

Glen-L 36 Notes

From the instructions:

RIGGING & CHAINPLATES: Specifications for the standing and running rigging together with the chainplates and stemhead fitting are given on Sheets 6 and 7 of 7. Each stay of the standing rigging is to be fitted with an adjusting turnbuckle preferably of the forged open barrel type of a strength that exceeds that of the connecting wire rope stay. Use toggles at all rigging junctions. The type of wire to use is a matter of personal preference however, the stainless steel type is common. If pressed sleeve-type wire terminals using thimbles and eyes are used, only 7 x 7 or 7 x 19 wire rope should be used in lieu of the 1 x 19 type and the diameter of the wire should be increased to the next largest diameter. Always use at least two sleeves per terminal with this method. On the ketch rig, a single backstay going to a link plate which then joins to a backstay bridle leading to a chainplate each side of the hull to clear the stay of the mizzen mast can be used, or optionally, two back stays of a size equal to the bridle may be used. There are many variations possible in rigging the boat, especially with regard to fixed stays and terminal fittings from those specified. These may include release levers, luff groove headstay rods, furling gear, and any number of other new developments or personal choices, which can be provided to suit the owner's desires and sailing conditions as long as they are compatible with the nature of the vessel. Lengths for all the rigging are best taken directly from the work. Chainplates along the sheer of the boat can alternately be located outboard or inboard. For inboard chainplates, covers must be provided where the chainplate passes through the deck or cabin top to prevent leaking. These chainplates on fiberglass hulls are bolted directly through the fiberglass hull, and on foam sandwich hulls, the foam must be removed in the area of the chainplates at least 6" either side of the centerline of the chainplate. With either fiberglass construction method, the inside surface of the laminate to at least 6" each side of the chainplate centerline is built up with an additional fiberglass laminate consisting of two each alternating layers of 1 oz. mat and 18 oz. woven roving. On the CAPRICE version using the fiberglass cabin construction method, the mizzen upper and lower chainplate if using the ketch rig is bolted through the cabin side. Solid plywood is used instead of the core material and another 3/4" plywood blocking bonded to the inside of the cabin side for additional strength. This blocking should have the edges beveled and then is covered with two alternating layers each of 1 1/2 oz. mat and 18 oz. woven roving. If using the ketch rig, the forward lower shroud chainplates of the main mast are bolted to the bulkhead and blocking just aft of Station 7 in lieu of hull mounting. All other chainplates are bolted through bulkhead or similar plywood

members that are backed with blocking sized as noted of plywood or solid stock. On the BARON and DELPHIN versions using plywood hulls, the inside surfaces of the hull where chainplates are located are built up with plywood to a thickness equal to the sheer clamps and spanning to longitudinal battens as noted. The stemhead fitting, on the ASTRA and CAPRICE versions is bolted through the stem peak, however, on the BARON and DELPHIN versions, only one through-bolt is possible due to the stem. In this instance, the other fastenings must be lag bolts of equal diameter as the bolts specified. Sizes for the running rigging are noted on Sheet 6 of 7, while the method of rigging the vessel is shown by the rigging diagram in these instructions. Wire rope halyards are recommended in all cases with rope tails being optional. A topping lift is recommended for controlling the main boom that should be of wire rope also. Other running lines are optional such as various outhauls, downhauls, reefing lines, etc.

SAILS: The configuration of the sails is shown on Sheet 1 of 7 as well as the sail plan schematic in these instructions (detailed on following pages). Either a sloop or ketch rig may be used on any version, the dimensions of each of the standard sails is provided on the sail plan schematic. The owner may add to this sail inventory to suit the conditions of use. A Mizzen staysail while not sized on the schematic, can be fitted to suit, as well as other various specialized headsails, storm sails, downwind sails, etc. The drawings show a double "jiffy" reefed main and single reefed mizzen, but again this can be varied to suit. PM sails shown should be made from "Dacron" or equal, of cloth weights to suit the conditions of use, or as specified by the sailmaker. Since conditions where the boat will be operated will vary considerably as well as the preferences of the owner, it is advised that the owner consult with a professional sailmaker familiar with making sails for a vessel of this size and type in order to best fulfill these requirements.

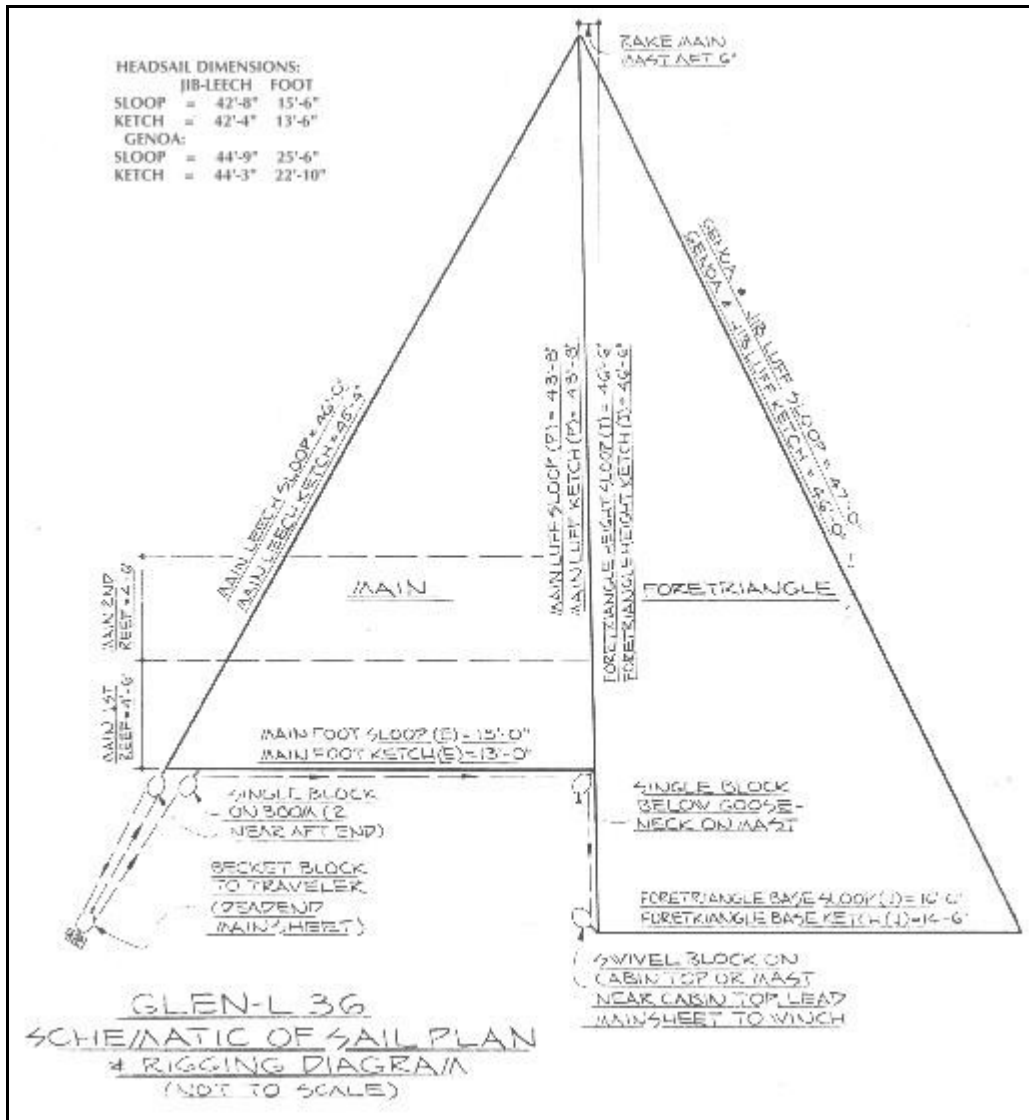
SAIL HARDWARE, FITTINGS, & EQUIPMENT: Many types of fittings can be used for the various hardware and sail control items. With each passing year, more new fittings, sailing and rigging methods, and innovations are brought onto the market, making it virtually impossible for anyone to make hard and fast rules regarding which method or what piece of hardware is the ultimate or even proper solution to a given condition. For these reasons, the layout, selection, and methods used in the design should serve only as one solution to making the vessel function. The rig shown and the equipment specified are of conventional types that make for efficient performance at a reasonable price. It is up to the owner to analyze his basic requirements and add or delete from the fittings, or to modify any items or methods of handling the rig as he chooses as long as they are in keeping with the intended use of the vessel. The drawings and sail plan schematic can serve as a general guide as to where to locate various fittings and equipment, and what type of hardware is required for the job. In many

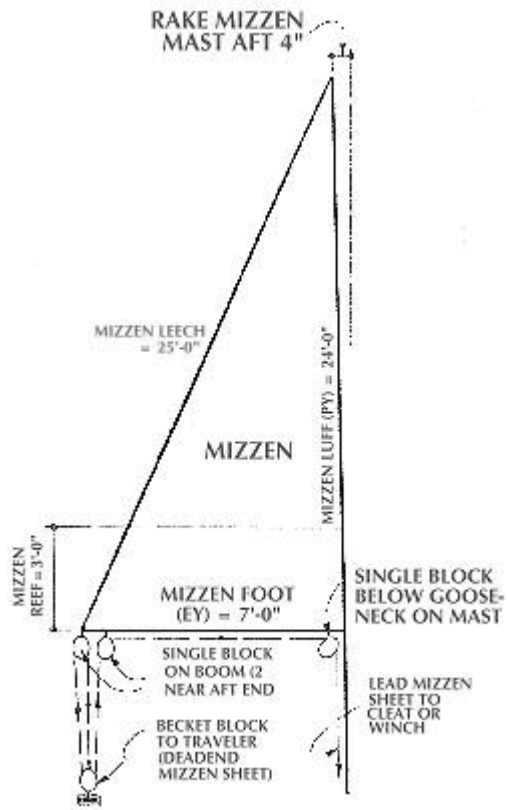
cases such as the jib and Genoa tracks, the position of the various fittings are shown as approximate only. All hardware that is selected must be of adequate, size and properly mounted for safety. Through bolting of fittings is recommended, using solid wood backing blocks or metal plates behind fittings. Where bolting is not possible, use screws or lag bolts of the largest possible thread size and longest lengths preferably into solid wood members. The number, type and placement of winches used to control the sails can be varied to suit the owner's preferences. The drawings indicate only one winch each side for the Genoa and jib sheets; however, many will prefer the use of one primary and one secondary winch at this point each side. One winch should also be used for the main sheet, however, no winch is necessary for the mizzen unless desired. Winches for the halyards can be of the self-storing reel or ratchet type either locate on the side of the spars, or leading through fixed blocks at the mast base to winches mounted near the cockpit. The placement, mounting, and selection of winches are important. A cleat should be located aft or behind each winch that is not of the self-tailing type or reel type. Such cleats should be angled about 10 degrees from the line lead to allow proper cleating of the line. Winches should be inclined very slightly up from a horizontal plane for proper winding. Winch bases should be supported on very rigid and strong bases and sub-structures, bolted per the manufacturer's instructions. Clearance should be allowed for full turning of all winch handles. Turning blocks for the Genoa sheet should also be securely mounted to the hull and be of a size capable of handling twice the load exerted on the Genoa sheets.

SPARS: The drawings (detailed on following pages) show the general configuration of the various spars used for either the sloop or ketch rig. Aluminum extrusions made from a marine alloy such as 6061-T6 are recommended for the spars, preferably anodized. While the plans show oval or elliptical sections for the spars, this can be varied as long as the proper strength specifications are adhered to. Dimensional sizes are listed for these shapes, or the following moment of inertia characteristics can be used. These figures are approximations and can vary by about 10% plus or minus. For the main mast, longitudinal moment of inertia (IL) should be 32, and transverse moment of inertia (IT) should be 12.5. For the mizzenmast, longitudinal moment of inertia should be 4 to 5, and transverse moment of inertia should be 2 to 3. The higher figures in this instance should be adhered to if a radar system will be mounted on the mizzenmast. A double spreader main mast rig is specified in order to reduce the size of extrusion required along with the various sizes of related gear. External or internal halyards may be used for the main mast, however, the external type tend to be more trouble-free and easier to replace. While "jiffy" reefing is indicated, other reefing methods can be substituted as well as other owner preferences that may alter the location or choice of spar fittings. Halyard

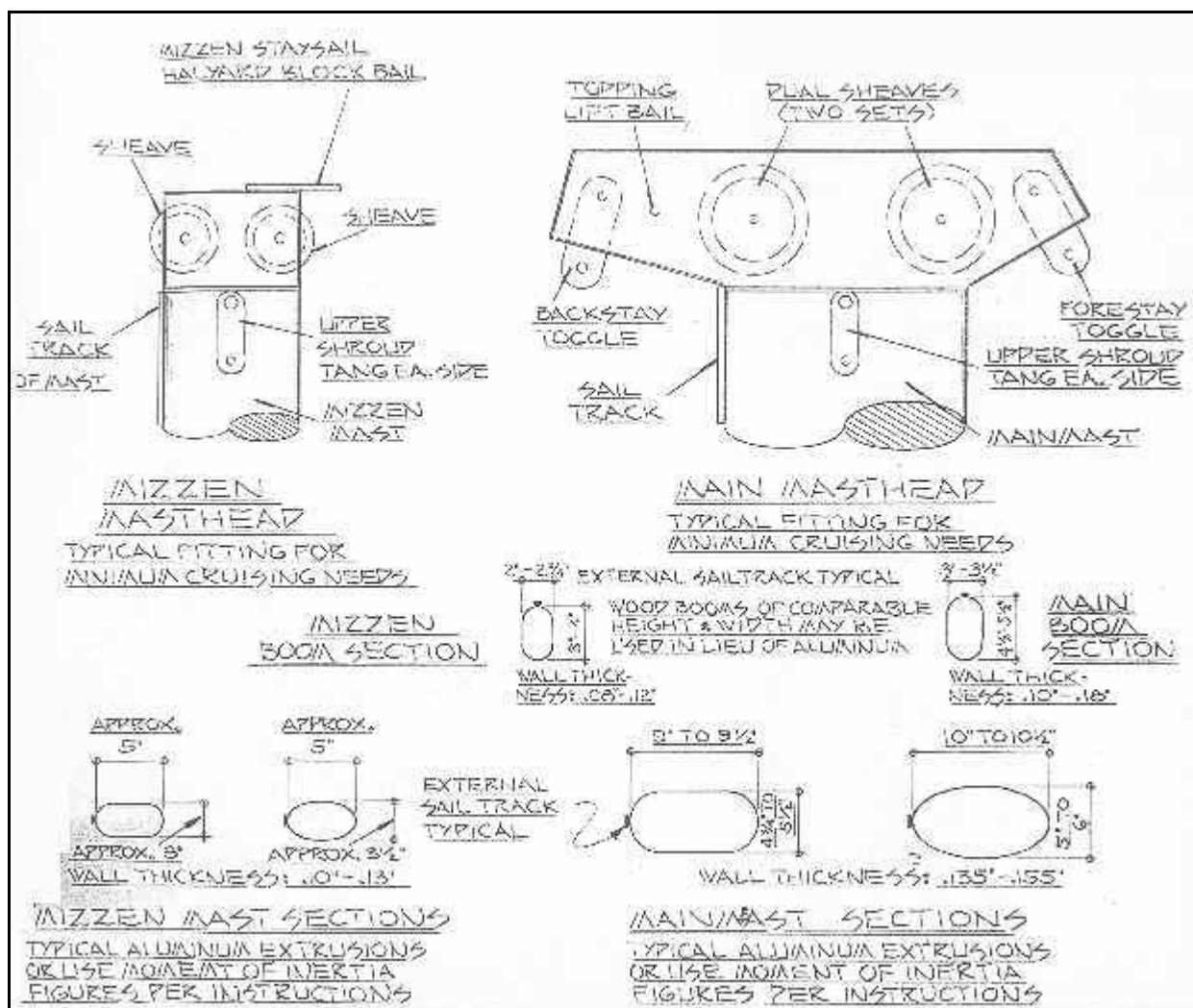
winches can be mounted on the sides of the spars together with cleats if desired. For internal halyards, sheave boxes should be located well above head level. Tangs attached to the spar should be sized to match rigging ends. In selecting a spar manufacturer, it is ideal for the source of supply to be near the vessel due to the long length and consequent shipping difficulties presented. Many spar manufacturers exist across the U.S., and a check with the various boating publications will reveal their locations. When stepping the mast, it is raked aft per the noted distance for initial tensioning purposes. The rigging should be set just tight enough initially to assure that the spar is absolutely straight. Tuning of the rigging can be done as required with the vessel underway during trial sailing, and should be checked a short time after, giving the hull time to adjust to the imposed loads imparted by the mast and rigging.

Sail Schematics





Spar drawings



Spar Lengths

- Mainmast: 52'-8"
- Mizzen mast: 30'-4" (Astra/Baron), 26'-3" (Caprice/Delphin)
- Boom, Ketch main: 13'-0"
- Boom, Sloop main: 15'-0"
- Boom, Mizzen: 7'-6"