Dragonfly Bill of Materials

LUMBER: Do NOT purchase any lumber until you read this section. Do NOT purchase any NET SIZED material. All lumber thickness specified should be purchased as standard lumberyard stock finished as full as possible. As an example, 1" stock is NOT to be a net thickness of 1". Stock 1" thick refers to lumber purchased as "four quarters" material that will finish from 3/4" to 7/8" in net or actual thickness. Widths, however, are noted as "net" unless specified otherwise. (Exception: All 2" thick DF stock is lumberyard size in both thickness and width except those marked with a double asterisk "**" (see note under ** below).) Purchasing random-random material to re-saw to the required size will result in considerable savings. Some suitable boatbuilding woods include mahogany (dark red Philippine, Honduras, or African) clear vertical grain Douglas-fir, Sitka spruce, white oak or longleaf yellow pine. Similar woods, available in the building locale and common to boatbuilding, may be substituted at the discretion of the builder. The prototype was built primarily from dark red Philippine mahogany. The listing below calls out the preferred lumber "see above" means any of the foregoing lumbers can be used. Check all listings to the work prior to purchasing materials.

MATERIAL ABBREVIATIONS: DF= Douglas-fir; PW = plywood; Ext = exterior; Mar = marine; Mahog = mahogany; SP = spruce (Sitka)
** Not required with Frame Kit.*

ITEM	MATERIAL	NO.PCS.	SIZE
Keel strip	see above	1	1" x 2 ¼"* x 14'
Batten strip	see above	2	1" x 2" x 16', makes two
*Bow #2 beam	see above	1	1" x 4" x 50"
*Bow #2 cleat	see above	1	1" x 3" x 3'

Deck beams	see above	3	1" x 3" x 14', ea. makes two
Carling	see above	1	1" x 3" x 8', makes two
*Foredeck crown	see above	1	1" x 4 ½" x 5'
Deck strongbacks	see above	1	1" x 2 ½"** x 11'
Deck battens	see above	2	1" x 2" x 11'
Foredeck strongback	see above	1	1" x 2" x 18"
Foredeck battens	see above	1	1" x 2" x 3', makes two
Athwartship pc. atop #1	DF	1	1" x 2" x 3" x 3'
Motorwell CL cleat	DF	1	2" x 2 ¼"** x 18"
Transom uprights	DF	1	2" x 2" x 3' 6", makes two
Transom sole cleat	see above	1	1" x 2" x 3', makes two
Deck/motorwell side cleat	see above	1	1" x 2" x 4', makes two
Inner sheer	mahog	2	1"x 1 ½" x 18'

Outer sheer	mahog	2	1" x 1 ½" x 18'
Bumper	oak or mahog	2	1" x 1 ¼" X 18'
Coaming	mahog	1	1" x 3" x 10', makes two
Cross coaming	mahog	1	1" x 3" x 10', makes two
Clamp	mahog	1	1" x 3" x 11', makes two
Runner under keel	oak	1	1" x 2" x 12'
Runner under battens	oak	2	1" x 2" x 13'
** The 2 ¼" may vary; it is to be the net thickness of three lams of ¾" plywood.			

PLYWOOD: All plywood must be intended for marine or exterior use. Interior grades are NOT acceptable. Marine plywood has higher grade inner ply cores, while the exterior grade cores may be of inferior material and have inner voids not apparent to the eye. In most cases, the glues used in both marine and exterior panels are the same, however, the decision to use exterior in lieu of marine panels for planking must lie with the builder. Most exterior plywood is not 3/8" thick; it is classed as "scant" and is a fraction less than full thickness. Take care if mixing marine and exterior panels that must butt join. Marine plywood is recommended, especially for the bottom. Douglas-fir plywood is acceptable in all cases although other species of suitable grade may be used alternately. The grade of the exterior veneer of a plywood panel is identified by the letters A, B, and C. For planking, the A-A (best) grade is desirable. The best face of all panels should be the one exposed. Check the PLYWOOD LAYOUT in these instructions and the text for method of utilizing the listed plywood to obtain the various parts.

** Not required with Frame Kit, See "Plywood Layout" in these instructions.*

PANEL NO.	TYPE	NO. PCS	SIZE
I, II, III, V, VI, VII & VIII	DF Ext or Mar AA or AB	8	3/8"x4'x8'
* IV	DF Ext AB	1	3/4"x4'x8'
IX thru XII	DF Ext AC	4	5/8"x4"x8'

FASTENINGS: All permanent fastenings should be of a non-corrosive type. Screws as noted are of the flat head wood type, while nails are of the annular ring shank type commonly used in boatbuilding. Screws should be hot-dipped galvanized or preferably silicon bronze while nails can be bronze or Monel. Electroplated steel and brass fasteners are NOT advised. Carriage bolts are to be complete with nut and washer with galvanized being satisfactory.

* **NAILS:** Ring type, bronze boat nails.

- •3/4" #14 2 oz.
- •1" #14 ¾" lb.

* **SCREWS:** Wood type, flat head, bronze or galvanized

- •1" #8 1 gross, 1 gross, 5 dozen
- •1 ¼" #8 2 gross
- •1 ½" #8 1 gross
- •3" #14 8 only

* **CARRIAGE BOLTS:** Galvanized with nuts and washers.

- •5/16" x 6" - 4 required

* **STITCHING WIRE:** Copper wire 12 or 14 ga.

- •50 lineal feet

* **FIBERGLASS TAPE, 7-8 oz.:** Although fiberglass tape can be used, it is preferable to use fiberglass cloth cut at a 45 degree angle so the strands of fiberglass cross the seam being reinforced rather than parallel them. See Lam Sched.

- •38" cloth - approx. 3 2/3 yds., cut in 3" and 4" widths.

* **BI AXIAL FIBERGLASS TAPE:** Cut in parallel strip from bi-axial cloth. See Lam Sched.

- •50" bi-axial - approx. 6 1/3 yds.

* **EPOXY RESIN:** For gluing, laminate application, interior epoxy encapsulation, resin putty and taping seams: - Approx. 4 gals. + 1 qt.

* **MICROSPHERES:** (or equal) - 2 lb.

* **SILICA:** - 1 lb.

** These items are contained in the GLEN-L Stitch-N-Glue Kit PLUS a sampling of application tools, squeegees, brushes, and rollers.*

† **FIBERGLASS CLOTH:** For exterior encapsulation and sheathing, 7-8 oz. treated boat type.

- •4 yds. - 38" width (covers transom and bow)
- •11 1/3 yds. - 60" width (covers botton in single piece, split for sides)

† **EPOXY RESIN:** Resin and slow hardener for exterior fiberglass application:

- •4 gals. + 1 qt.

† These items are contained in the GLEN-L Fiberglass Covering Kit plus a sampling of application tools, squeegees, brushes, and rollers.