

Part #		Part Description	Part Description	Part Description	Part Description	Part Description	Part Description	Quantity	Cost Per Item	Rationale	Quick Calculation	Total Cost
1	Master Carton							1	\$358.9452	sum of its components	20 headphones shipped per carton	\$358.9452
2		Big Box						1	\$0.4000	based on https://www.nuvonium.com/blog/view/how-to-price-your-product-for-retail-distributor-and-direct-to-consumer-sal	We assume the headphones will be packaged in a larger screen printed container together with overall instructions and other packaging materials. http://tcprioting.en.alibaba.com/productgroupolist-802884164/Paper_Packaging_Box.html	\$0.4000
3		Packaging Materials (Big Box)						1	\$0.8000	based on https://www.nuvonium.com/blog/view/how-to-price-your-product-for-retail-distributor-and-direct-to-consumer-sal	rough estimations were based off the assumption that packaging materials are needed for cushioning, and labels/instructions were screen printed, more packaging materials needed to accommodate 20 headphones per box, http://www.alibaba.com/product-detail/Bottom-price-high-end-shantou-packing_1864789641.html?spm=a2700.7724838.0.0.2JfYR1	\$0.8000
4		OM Headphones, black and silver, plastic and metal, 9" x 2.5" x 9"						20	\$17.2873	Material Cost		\$345.7452
5			Headphone Cup Right, black and silver, plastic and metal, 2.5" diameter x 1.25" deep					1	\$10.01	Material Cost		\$10.01
6				Foam Earpad, black, foam, 2.5" diam. x .75" deep				1	\$1.50	http://www.alibaba.com/product-detail/White-Big-Leather-Headphone-Cushion_60115356644.html	factory in Guandong, supplies headphones from \$.15 to \$1.5	\$1.50

7				Earpad Holder Right, white, plastic, 1.5" diam. x 1" deep (tapered)				1	0.5805	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.041(material) + 0.231 (product) + 0.617 (tooling) = 0.889	0.5805
8				Speaker Grill, black, plastic, 2" diam. x .25" deep				1	0.3395	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.01 (materials) + .109 (production) + .441 (tooling) = .56	0.3395
9				Back Plate Right, Silver, Aluminum, 2" diam. x .0625"				1	0.257	http://sz-zd.en.alibaba.com/	.49 in ³ (volume) * 10.2 lb / in ³ (density)* .49 in ³ * \$.3/lb (cost of aluminum) = \$.147 for material only. Assume labor and tooling is 75% of materials, so .147 + .11 = .257	0.257
10				Electronics Assebmly Right				1	6.92	Material Cost		6.92
11				Battery AAA Lithium, silver, metal, .41" diam. x 1.75" deep				2	1	http://www.alibaba.com/product-detail/ER10450-aaa-cell-lithium-battery_1329335360.html?spm=a2700.7724838.0.0.PF56UM	Rechargeable AAA battery, assume low price	2
12				Battery holder, plastic & metal, black, .5" x 2"				1	0.1	http://sunhokey.en.alibaba.com/	We are a high volume application, so assume low end of price range.	0.1
13				Right PCB				1	4.02	Material Cost		4.02
17				Driver, black, metal & plastic, 1.5" diam. x .5" deep				1	0.7	https://www.alibaba.com/product-detail/40mm-8ohm-0-2W-headphone-parts_803590644.html?spm=a2700.7724838.0.0.SE92IM&sp	We are a low volume application, so assume higher end of price range.	0.7
36			1.5685	Heart rate sensor, metal & plastic, .25" OD x .05" depth				1	0.1	http://www.alibaba.com/product-detail/Pulse-Sensor-Photoelectric-pulse-wave-sensor_60358804673.html?spm=a2700.7724838.0.0.iqsPMJ	We are middle volume (MOQ = 1, suppliability = 200K/week)	0.1

31				Rear Speaker Holder, black, plastic, 2" diam. x .25" deep				1	0.3915	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.021 (materials) + .113 (production) + .515(tooling) = .649	0.3915
33				Phillips Screw, Silver, Steel, .54" length, #6-24, .122" major diameter				4	\$0.0046	based on http://www.mcmaster.com/#machine-screws/=124n3j5 assuming 10x mark up	4.63(Retail Cost)/100(# of parts) *(1/10) for mark up = .00463	\$0.0185
20				Headphone Cup Left, black and silver, plastic and metal, 2.5" diameter x 1.25" deep				1	\$6.48	Material Cost		\$6.48
6				Foam Earpad, black, foam, 2.5" diam. x .75" deep				1	\$1.50	http://www.alibaba.com/product-detail/White-Big-Leather-Headphone-Cushion_60115356644.html	factory in Guandong, supplies headphones from \$.15 to \$1.5	\$1.50
21		1.5685		Earpad Holder Left, white, plastic, 1.5" diam. x 1" deep (tapered)				1	0.5805	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.041(material) + 0.231 (product) + 0.617 (tooling) = 0.889	0.5805
8				Speaker Grill, black, plastic, 2" diam. x .25" deep				1	0.3395	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.01 (materials) + .109 (production) + .441 (tooling) = .56	0.3395
22				Back Plate Left, Silver, Aluminum, 2" diam. x .0625"				1	0.257	https://yuandeng.en.alibaba.com/product/60429711133-219390821/OEM_OEM_stainless_steel_aluminum_brass_sheet_metal_stamping_parts_sharp_image.html	10.2 lb / in ³ * .49 in ³ * \$.3/lb = \$.147 for material only. Assume labor and tooling is 75% of materials, so .147 + .11 = .257	0.257
23				Electronics Assebmly Left				1	3.41	Material Cost		3.41
11				Battery AAA Lithium, silver, metal, .41" diam. x 1.75" deep				2	1	http://www.alibaba.com/product-detail/ER10450-aaa-cell-lithium-battery_1329335360.html?spm=a2700.7724838.0.0.PF56UM	Rechargeable AAA battery, assume high price end	2

12					Battery holder, plastic & metal, black, .5" x 2"				1	0.1	http://sunhokey.en.alibaba.com/	We are a low volume application, so assume higher end of price range.	0.1
24					Left PCB				1	0.61	Material Cost		0.61
17					Driver, black, metal & plastic, 1.5" diam. x .5" deep				1	0.7	https://www.alibaba.com/product-detail/40mm-8ohm-0-2W-headphone-parts_803590644.html?spm=a2700.7724838.0.0.sE92IM&s=p	We are a low volume application, so assume higher end of price range.	0.7
31					Rear Speaker Holder, black, plastic, 2" diam. x .25" deep				1	0.3915	by volumetric and material comparison, calculator: http://www.custompartnet.com/estimate/injection-molding/	.021 (materials) + .113 (production) + .515(tooling) = .649	0.3915
33					Phillips Screw, Silver, Steel, .54" length, #6-24, .122" major diameter				4	\$0.0046	based on http://www.mcmaster.com/#machine-screws/=124n3j5 assuming 10X mark up	4.63(Retail Cost)/100(# of parts) *(1/10) for mark up = .00463	\$0.0185
26					Head Band, black and silver, metal and foam, 9" diameter by 1.25" depth				1	0.7971111111	Material Cost		0.7971111111
27					Band, silver, aluminum & foam, 1.5" x 8" x 6"				1	0.139	http://www.alibaba.com/help/gold_supplier.html?traceLog=from_widget_supplier_card_aish-detail	(((.25 OD in^2*pi - .2 ID ^2*pi)*9in long * 0.098 lb/in^3)^-1*2204 lbs/metric ton)^-1*\$2500 for custom extrusion per metric ton * 1.3 (custom curvature) * 1.5 (final overmolding of foam cushion)	0.139
28					Wire, black, metal and plastic, 9" length, 28 gauge				1	0.16	https://www.alibaba.com/product-detail/FEP-insulated-teslon-28-gauge-copper_60020496177.html?spm=a2700.7724838.0.0.hU7MHX&s=p	\$.09/meter * .2meters = \$.018	0.16

31				Wire, red, metal and plastic, 9" length, 28 gauge					1	0.16	https://www.alibaba.com/product-detail/FEP-insulated-teslon-28-gauge-copper_60020496177.html?spm=a2700.7724838.0.0.U7MHX&s=p	\$.09/meter * .2meters = \$.018	0.16
29				Circular Socket, silver, aluminum, .375" diam. x .65"					2	0.153	http://www.alibaba.com/help/gold_supplier.html?tracelog=from_widget_supplier_card_aisn-detail	$((.375/2)^2 * \pi - (.375 - .125/2)^2 * \pi) * .65(\text{depth}) = .04 \text{ in}^3 * 10.2 \text{ lb / in}^3 * .3 \text{ \$/lb} = .122$, assume labor is 25% cost of materials. $.122 + .25 * .122 =$	0.306
30				Circular Socket Cup, black, plastic, .25" diam x .1"					4	0.006	http://www.custompactnet.com/estimate/injection-molding/	.375" outer diameter, .325" inner diameter, .1" height	0.024
32				Heat Shrink, Black, Plastic, 1" length, .25" diameter					1	\$0.0081	based on a size comparison with: http://www.mcmaster.com/#7496k45/=124qlyf	\$14.60 (Retail Cost)/15(# of parts)*(1/12; length of part)*(1/10; for mark up) = 0.00811	\$0.0081
34		OM Headphones Packaging Materials & Instructions							20	\$0.4000	based on https://www.nuvonium.com/blog/view/how-to-price-your-product-for-retail-distributor-and-direct-to-consumer-sale	rough estimations were based off the assumption that packaging materials are needed for cushioning, and labels/instructions were screen printed, http://www.alibaba.com/product-detail/Bottom-price-high-end-shantou-packing_1864789641.html?spm=a2700.7724838.0.0.2JfYR1	\$8.0000
35		OM Headphones box 10" x 10" x 4"							20	\$0.2000	based on https://www.nuvonium.com/blog/view/how-to-price-your-product-for-retail-distributor-and-direct-to-consumer-sale	We assume the headphones will be packaged in a screen printed container individually with the instructions and other packaging materials, http://tcpprinting.en.alibaba.com/productgroup-list-802884164/Paper_Packaging_Box.html	\$4.0000