccer Pinball

### Motor Circuit

Item	Vendor	Part #	Price \$	Unit	Qty	Total
3.3 k 5% Resistor	Lab kit			ea	3	\$ -
47 k 5% Resistor	Lab kit			ea	1	\$ -
2 pin male molex connector	TA Shop		\$0.05	ea	4	\$ 0.20
2 Pin female molex connector	TA Shop		\$0.06	ea	4	\$ 0.24
Fast Return Diode	TA Shop		\$0.15	ea	13	\$ 1.95
3 pin male molex	TA Shop		\$0.05	ea	1	\$ 0.05
3 pin female molex	TA Shop		\$0.06	ea	1	\$ 0.06
ST Micro Dual H-Bridge	TA Shop		\$2.25	ea	2	\$ 4.50
MM74HC14 - Schmidt Trigger	Lab kit		\$0.00	ea	1	\$ -
220 uF Polar Capacitor	Lab kit		\$0.00	ea	2	\$ -
Printer Cartridge Motor	Recycling Center		\$0.00	ea	1	\$ -
Geared DC Motor	Jameco		\$22.00	ea	1	\$ 22.00
Breadboard Jumper Wire Kit	Lab kit		\$0.00	ea	1	\$ -
Door Lock Motors	Auto Supplier		\$15.00	ea	2	\$ 30.00
<b>Total</b>						<b>\$ 59.00</b>

### Sensor & I/O Circuit

Item	Vendor	Part #	Price \$	Unit	Qty	Total
2 pin male molex connector	TA Shop		\$0.05	ea	1	\$ 0.05
2 Pin female molex connector	TA Shop		\$0.06	ea	1	\$ 0.06
3 pin male molex	TA Shop		\$0.05	ea	4	\$ 0.20
3 pin female molex	TA Shop		\$0.06	ea	4	\$ 0.24
4 pin male molex	TA Shop		\$0.06	ea	4	\$ 0.24
4 pin female molex	TA Shop		\$0.08	ea	4	\$ 0.32
5 pin male molex	TA Shop		\$0.06	ea	1	\$ 0.06
5 pin female molex	TA Shop		\$0.08	ea	1	\$ 0.08
MM74HC14 - Schmidt Trigger	Lab kit		\$0.00	ea	1	\$ -
6 pin male molex	TA Shop		\$0.06	ea	1	\$ 0.06
6 pin female molex	TA Shop		\$0.08	ea	1	\$ 0.08
100 k 5% Resistor	Lab kit		\$0.00	ea	2	\$ -
1 k 5% Resistor	Lab kit		\$0.00	ea	1	\$ -
0.01 uF Capacitor	Lab kit		\$0.00	ea	1	\$ -
Piezo Buzzer	Jameco		\$1.00	ea	1	\$ 1.00
Breadboard Jumper Wire Kit	Lab kit		\$0.00	ea	1	\$ -
Twister Pair Cable	TA Shop		\$0.10	foot	16	\$ 1.60
Subminiature limit switch w/ roller	Radio Shack		\$2.79	ea	2	\$ 5.58
Arcade Push Buttons	Am. Arcade Sup.		\$2.99	ea	3	\$ 8.97
Large Potentiometer	Donated		\$0.00	ea	1	\$ -
Coin Sensor	TA Shop		\$1.00	ea	1	\$ 1.00
Reflective Sensor	TA Shop		\$1.30	ea	2	\$ 2.60
<b>Total</b>						<b>\$ 22.14</b>

### Scoreboard

Item	Vendor	Part #	Price	Unit	Quantity	Total
LM339 Low Power Quad Comparator	TA Shop	LM339	\$ 0.45	ea	8	\$ 3.60
74HC164 8 bit SIPO Shift Register	TA Shop	74HC164	\$ 0.54	ea	4	\$ 2.16
120 Ohm, 1/4 W resistor	TA Shop		\$ 0.01	ea	28	\$ 0.28
2k resistor	TA Shop		\$ 0.01	ea	56	\$ 0.56
10k resistor	TA Shop		\$ 0.01	ea	8	\$ 0.08

2N3906 PNP Transistor	TA Shop	2N3906	\$ 0.10	ea	28	\$ 2.80
CC Red 7-Segment LED	Jameco	97201	\$ 3.35	ea	4	\$ 13.40
5-pin Molex KK .10" male Header	TA Shop		\$ 0.25	ea	10	\$ 2.50
5-pin Molex KK .10" female socket	TA Shop		\$ 0.25	ea	18	\$ 4.50
Molex Pins	TA Shop		\$ 0.05	ea	96	\$ 4.80
3-pin Molex KK .10" male Header	TA Shop		\$ 0.15	ea	2	\$ 0.30
3-pin Molex KK .10" Female Socket	TA Shop		\$ 0.15	ea	2	\$ 0.30
.1 microFarad Ceramic Capacitor	TA Shop		\$ 0.10	ea	4	\$ 0.40
10 Strand ribbon Cable	TA Shop		\$ 0.20	lin. Ft.	4	\$ 0.80
18 AWG stranded Wire - Red	TA Shop		\$ 0.10	lin. Ft.	8	\$ 0.80
18 AWG stranded Wire - Black	TA Shop		\$ 0.10	lin. Ft.	4	\$ 0.40
24 AWG Twisted Pair	TA Shop		\$ 0.10	lin. Ft.	12	\$ 1.20
Protoboard	Lab Kit		\$ -	ea	2	\$ -
Assorted Jumper Kit	Lab Kit		\$ -	ea	2	\$ -
<b>Total</b>						<b>\$ 38.88</b>

### Construction Supplies

Item	Vendor	Part #	Price \$	Unit	Qty	Total
3/4" x 3/4" x 4' wood	Home Depot		\$1.60	ea	4	\$ 6.40
1/8" Hardboard	Home Deopt		\$4.00	ea	1	\$ 4.00
1/16" Masonite	Donated		\$0.00	ea	1	\$ -
3/4" x 3 1/2" wood	Donated		\$0.00	lin. Ft.	20	\$ -
Foam Core	Donated		\$0.00	ea	5	\$ -
1/4" nylon washers	Ace Hardware		\$0.45	ea	4	\$ 1.80
1/4-20 nuts	Ace Hardware		\$0.35	ea	4	\$ 1.40
6-32 nuts			\$0.25	ea	4	\$ 1.00
6-32 washers			\$0.20	ea	4	\$ 0.80
Ping Pong Balls	Donated		\$0.25	ea	1	\$ 0.25
Loofah (for the net)	Walmart		\$0.99	ea	1	\$ 0.99
<b>Total</b>						<b>\$ 16.64</b>

**Project Total \$ 136.66**