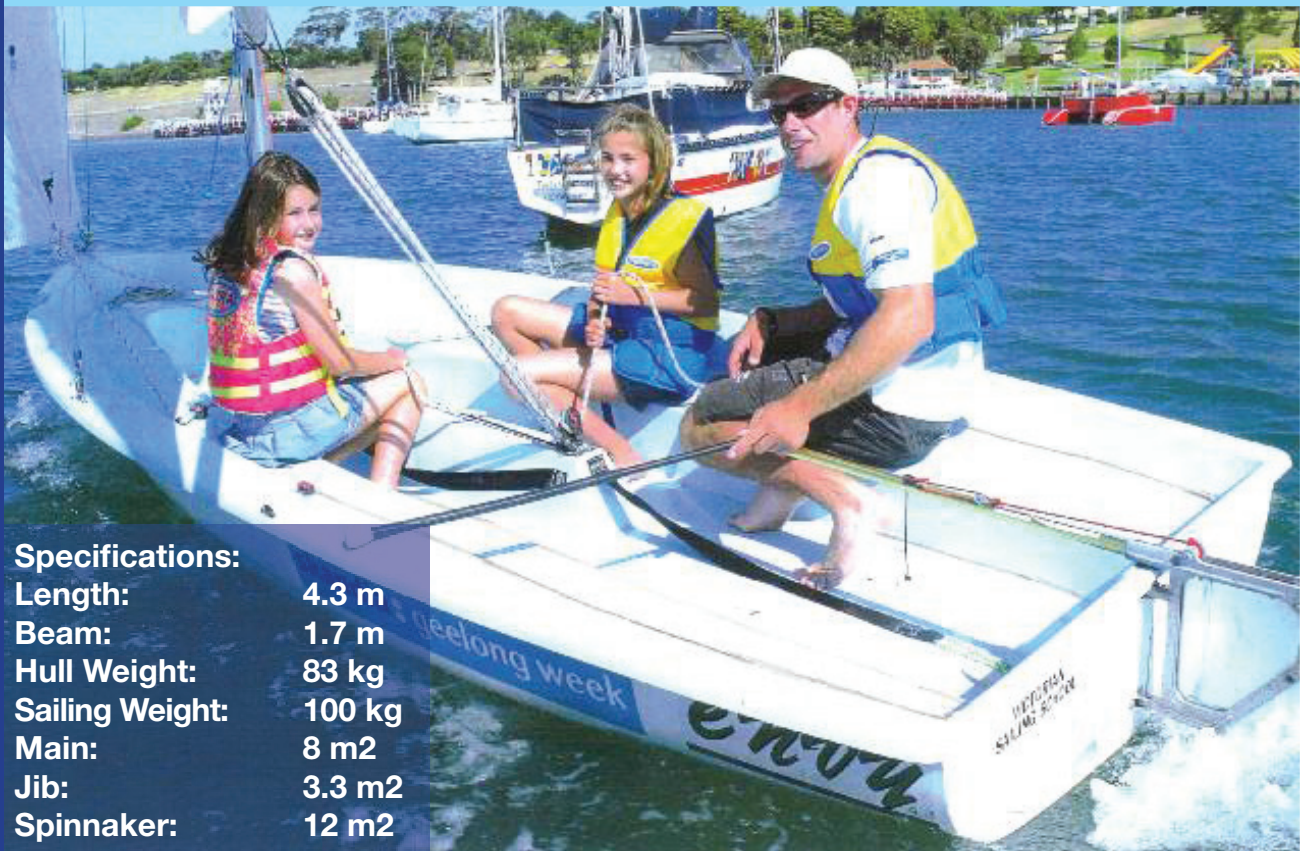


# TECHNICAL MANUAL FOR OPERATION AND MAINTENANCE OF ENVY 4.3m SAILBOAT

- RIGGING / UN-RIGGING OF ENVY
- LOADING / UNLOADING OF DOUBLE TRAILER
  - LOADING AND SECURING MAST
- ON WATER AND BOATING SAFETY



## Specifications:

Length:	4.3 m
Beam:	1.7 m
Hull Weight:	83 kg
Sailing Weight:	100 kg
Main:	8 m <sup>2</sup>
Jib:	3.3 m <sup>2</sup>
Spinnaker:	12 m <sup>2</sup>

THIS MANUAL CAN BE VIEWED AT THE ENVY WEBSITE

[www.dinghysports.com](http://www.dinghysports.com)

# Dinghy Sports Envy 4.3

## For sail training and family fun

The Envy 4.3 was born to fulfill the demand for a modern, safe and well built, cost effective production sailboat. The Envy will carry an adult and 1 to 4 kids for sailing schools or three adults for sailing training in comfort and safety. The boat sails well and is easy to maintain, built tough enough and light enough that an adult can load it onto a trailer with no lifting. The boat can also be rowed and carry a small outboard motor, for use as a fishing / rowing boat.

Until now all sailing schools and sailing club training programs have used sailboats for their fleets that are for various reasons unsuitable.

## Good Design

The hull shape of the Envy is similar to the Olympic 470, round bilged, full sections type hull that is very stable but also capable of a good turn of speed. The deck is a one piece moulding that incorporates side decks, seats, centre case and self draining floor in a non skid grip. The fact that the water runs out of the stern makes the boat unsinkable and eliminates the need for venturi bailers or buckets. Dinghy Sport is Australia's Premier Builder of sailboats for kids. Mark Phillips has been in sailboat building and design for over twenty years.

## Sail Trainer

The Envy 4.3 is the first boat specially designed and built with Sail Training in mind. The mainsail can be reefed down so the boat remains comfortable in extreme conditions. It also sails very well under mainsail only with the jib lowered.

## Family Fun

The Envy 4.3 will be ideal for of the family. Husband and Wife teams can sail together without all of the adjustable rig, wing mast, narrow hull, shallow cockpit and uncomfortable hassles of other sail trainers.

The kids can come along sailing and have lessons from Mum & Dad in the morning. On Sundays the family can explore the bays and inlets. This boat cannot sink or even fill up. By lowering the jib the boat will sit easily on the beach at lunchtime as the full length battens will stop the mainsail flapping.

The boat also comes with a bumper bow for protection of the bow and other boats. The spars are anodised alloy, and sealed for safety. The foils are fibreglass by "Freddy Foils". The rudder box is cast alloy and the sails are dacron. The hulls are foam (core mat) construction polyester, are one design from the same mould.

The sports version has a spinnaker and trapeze kits added.

# Envy Rigging Manual

This manual covers the rigging, maintenance and detailed parts list for the envy 4.3 sailboat. Design & Manufacture by mark Phillips of Dinghy Sports Australia Pty Ltd and loading and un-loading of envys from double trailers.

## Rigging

**WARNING: ENSURE THAT ALUMINIUM MAST NOT COME INTO CONTACT WITH OVERHEAD ELECTRICAL CABLES WHEN RIGGING.**

### 1. Stepping the Mast (requires 2 people)

- a. Stand mast to vertical and place mast heel into mast step.
- b. Attach port and starboard shrouds to chainplate saddles with screwpin in shroud adjuster.
- c. Lace forestay lanyard to bow chainplate saddle, making 4 turns for purchase and pulling taught. Tie off Securely

### 2. Hoisting the Jib

- a. Clip jib tack to shackle on bow fitting.
- b. Twist on jib attachment hanks from bottom to top. Tack to head.
- c. Attach Jib hallard to jib head. Hoist jib through jib halliard cleat.
- d. Attach jib sheet to clew by means of a knot in the middle.
- e. Pass ends of Jib sheet through jib fairleads. Tie a figure of 8 knot In the ends.

### 3. Hoisting the Main Sail

- a. Put mainsail head in sail track, shackle main halliard to head.
- b. Hoist mainsail through main halyard cleat. Hoist to the Top.
- c. Fit boom to gooseneck (Pin into Boom Extrusion).
- d. Put boom through clew webbing hoop. Tie clew of mainsail to boom eye using outhaul cord. Tie off securely.
- e. Thread Mainsheet, tie mainsheet to pulley becket on centerboard case top, pass through forward boom pulley, return to the becket block then to aft boom pulley and finally to ratchet block. Tie a figure 8 knot in the end.
- f. Fit Cunningham (luff ) tensioning control. Pass cord through Eyelet in sail tack and down through clam cleat on mast.
- g. Fit boom Vang. Shackle boom Vang cleating block to saddle on mast. Shackle top end to webbing Boom Hanger.

### 4. Rudder Assembly

- a. Put rudder blade in fully up position. Blade should be lying parallel to Tiller.
- b. Fit rudder box to transome pintles by passing rudder pin upward through pintle and rudder box lug holes. Lock into place with safety clips x2.
- c. Ensure rudder blade is fully down when sailing. Pull down with Downhaul rope and cleat.

## **5. Centre Board**

- a. There are two clips on the centerboard control shockcord.  
(1) Holds it up, the other (2) holds it down when sailing.  
After launching unclip 1 and pivot centerboard down until water is deep enough to attach Clip 2.

## **6. Hatches and Bungs**

**ENSURE HATCHES AND BUNGS ARE FITTED BEFORE SAILING.**

# **TO DISMANTLE (UN-RIG)**

## **7. Rudder Assembly**

- a. Swivel to up position, remove safety clips and pin, Remove rudder from transome and stow in rudder bag. Replace pin and clips to transome.

## **8. Mainsail**

- a. Release Cunningham Eye cord.
- b. Release Main halyard from cleat and lower mainsail.
- c. Un-shackle Main Halyard from sail and stow halyard to Cunningham eye cord.
- d. Untie Clew outhaul cord.
- e. Stow Boom. You can normally leave mainsheet in sailing position.
- f. Un-shackle vang from boom and stow to Cunningham eye cord.
- g. Roll up mainsail (normally with Jib inside).

## **9. Jib**

- a. Release Jib halyard from cleat and lower jib.
- b. Un-shackle halyard from jib head and stow to Cunningham eye cord.
- c. Un-clip jib hanks and jib tack clip.
- d. Un-tie jib sheet from sail. Stow Jib sheet in Halyard Bag.
- e. Roll up Jib (inside Mainsail) stow main + Jib in Sailbag.

## **10. Un-Stepping the Mast (Requires 2 People)**

- a. One person holds mast, other unties forestay lanyard from bow fitting.
- b. Then unshackle Port and Starboard shrouds from Gunwale Chainplate saddles.
- c. Remove mast from Boat. Secure shrouds and halyards. Use forestay Lanyard to secure stays.

## **11. Routine Maintenance**

- a. After use hose boat, spars, rudder & ropes etc, with fresh water and check for faults and wear.

**11 cont.**

- b. Sails - Don't leave sails flapping in the wind.  
Don't leave sails exposed to hot sun when not in use.  
Don't crush or fold sails. Roll them and store in Sail Bag.
- c. Should the hull, deck, Centreboard or rudder blade become damaged. Contact the manufacturer Dinghy Sports for Repair Information. The Materials used in manufacture were supplied by F.G.I (Fiberglass International). The Laminating resin is Polyester, Hull Gelcote is WHITE "aquagaurd", the deck is SKY BLUE "aquaguard" gelcote.

**12. Spare Parts List**

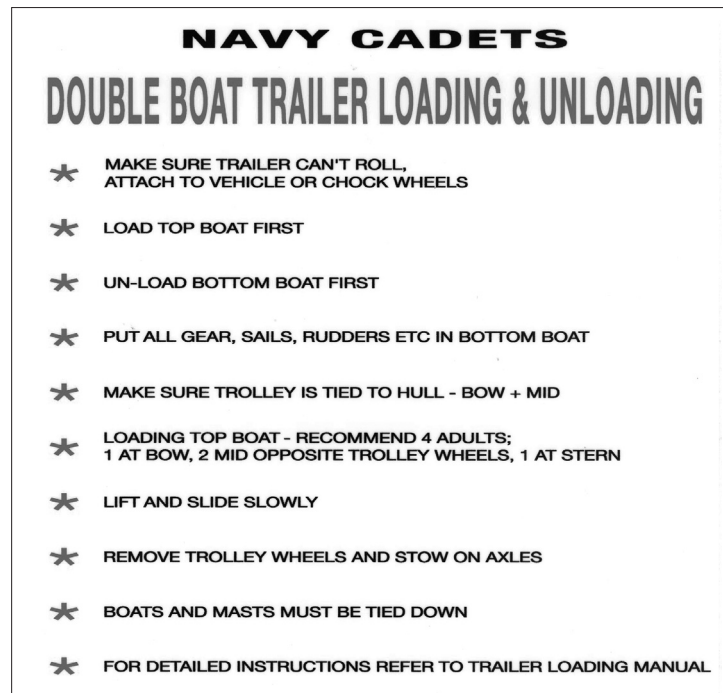
For prices on spare parts see Envy website ([www.dinghysports.com](http://www.dinghysports.com))

QTY	DESCRIPTION	PART No.	QTY	DESCRIPTION	PART No.
1	AFT Toe-Strap	DS1	1	Mast Bare	DS25
1	Boat Cover	DS2	1	Mast Complete (no wires, no halliards)	DS26
1	Boom Complete	DS3			
1	Boom Vang Becket Block	DS4	1	Mast Heel Plug	DS27
1	Boom Vang Cleating Block	DS5	1	Mast Step	DS28
1	Boom Vang Ropes	DS6	2	Rudder Gugeons	DS29
1	Centreboard	DS7	1	Rudder Pin	DS30
1	Centreboard Shock Cord	DS8	1	Rudder Pin Clip	DS31
3	Chainplate Saddles	DS9	1	Rudder Blade	DS32
2	Foreward Toe-Straps	DS10	1	Rudder Box	DS33
1	Forestay	DS11	1	3/16" Shackles	DS34
1	Gooseneck	DS12	2	Shrouds	DS35
1	Inspection Hatch	DS13	2	Spreaders	DS36
1	Jib Halliard	DS14	1	Tiller	DS37
2	Jib Fairlead	DS15	1	Tiller Extension	DS38
2	Jib Cleat	DS16	1	Tiller Extension Universal	DS39
1	Jib Sail	DS17		Joint	
1	Jib Sheet	DS18	1	Wire Kit	DS40
1	Main Halliard	DS19	2	Vernier Adjusters	DS41
1	Main Sail	DS20	1	Launching Trolley	DS42
1	Main Sheet	DS21	1	Double Trailer	DS43
1	Mainsheet Ratchet Block	DS22	1	Rudder Cover	DS44
1	Mainsheet Becket Block	DS23	1	Halyard Bag	DS45
2	Mainsheet Boom Blocks	DS24	1	Mainsail 'Navy Cadets' Signage	DS46
					DS47



### 13. Double Boat Trailer. Loading & Un-loading.

**WARNING: THE MANUAL HANDLING OF BOATS ON AND OFF TRAILERS IS THE AREA PEOPLE SHOULD TAKE THE GREATEST CARE.**



This sticker is on both mudguards of the Envy double trailers. Replacement stickers are available from Dinghy Sports.

#### a) Trailer Loading

- Make sure trailer can't roll. Ideally attach to vehicle tow bar or at least chock the wheels.
- Load top boat first. This allows a person to step through the trailer to assist lifting of front of trolley onto top loading bar.
- Put all gear in bottom boat. This keeps top boats as light as possible for ease of lifting. Ensure there is no water in boats.
- Ensure both boats are tied to trolley using bow and mid tie down ropes. These ropes should be tight and tied off securely.

#### b) Loading Top Boat (recommend 4 minimum, ideally 5 adults)

- Hull with trolley weight approx 100kg.
- Position lifting crew of 5. 1 at bow, 1 inside trailer in front of rear top loading bar, 2 at mid opposite trolley wheels and 1 at stern.
- Lift and slide trolley onto trailer until handle is close to level with rear top loading bar. 2 front crew stand inside trailer holding trolley handle, crew leader calls "lift", all crew lift boat and trolley to shoulder height, front crew place trolley on top loading bar and slide boat forwards approx 300mm. Crew leader calls "stop". Front crew get out of trailer. It is now their job to guide trolley forward into front locator. Crew leader calls "slide". Crew now slide boat forward slowly until trolley wheels are just short of rear bar. Remove trolley wheels and stow on axles provided. Slide boat forward until boat is in front locator and trolley axle is against rear locator and on top of loading bar.

### c) Loading Bottom Boat

- Position lifting crew. Lift and slide trolley onto trailer, continue to slide forward until in position. There is no need to remove lower boat trolley wheels.

### d) Tying Boats

- TIE BOTH BOATS to trailer with 3 tie downs supplied. 1 at bow tying trolley handle to trailer to stop trolley sliding back. Check boat is securely tied to trolley with bow line. 1 at mid loading bar and 1 at rear loading bar. Use hitch in rope for purchase to ensure firm tie down of top and bottom boats.

### e) Un-Loading of Trailer

- Ensure trailer is secure. Ideally attached to vehicle tow bar, or at least chock the wheels.
- Un-load masts (see mast loading/un-loading (14))
- Un-load bottom boat first. Untie 3 tie downs and stow. Lift and slide boat and trolley slowly back until trolley handle approaches rear of trailer. Put rear of boat down, lift bow and wheel away.
- Un-load top boat. Untie 3 tie downs and stow. Position lifting crew, slide boat back approx 300mm and replace trolley wheels and washer and pins to trolley axle. Crew leader calls "slide" and 3 crew lift and slide boat and trolley back until trolley handle approaches rear loading bar. Crew leader calls "stop". 2 bow crew lift trolley down to trailer. Slide boat and trolley slowly back until trolley handle approaches back of trailer. Put rear of boat down, lift bow and wheel away.

## 14. Mast Loading / Un-loading and Securing

### a) Loading

- Check both boats are loaded properly and tied down.
- Installing rear mast carrying support to top boat transome. Remove rudder pin safety clips and slide rudder pin down, place mast support so that rudder fitting on hull lines up with rudder fitting on support then slide rudder pin up through both rudder fittings and lock into place with safety clips x2.

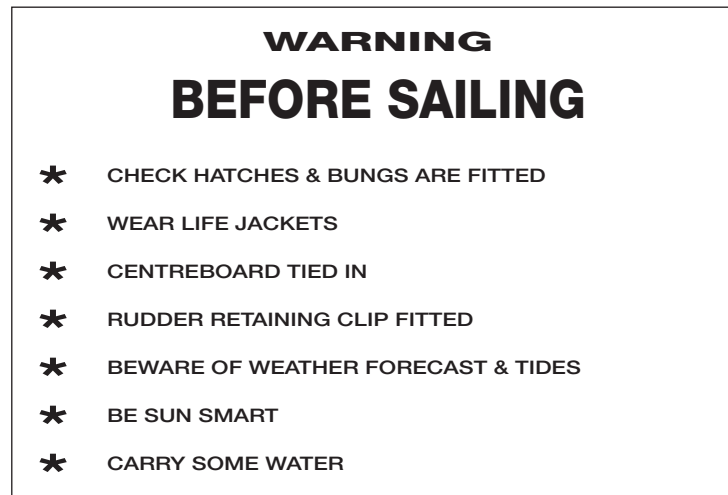
### b) Loading and Securing Masts (requires 2 people)

- Ensure front mast support is set to correct height to suit vehicle clearance or door heights. Lift mast onto supports, base end of mast to stern. Position support just below gooseneck on mast. (ensure mast rigging, shrouds and halyards are secure and neatly tied.) Tie first mast to supports with mast-track facing sideways toward centre of boat. Second mast is positioned so spreaders are parallel to each other & one inside the other. Tie second mast to supports with elastic hold down supplied. These should be backed up with rope for long trips.

## 15. Before Driving

- Ensure trailer is properly clipped on the towbar.
- Ensure safety chain and lights are attached to car.
- Ensure jockey wheel is up securely.
- Always double check boats and masts are tied on securely.
- Ensure gear is stowed and tied into bottom hull. Check off.
  - 2 Rudders
  - 2 Sail bags with sails inside
  - 2 Booms
  - Life jackets etc.
- Ensure top cover is properly fitted to bottom boat.

## 16. On Water Safety and Boating Safety



This sticker is on the inside transome of the Envy hull. Replacement stickers are available from Dinghy Sports.

### a) On Water

#### \* MOST IMPORTANT BEFORE SAILING - 'BE WEATHER WISE'

It is important to check local weather conditions the day before and just before departure. You can obtain up to date weather information through television, radio, internet and telephone broadcasts.

### b) Boating Safety

The various Maritime Authorities in Australia publish very good boating handbooks that cover all aspects of boating safety, navigation and water traffic rules.

A copy of the NSW Maritime Handbook is included with each Envy sold. For further information on safe boating, see next page.



NSW	NSW Maritime	<a href="http://www.maritime.nsw.gov.au">www.maritime.nsw.gov.au</a>
VIC	Marine Safety Victoria	<a href="http://www.marinesafety.vic.gov.au">www.marinesafety.vic.gov.au</a>
QLD	Maritime Safety Queensland	<a href="http://www.msq.qld.gov.au">www.msq.qld.gov.au</a>
SA	SA Department for Transport	<a href="http://www.transport.sa.gov.au">www.transport.sa.gov.au</a>
WA	WA Dept of Planning & Infrastructure	<a href="http://www.dpi.wa.gov.au">www.dpi.wa.gov.au</a>
NT	NT Dept of Planning & Infrastructure	<a href="http://www.dpi.nt.gov.au">www.dpi.nt.gov.au</a>
TAS	Marine & Safety Tasmania	<a href="http://www.mast.tas.gov.au">www.mast.tas.gov.au</a>

## **DISCLAIMER - RISK WARNING**

Whilst care was taken with the production of this manual, Dinghy Sports does not accept any liability for errors and omissions. This manual is a guide only.

Participants are warned that, regardless of the precautions, which might be taken by reasonable and experienced persons, sailing can be a dangerous pursuit and participants are exposed to significant risk of property damage, physical harm and possibly death.

As an indication, these risks may include, but are not limited to:

- The extremes of weather and sea conditions.
- The potential that control of vessels may be lost, resulting in collision with objects and other vessels.
- The sudden movement of the vessel at any time and the possibility that participants may fall or be thrown overboard, resulting in drowning.
- The possibility that participants may be injured by equipment on the vessel.
- The absence of immediate medical care and the likelihood that significant delays may occur before medical care is available.
- Exposure to the elements for extended periods.