



Packing The Quad ESL-63's with Home-Store Materials

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This document outlines a simple and relatively inexpensive way to pack a set of Quad ESL-63's using materials purchased at a home supply store. In this case, I spent about \$150 on all the packing materials, at my local Home Depot. There is nothing special, and consists of plywood, dimensional stick lumber, bubble wrap, and polystyrene foam.

This guide shows how I fabricated a 45" x 32" x 17" plywood packing crate and securely holds a pair of speakers. Based on the rates at the time of this writing, a box of these dimensions is charged for a "dimensional weight" of 148 lbs. This crate holding a pair of ESL-63 USA monitors weighs 146 lbs; so you are getting maximum value from the shipment.

The parts list is as follows:

Description	Quantity	Dimensions / Notes
Top and bottom plywood sheets (~0.5in thick)	2	45" x 32" x 0.5"
Long side plywood sheets (~0.5in thick)	2	45" x 16" x 0.5"
Short side plywood sheets (~0.5in thick)	2	16" x 31" x 0.5"
Long Stick Lumber (2x3's in this example)	4	43.5"
Medium Stick Lumber (2x3's in this example)	4	25.5" (change this value if not using 2X3's)
Short Stick Lumber (2x3's in this example)	4	12.5"
Roll of 6" shrink wrap (in shipping section)	1	Located in the shipping box section
Large roll of bubble wrap	2	Located in the shipping section
Pack of polystyrene foam board	2	Located in insulation section
1 lb box of drywall screws	1	1.25" x #6 user choice, located in hardware

These items above can be cut by the home store to the proper dimensions. And once cut will fit in most vehicles for transport home. Astute readers will notice that the dimensional lumber is slightly short to perfectly fit the inside of the crate comprised of the plywood exoskeleton. This is a convenience measure because in my experience the accuracy of the cuts at home stores can be somewhat low, and will prevent you from having to shorten your lumber later.

The plywood in the table above is cut as follows: The Large top and bottom plywood sheets are cut from a single 4' x 8' sheet of 0.5" thick plywood. The sheet is ripped along the short side twice to form two 45" x 48" pieces. These pieces are then cut at 32" to form a 45" x 32" and a 45" x 16" piece (minus kerf). The two 16" x 31" pieces are cut from a pair of 2' x 4' pieces or a single 4' x 4' piece of plywood. The home store can also cut the dimensional lumber to length if desired. I used 2x3 lumber because at the time of fabrication my only home store had very limited stock of 2x2's and the ones they did have were really warped and beat up.

Shown below is the components used to build the crate:



The crate is fabricated with the dimensional lumber on the inside and a smooth plywood finish on the outside. The completed crate should look like this:



After the crate is complete, the speakers must be prepared for installation. This method has worked well for me, but there are many ways to accomplish this. I begin by placing a poly bag over the speakers to keep them clean and any foam bits off the grille cloth:



I then add some bubble wrap to the top of the base where the connections are. This bubble wrap will protect the tops of the speakers from being damaged by the binding posts, to this to both speakers:



I then place several layers of bubble wrap on top of this speaker where the second speaker will rest. This can be more elaborate and can support the speakers at the edges, but the the robust grilles of the USA monitors it's not as critical. I do add more layers of bubble wrap at the sides to evenly distribute the load

of the two convex faces nested together. The bubble wrap is shown below ready for the second speaker to be placed on top:



The second speaker is then laid on top of this one as seen below:



The two speakers should be held together so they form one solid unit and cannot bang into each other. I do that by using stretch film to band the speakers in three locations as shown below, this could also be done with packing tape, but the unboxing will be far less pleasant:



Several layers of bubble wrap are then applied. I add a healthy amount of bubble wrap to the top and bottom of the speakers to cushion them. This can be seen in the figure below:



After the initial layer of top and bottom padding, I wrap the entire set in vertical wraps with small bubble wrap as seen below:



The final bubble wrapping is three horizontal rings of wrap:



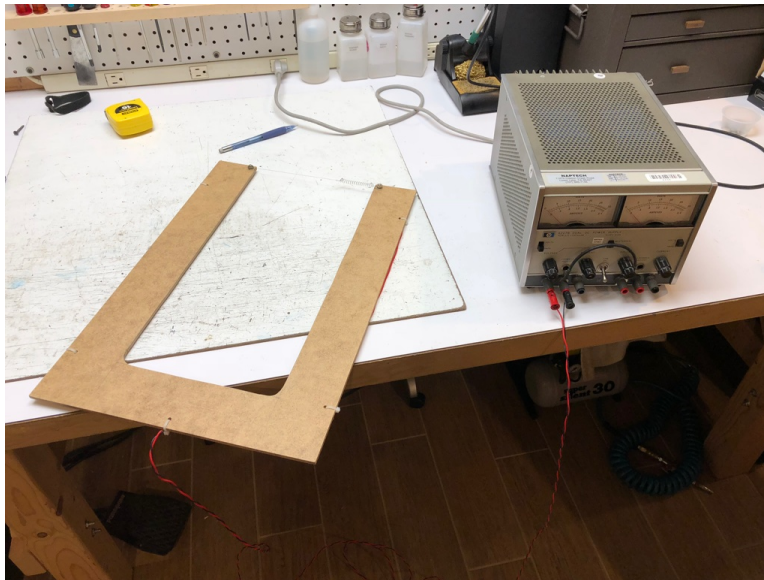
The packaged speakers can then be test fit into the crate. I remove the top internal lumber to make insertion easier, this can be seen below:



At this point, the extra space around the speakers must be filled in. It could be filled in with a lot more bubble wrap, or in this case, it was filled in with poly styrene insulation foam. The foam before being trimmed to size is shown below:



I cut this foam with a hot ni-chrome wire but it can also be cut with a sharp utility knife. The ni-chrome wire leaves clean cuts without a lot of little bits of foam everywhere:



The bottom is lined with foam prior to the final insertion of the speakers. NOTE: It's often easier to insert the speakers into the crate with the crate vertical, and the big lump of speakers can be "walked" into the crate by tipping and pivoting them. This is really a life-saver if you need to pack these by yourself.



The speakers are inserted into the crate and all four sides are packed with foam, keeping in mind that the internal lumber will need to be re-installed. The crate internal lumber is reinstalled and foam on top installed. This is now ready to have the lid screwed into position:



Shown below is the final crate ready to ship:



NOTE: I added additional screws to all sides of the crate after this picture was taken.