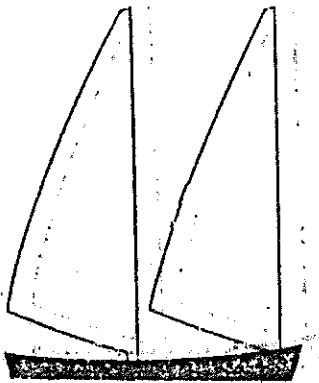




FREEDOM YACHTS INTERNATIONAL LTD

FREEDOM 21 (FIN KEEL)

P E R F O R M A N C E

D A T A

WIND SPEED - 20 KNOTS TRUE

SEA STATE - SOLENT CHOP

TRIAL CONDUCTED OVER 5 HOURS WITH THREE PEOPLE ABOARD

TO WINDWARD, MAIN WITH ONE REEF

BROAD REACH, MAIN WITH ONE REEF

DOWNWIND, MAIN WITH ONE REEF AND SPINNAKER

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MAXIMUM SPEED TO WINDWARD - 5 $\frac{1}{2}$ KNOTS

AVERAGE SPEED TO WINDWARD - 5 KNOTS

SPEED BROAD REACH - 7 $\frac{1}{2}$ KNOTS

SPEED DOWNWIND WITH
SPINNAKER - 11 KNOTS

How To Sail A Freedom 21

One of the first simplicities offered by this boat is that you can forget completely about all those complex tuning instructions normally associated with the average stayed rig. There is only one place to put this mast—you just stick it there and forget it. When you get your boat set up, there may seem like a lot of lines. Relax—the purpose of all these lines is to give you complete control of everything, from the cockpit. Once you familiarize yourself with what each line does, you will find it just like the keys on the keyboard.

Trimming Sail A cat boat cannot be sailed effectively so windward with the traveler in the center position. In any sort of a breeze you will want to carry the traveler down slightly—about over the edge of the companionway. If you wish to reduce heeling, let the traveler down further. The main sheet controls the basic angle of the sail, but when close hauled, the main sheet also governs leech tension. If you haul hard on the main sheet you will tend to close the leech; this puts the sail in basically one plane and is good for developing full power in lighter winds and flatter seas. If you ease the sheet slightly, you will note the top battens tend to fall off slightly. The sail now has “twist”—that is, it is operating in several vertical planes. This kind of trim is useful for moderate breezes with choppy seas. Traveler adjustment is another variable here, and you really have to experiment to find what works best for your style of steering—with any particular wind-sea combination.

For offwind performance it is very important to set up sufficient vang tension. It is easier to set up the vang when the sail is trimmed to windward. Remember you cannot let the mainsail out past 80° to the centerline of the boat, as this will put a heavy strain on the gooseneck. On ordinary boats you are used to having the boom stopped by the stays. The Freedom 21 has no stays so you can let the sail out to maximum efficiency. But beyond 80° is not efficient and, as mentioned, will break your gear. It is best to put a knot in your mainsheet so that it can't run through the boom beyond the 80° point.

Reefing We've made reefing just about as simple as it can be and it's all done from the cockpit. There are two reefing lines—one on port and one on starboard control console. For normal sailing conditions, I carry the starboard reefing line set up to the first reef position, and I use the port reefing line as a cunningham control. (Just tie a knot in the reef line as it exits from the aft end of the boom and then hook the forward end into the cunningham grommet.) With two people aboard, I find it comfortable to reef at about 15-18 knots of breeze. The procedure is to ease the main sheet to relieve pressure on the sail. Lower the main halyard to the first reef position (you can mark this on the halyard) then simply winch in the reefing line. Being continuous, the reefing line will first bring the new tack down to the boom and will then pull the new clew down. Because of the stabilizing influence of the batten, you should not have to lash the sail further.

The Spinnaker For the spinnaker operation to run smoothly, you must have the patented Hoyt Gun Mount correctly set up (see attached diagram). Check to make sure that the yard can be pushed by hand easily in and out of the rotating sleeve. If it is too tight, remove the yard and sand or file down the plastic lining inside the sleeve until the yard easily slides in and out. Next, check to be sure that the swiveling sleeve itself is firmly bolted to the flat plate on top of the bow pulpit. This should be periodically checked, as this bolt sometimes tends to loosen. Then mark the mid-point on the yard with indelible ink, and also mark the retractor lines where they exit from the control console when the yard is set at mid-point. Thus you can visually check the pole when it is at its mid-point and also see by the marks on the lines.

To Hoist The Spinnaker Make sure the spinnaker reins are free and all easylock jams are secured. The yard should be retracted, aligned over the spinnaker launch tube and inboard of the port lifeline. Release the stb. clew and stb. yard control lines. Haul on the port yard control line to extend the yard to its midpoint. At first, this will be difficult since the droop of the yard in the retracted state creates the greatest friction in the sleeve. If you like, you can use the winch at this point to make it easier. As the yard is extended, pulling the port yard control line will become easier. Once centered, secure the stb. clew and yard control lines to keep the yard from sliding back and forth through the sleeve.

Next square the pole a bit with the reins in order to make it easier to pull the sail out of the launching tube. Pull each spinnaker clew out to the end of the yard with the appropriate clew line. If the wind is light (under 12 knots) you can directly hoist the spinnaker with the yard squared to the wind. The spinnaker will fill as you hoist, but this is no problem in light wind. If the wind is over 12 knots, you will find it easier to pull the yard around so that one end points into the wind. Then you can hoist the spinnaker without filling it—it simply luffs into the wind. When the halyard is fully hoisted simply pull the reins around and fill the spinnaker. A variation of this technique is to pull one end of the yard in behind the mainsail—bear off—hoist the spinnaker behind the mainsail and then square away the yard to fill the spinnaker.

Remember that the yard should be centered at all times. There is little advantage to trying to extend the yard more on one side than the other. Doing so will only excite the sea lawyers if you are racing, throw your sail system out of balance, and place a dangerous strain on the gun mount.

To come up to a beam reach, simply trim in on the leeward rein. You can pull the yard around to the same angle as a regular spinnaker pole. As the yard trims forward, note that you are tightening the windward leech and loosening the leeward leech, because of the geometry involved. To a point this is a desirable natural adjustment. But if the windward leech seems too tight, you may want to ease off on the windward clew line slightly.

If you are using the spinnaker in heavy winds and find the boat going into a broach, remember that simply releasing the leeward rein will not really do much. What you have to do is haul on the windward rein so as to force the spinnaker around into the luffing position. If the boat is spinning up into the wind you will do better to spill the mainsail, keep the spinnaker drawing and head off. It takes a slightly different kind of reaction than a regular spinnaker rig, but you will find the gun mount spinnaker to be far more stable and less prone to broaching, because both clews are always controlled.

Jibing The Spinnaker If you are singlehanding, the best way to jibe the spinnaker is to simply square the pole and cleat both reins. Then you simply sail the mainsail through the jibe by bearing off and pulling the mainsail over. If you do it correctly, you should be able to keep the spinnaker filled throughout the operation and the boat will stay very stable because of the continual forward thrust of the spinnaker. Obviously if you have two people on board you can do more radical jibes by trimming the yard throughout the jibe.

Dousing The Spinnaker It is easier to douse with the yard squared or nearly squared. In this position, the spinnaker is pulling forward rather than sideways, and it stows better. If you have the yard pulled around as for a reach, it tends to restrict the opening of the launching tube and this makes dousing tougher. To make a smooth douse, hold the retriever line in one hand and take up the slack until you are actually beginning to pull in on the center spinnaker patch slightly. Then release the halyard and haul away on the retriever line. Watch the spinnaker as it is sucked back into the tube. When the retrieval patch on the spinnaker is well in the launching tube, release the two clew lines. Pull the spinnaker all the way back into the tube, then pull in the port rein to align the yard over the spinnaker launch tube and inboard of the port lifeline. Release the port yard control line and haul on the stb. yard control line to retract the yard. Trim the port rein to keep the yard inboard of the lifeline while retracting the yard until about 2 feet of the yard projects over the bow. Secure and trim all lines associated with the spinnaker system to make it ready and neat again. Taut reins will prevent the yard from swinging in its retracted state while tacking.

In General Once you get to know the gun mount rig, you will develop complete confidence. It is really hard to get into trouble because the yard and clews should always be under complete control. In any sudden emergency you can simply release the spinnaker halyard. The top of the spinnaker will blow forward, but it cannot fall into the water because it is held up by the retriever line. So you can just leave it and haul it into the tube as soon as you get a chance. Get to know what each line does and you are in complete control—all from the cockpit.

Garry Hoyt

Caution Remember that carbon fiber is a conductor of electricity. Therefore never hoist or move the mast in the vicinity of power lines.

