FREEDOM 28 *Specifications*

LOA	27′6″
(Including anchor roller)	28′6″
LWL	23′4″
BEAM	10′3″
DRAFT	4′6″
*DISPLACEMENT	6,370 lbs.
*LEAD BALLAST	2,540 lbs.
ENGINE	Yanmar 2 GM 2 cyl. 18 hp Fresh water cooled diesel
HEADROOM	6′0″
MAST HEIGHT ABOVE WATER	43′0″
*SAIL AREAS	Main 290 sq. ft. Jib 120 sq. ft.
*TANKAGE	Water: Two Tanks 18/22 gal. Fuel: 17 gal. Waste: 12 gal.

**All dimensions are approximate.*

GENERAL

The Freedom 28 is a sleek, fixed keel 4′6″ draft yacht built by Tillotson-Pearson and designed by Gary Mull with a modern stable hull driven by a powerful full battened mainsail with a cambered jib set on an unstayed carbon fiber mast.

The Freedom 28 looks and, most importantly, feels like her two stablemates, the Freedom 30 and the Freedom 36. This entry level yacht offers true cruisability with features such as stand up head room, enclosed marine head, large galley, and a real navigator's station plus much, much more.

SAIL CONTROLS

Two Barient #18 chrome winches control the main and jib halyards, main and jib sheets, first and second reef lines and vang. Each line passes through a sheet stopper. The traveler is controlled by 3:1 traveler control lines led through cam cleats.

Main halyard is 7/16″ ultra low stretch Yale composite for minimum stretch. The custom fabricated boom provides an internal 5:1 mainsail outhaul, as well as a single line cockpit controlled reefing system.

HULL

The hull is constructed to ABS standards and consists of a laminate of isophtalic gel coat, a barrier layer of vinylester resin and chopped fibers (for maximum blister resistance), and laminates of .75 oz. chopped strand mat and non-woven bidirectional glass cloth sandwiching a balsa wood core.

DECK

A similar hand-laminated, cored construction is used in the deck. Heavy reinforcing is built in for deck hardware. Molded in non-skid areas are available in several colors as an option. The cockpit is integral with the deck with two large scuppers draining through the transom. Two cockpit seat lockers to starboard provide storage for decklines, fenders, and optional propane tanks.

MAST

Tillotson-Pearson has pioneered the use of carbon fiber in unstayed masts. Although carbon is more expensive than aluminum, it provides the added strength and durability to allow all Freedom masts to carry a lifetime warranty to the original owner.

INTERIOR

Standard teak joinery is handsomely fitted throughout, and accented with teak trim. The cabin sole is teak and holly. Interior finish is hand rubbed oil.

GALLEY

The galley is located to starboard, aft of the main salon. A 10″ deep stainless steel sink is located close to centerline to permit draining while under sail. Outboard of the sink is a 5 cubic foot icebox with two-level storage. There is dish storage aft of the icebox and a storage locker outboard of the two burner alcohol stove. A propane stove with oven as well as additional galley cabinetry are available as an option.

Garbage: A clever trap door in the galley to a waste receptacle located in the lazarette isolates the garbage from living areas.

MAIN CABIN

This cabin has true family room for lounging or a family Monopoly game on a rainy day. Its two opposing settees and fold down table can accommodate 6 adults for dinner. Outboard of the port settee is the Bass electrical panel with a bookshelf forward. To starboard is a bookshelf and an optional galley cabinet, with two drawers, is available. The aft end of the port settee can be raised to create a sit down navigator's station for the passage maker.

HEAD

Located forward of the main salon to port, the head features a marine toilet with china bowl plumbed to a 12 gal. holding tank, a one piece fiberglass pan for ease of cleaning, a molded fiberglass sink, and a large storage locker outboard. Ventilation is provided by an overhead deck hatch and an opening port.

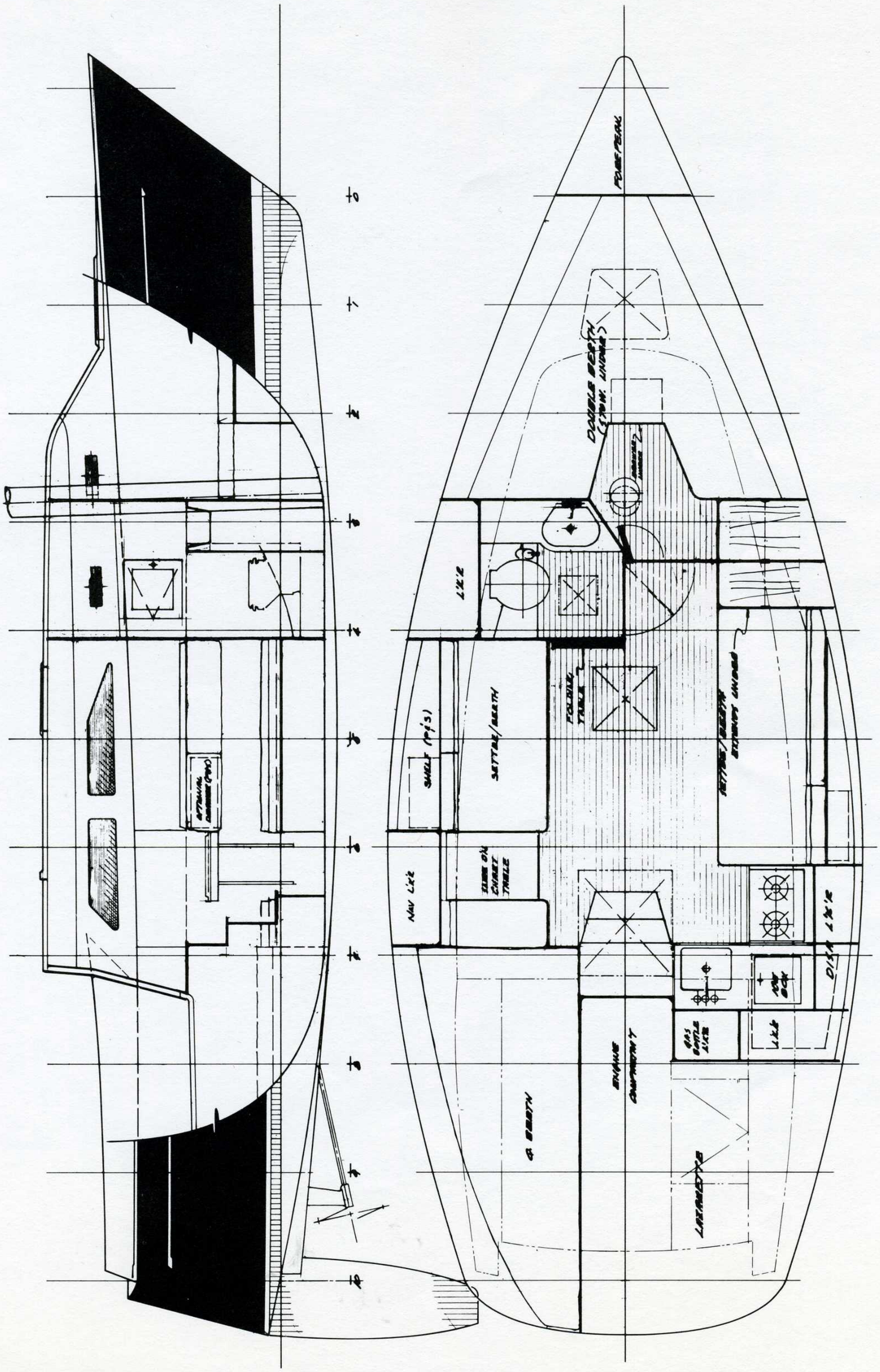
LIFELINES & PULPIT

A custom stainless steel bow pulpit with anchor roller and a stern rail are standard with double lifelines running through six 24″ high stainless steel stanchions. Optional boarding gates are available.

MECHANICAL

Engine: A Yanmar 2GM20F fresh water cooled 18 HP diesel with 35 AMP alternator drives a two blade propellor through 2.62:1 reduction gear. A 1″ stainless steel shaft passes through a Syntron dripless shaft seal. A removable insulated engine box gives complete access to engine and machinery space. A 17 gal. aluminum fuel tank is located under the aft bunk.

FREEDOM 28 *Line Drawings*



For more information call or write: Freedom Yachts, Bend Boat Basin, Newport, Rhode Island 02840 (401) 683-3500

FREEDOM 28 *Designer's Comments*

The Freedom 28 is the fourth in what we hope to be a long line of Mull-designed Freedoms for Tillotson-Pearson. Beginning with the Freedom 36 and continuing with the Freedom 30 and the just-recently launched 20 Freedom Independence, I am more than ever confirmed in my initial opinion of Tillotson-Pearson as being a fantastic organization with which to work. Their capabilities and expertise in the various skills and capabilities necessary for quality fiberglass boat production are second to none. Having a strong technical/engineering leaning myself, I am in seventh heaven working with a group of people who have the skills and abilities themselves to define a great many of the tasks in engineering terms and, more importantly, rather than giving high tech lip service as in many organizations, Tillotson-Pearson puts its resources, money, research, and best efforts into making high tech laminates pay off for the cruising sailor.

The hull shape of the Freedom 28 is a generic development of the other boats I have designed for Freedom. The lines were developed using a number of computer programs which aid in developing overall hull shape, prismatic coefficient, displacement, etc. The system in use in our office, coupled with several different performance analysis programs, enables us to run through a large number of variations of hull shape quite quickly and easily to help determine the best combination of parameters to suit the various requirements of our design targets. The keel and rudder were both developed with the aid of relatively sophisticated lifting surface analysis programs, and a good deal of the drawings for the Freedom 28 were produced using AUTOCAD together with other software developed in-house. As a result, we were able to furnish TPI with full-size mylar lofting templates for the hull, keel, and rudder. This enables us to not only save a good deal of time and money in the tooling process, but also assures a much higher and more dependable level of accuracy than heretofore possible. In addition, the structure of the boat we derived using a computer system developed in-house. The structure should fully comply with the American Bureau of Shipping's "Scantling Guide for Offshore Racing Yachts" except in the areas where we have found that the unstayed Freedom rig requires special treatment.

As with all of our designs for Freedom, the basic design target remains constant: The boat must be comfortable, seakindly, easily handled, good-looking, and deliver maximum performance within that design envelope. Comfort can mean a great many things to a great many people, but in boats it is a constant source of concern and study to try to get it right. The relationships between seat height, width, angle, and seat back height must be constantly adjusted to suit each design. The seating for a 36 footer would be quite uncomfortable in, say, a 28 footer. On the other hand, there are certain dimensions which must remain relatively fixed. The height of the working surfaces of the galley above the cabin sole must be held within a fairly small range, or they become very inconvenient. We make it a practice to constantly monitor these various dimensions and relationships in order to improve our designs, and have found kindred spirits at TPI. During the development phase of every Freedom boat, TPI builds a full-size mock-up of the entire interior. This includes doors, drawers, cabinets – everything. This not only allows us to check and often modify some of the dimensions or angles to get them just right but, just as importantly, it gives the engineering and production staff at TPI a chance to get at the boat before tooling has been built to work out the various production and tooling techniques necessary to deliver a really quality finished product to the owner. This willingness on the part of TPI not only to build the full-size mock-up but to use it so professionally and so broadly to deliver to the owner a boat to satisfy his dearest needs and requirements is one of the highlights of the Tillotson-Pearson policy.

One of the prime design requirements for the Freedom 28 was to obtain full standing headroom through the majority of the boat. This in turn forces a somewhat higher sheer and housetop line than might otherwise be used, but by carefully working with the full-size mock-up we have been able to obtain really excellent headroom throughout the 28 without having to resort to unsightly amounts of freeboard or housetop height. This is an area which always requires careful compromise on boats of this size but, with the help of the TPI staff, I think the Freedom 28 comes off exceedingly well.

The cockpit, set well aft in the boat, is of course self-bailing and accommodates either tiller or wheel steering. On deck, we have quite a large number of hatches and opening ports to supply really superior ventilation. In my opinion, nothing contributes more directly to comfort below than lots of fresh air whenever you want it.

Going below in the boat, it isn't immediately apparent that she is only 28 feet long. The main cabin is quite large with settees port and starboard for lounging, conversation, or having a meal at the main cabin table which stows out of the way on the port side of the main bulkhead. Aft to port is a sit-down chart table with stowage for charts, pencils, etc., and aft of that is a very large quarter berth. The chart table and seat also fold away, making the port side settee into a full-length berth. To starboard aft is the galley with a two burner stove outboard and the galley sink and ice box aft. There is an enormous amount of stowage in and around the galley, and an optional opening port over the galley gives the cook tremendous ventilation just where it is needed.

The settee on the starboard side makes use of a little trick I have used in some other designs, tucking the foot of the settee into the joiner work forward to make that into a full-length berth as well. Forward on the port side is a very large head with room for an optional shower and, in keeping with our feelings regarding ventilation, the head has a large ventilation hatch as well as an opening port. To starboard opposite the head are hanging lockers and other stowage to augment the rest of the drawers and lockers in the main cabin as well as to furnish separate stowage for the forward cabin which, as can be seen, has a good-sized V-berth which can be made into a very comfortable double berth with the addition of a filler piece between the heads of the berth port and starboard. Here, again, a tremendous amount of stowage is available below the berths and, of course, there is the anchor rode locker forward of that.

The standard rig for the Freedom 28 is the now familiar unstayed sloop rig with fully-battened main. The self-tacking jib is a bit larger in proportion to the Freedom 30 and 36, owing to the structure and mechanics of the jib system. It remains, however, a high aspect non-overlapping jib acting more as a leading edge slat for the fully-battened main than is

customary on "soft" rigs. In passing, it is worth mentioning that even the high tech racing boys in the Twelve Metre Class have found that they can extend the life of their mainsails by almost one hundred percent by going to fully-battened mains. Of course, these aren't legal in the Twelve Metre Class, but it is nice to know that the multimillion dollar high tech end of the sport confirms what Freedom has known all along.

All in all, I feel the Freedom 28 should provide her owners with a good many miles and hours of safe and really enjoyable sailing with all of the comfort and ease of handling so well known in the Freedom line.

Gary Mull

FREEDOM 28 *Builder's Comments*

One good boat deserves another.

Our Freedom 30 and 36 designed by Gary Mull have been real success stories and all indications were that a 28 could be even more so. You see, 28 feet is really an "entry level" size range today; it's what young families and beginning sailors want. The easy sailing Freedom rig and a very stable hull address themselves to that kind of audience very nicely. A 28 footer makes a great deal of sense in our line.

But as a builder, I'm concerned with something else. Many 28 buyers will eventually move up to something bigger. When that time comes, the value of their boat will be a very important concern. I believe the 28 will have good value then because we're building in that value now.

Like all Freedoms, the construction of the 28 is founded in research, good building practice and intensive quality control. We pioneered the use of carbon fiber in the boat industry and now we're able to offer a lifetime warranty on the Freedom spar. Our experimentation in core structures has led us to balsa cores as the strongest, most durable and most insulating against noise and temperature extremes of all the cores. Our gel coat research has resulted in a gel coat that won't blister. And those are just a few examples. Our testing practices are easily the most extensive in the industry.

When you see our new 28, you'll probably be impressed. When you know how she's made, you'll be convinced.

Everett Pearson

PRESIDENT, TILLOTSON-PEARSON

FREEDOM 28 *Line Drawings*