

Parts to build a set of bookshelf speakers

(roughly) equivalent to the "Overnight Sensations" sold by Parts Express.

Drivers from Parts Express

Qty	Part Number	Description	cost each	in larger quantities
2	297-429	HiVi B4N 4" Aluminum Midbass Round Frame	\$14.91	\$11.24
2	275-030	Dayton Audio ND20FA-6 3/4" Neodymium Dome Tweeter	\$14.82	\$13.86
2	260-388	Port Tube 1-3/8" ID Adjustable	\$2.57	\$1.75
			\$64.60	\$53.70

Cross-over components from Digi-Key

Qty	Digi-Key	Description	cost each	in larger quantities
2	6.2W-10-ND	Yageo 6.2- Ω , 10 W	0.63	\$0.36
2	10W-10-ND	Yageo 10- Ω , 10 W	0.63	\$0.36
2	445-173594-1-ND	AVX ceramic 0.22 μ F	0.29	\$0.20
2	445-8357-ND	TDK ceramic 1.5 μ F	0.52	\$0.36
2	490-8355-ND	Murata ceramic 2.2 μ F	0.61	\$0.43
2	445-5282-ND	TDK ceramic 6.8 μ F	0.63	\$0.47
2	811-1343-ND	Murata 1 mH (0.46 Ω)	2.49	\$2.44
2	811-1314-ND	Murata 330 μ H (0.35 Ω)	1.42	\$1.40
				\$12.04

Miscellaneous

Qty	Digi-Key	Description	cost each	in larger quantities
2	31169	7cm x 5 cm perfboard (MP Jones)	1.79	\$1.79
		wood & glue (Menards)	N/A	\$5.00
1	091-1250	4 binding posts (Parts Express)	14.49	\$13.79
				\$22.37

The grand total is \$88.11, which we can round to an even \$88, to keep things simple. This is the price if you want to do a full set. Paint, wood filler, and other niceties would be extra.

Options to lower the cost.

- a. Build one speaker, instead of a set — obviously, the cost is \$44.
- b. Leave out the binding posts (or provide your own), subtract \$13.79.
- c. Provide your own wood, subtract \$5. (Of course, you will need to cut it, too.)
- d. Use your own circuit boards (or none at all, subtract \$3.58).

As you see, it is difficult to lower the cost very much since the most expensive items are the drivers.