

# INTERNATIONAL NACRA CLASS ASSOCIATION

## Nacra Class Rules

Pertaining to One Design Control as Amended for North America

4.5, 450, 5.0, 500, 5.2, 5.5uni, 5.5sl, 5.7, 570, 5.8, 5.8na, 6.0na, & F-18

### 1. OBJECT OF CLASS RULES

1.1 The International Nacra Class Catamarans are each a one design manufacturers class. The rules, official plans and specifications are intended to ensure that the catamarans of these classes are as nearly as possible the same in regards to shape, weight of hulls, daggerboards, rudders, spars, sails, and that the equipment is simple, functional and dependable. The ultimate intent is to encourage the use of only racing tactics and sailing skill to increase boat speed.

### 2. PROTECTION OF INT'L NACRA CLASS DESIGNS

2.1 Unless otherwise specified in these rules, all parts of these Nacra Class Catamarans are strictly controlled. Interpretations of these rules shall be given by Nacra in consultation with proper committees of the International Nacra Class Association (hereinafter referred to as INCA). In the event of a conflict between rules, official plans, measurement form and/or measurement diagram, the matter shall be referred to INCA, (NOTE: To doubly guard against "loophole restruction" of these fine International Class Catamarans and their potential for lasting racing pleasure, every deviation which is not specifically spelled out by plans, specifications or Design Rule is assumed illegal until approved and thus recorded in writing by those administering the Class Designing Rules.

2.2 MOLD All molds, patterns and templates for the hulls, daggerboards, and rudders shall be constructed solely by Nacra or the builders licensed for that purpose by Nacra, for Nacra.

2.3 ALTERATIONS TO MOLDS. No alterations shall be made to any molds, official patterns or templates.

2. 4 CONTROL OF MOLDS. All molds shall be pulled from the official class plugs maintained by Performance Catamarans, Inc. (hereinafter referred to as P.C., Inc.), and shall not be modified in shape except to fair any surface imperfections.

### 3. HULLS, DAGGERBOARDS AND RUDDERS

3.1 THE MANUFACTURE of hulls, daggerboards and rudders is strictly controlled by Nacra. Licenses to build these components are issued by Nacra for Nacra.

3. 2 ALTERATIONS to hull, daggerboards and rudders. Grinding, planing, sanding and/or application of putty, fillers and coatings on the outside surface are permitted provided that it is undertaken to fair local imperfections in these surfaces or to improve the surface finish and not to alter the intended shape of any surface.

### 3.3 LIGHTENING OF HULLS.

The hulls may not be lightened in any manner. A maximum of three inspection ports per hull are allowed. Inspection ports are not permitted forward of the main beam. None may have an opening larger than 6".

### 3.4 RUDDERS.

The rudder and rudder stock assembly, including the method of attachment to the transom is not to be modified. Rudders may be raked to attain helm balance.

### 3.5 DAGGERBOARD.

The top of the daggerboard may not be inserted below the deck level. Hand holds in the daggerboards may be added. The bottom of the handholds will then be considered the top of the daggerboard and may not be inserted below deck level. No part of the daggerboard or daggerboard well may be removed or added for the purpose of varying rake. All daggerboards manufactured by Nacra are legal for racing except ones which require modification of daggerboard or daggerboard well to accommodate them.

3.5a. F-18 boards maybe inserted so top is level with deck.

## 4. SPARS

### 4.1 CONSTRUCTION.

The material, method of construction and design of the spars shall be in accordance with these rules and official Spar Plan. The mast, spreader, boom, beam, tiller and tiller tie bars shall be fabricated only by Nacra for Nacra.

4.1a. Carbon mast by a licensed builder is considered class legal in the 5.5uni.

4.1b Only carbon masts built prior to August 31, 1997 and registered and approved with class association will be class legal on the Nacra 6.0na.

### 4.2 MAST.

The extrusion length and position of the mast head, mast hound, jib halyard strap eye, spreader and mast base are not to be altered in any manner. The gooseneck may not be lower than 10' from the bottom of the extrusion. Diamond wire tangs may not be raised or lowered but may be moved either to the front or side of the mast.

### 4.3 SPREADERS.

The spreader arm lengths may not be altered. Nacra adjustable rake spreaders are allowable on all models. The diamond wires are to be securely attached at the spreader ends.

### 4.4 BOOM.

The extrusion length and the method of attachment to the gooseneck are not to be altered. The mainsheet blocks are to be hung from permanently fixed bales. On the 5.2, bales may not be affixed aft of the original position. All other running rigging hardware is optional. No booms may be used on boomless designed rigs.

#### 4.5 Bridle Foils.

The 5.5sl., 5.8na., and 6.0na. bridle foil lengths, hardware, and fittings may not be altered. 6.0 may use original foil when modified to na rig.

#### 4.6 MAIN BEAM.

The extrusion length, mast step and dolphin striker assembly are not to be altered. Internal controls may be installed.

#### 4.7 REAR BEAM.

The rear beam may not be altered with the following exceptions: The stops under the beam may be altered to allow hull alignment. Internal controls may be installed for crew restrainer system only.

#### 4.8 TILLERS, TILLER TIE BAR AND EXTENSION.

Tillers may be toed-in and tiller tie bar shortened. Tiller extensions (hiking sticks) and design are optional.

4.8a Tiller to tiller tie bar connection fittings are open to modification or change.

#### 4.9 LIGHTENING OF SPARS.

No holes may be drilled, filed or cut into any manufacturer supplied component, spar or casting for the purpose of reducing weight.

### 5. RIGGING

#### 5.1 CONSTRUCTION.

All standard rigging (including diamond wires) shall conform with the wire types and, diameters shown in the manufacturers rigging schedule. Running rigging and associated fittings, sizes, types and lengths are optional. The main halyard, jib halyard and trapeze wire diameters shall not be less than those shown in the rigging schedule. Rope tails on halyards are permitted. Jib halyards may not be led internally in the mast. Halyards must be long enough to raise and lower sails while the boat is in an upright position. (NOTE: Bridle length is measured from bearing point to bearing point. The 4.5 and 5.0 bridle length includes shackle attachment to bow. The 5.8na bridle (hull to foil) attachment hardware is open to: stainless steel wire or fittings (ie., stay adjuster, turnbuckle, etc.)

#### Rigging Schedule Wire Type Diameter Class Lengths

Shrouds 1X19 5/32

Forestay 1x19 5/32

Diamond Wires 1x19 1/8

Main Halyard 7x19 1/8

Jib Halyard 7x19 1/8

Trapeze Wires 1x19 3/32

Bridle 1x19 5/32 4.5/450: 3'10-3/4"

Bridle 1x19 5132 5.0/500: 4' 1-1/4"

Bridle 1x19 5/32 5.2: 3' 11"  
Bridle 1x19 5/32 5.5uni: 18' 7 1/2"  
Bridle 1x19 5/32 5.5sl: 18"  
Bridle 1x19 5/32 5.7/570: 4' 1-1/4"  
Bridle 1x19 5/32 5.8: 3' 10-1/2"  
Bridle 1x19 5/32 5.8na: 6-5/8"  
Bridle 1x19 5/32 6.0na: 11-1/2"  
Bridle 1x19 5/32 F-18: 4' 7"

5.2 MAIN AND JIB LUFF tension systems are optional but may not be led inside the mast. (Note: Refer to 5.6c)

### 5.3 TRAPEZE.

Double trapeze is allowed on all but the 4.5, 450 and 5.5uni models, No continuous trapeze systems are allowed.

5.4 FOOT STRAPS, SAFETY LINES, or the like may be added to assist the crew to trapeze. Hiking assist inboard is optional.

5.5 ALTERATIONS. Lengths of bridle wires are not to be altered. Jib tack attachment may not be below bridle intersection- The forestay or its extension is to be attached at the bridle intersection. The forestay, shrouds, and diamond wires shall not be adjusted while racing.

5.6 EQUIPMENT may be added or changed to conform with current or previously supplied Nacra series production equipment. All such equipment supplied by Nacra shall be considered class legal.

5.6a Main sheet purchase may not exceed 8:1 on any boat. Multipliers or fine tune systems are not allowed.

5.6b Trampolines on all boats manufactured with a 1995 serial number and newer must be equipped with a Nacra licensed tramp. Hiking straps, gear and spinnaker bags may be added. The size, shape and attachment method of trampolines may not be altered.

5.6c Downhaul 4.5, 450 may not exceed 4:1; 5.0, 5.2, 5.7 and F-18 may not exceed 8:1 purchase. Nacra 5.5sl, Uni, 5.8, 5.8na and 6.0na may not exceed 16 to 1. All purchases above 8:1 may void manufacturers warranty.

5.6d Jib downhauls may not exceed 3:1 on 4.5, 5.0, 5.2, 5.7, F-18 and 8:1 on 5.5sl, 5.8na, and 6.0na. (Note: These purchases may void warranty)

5.7 RACING If, during a racing series, failure of a part appears imminent or is damaged or broken, the affected equipment (only) may be repaired or replaced. Repair or replacement may only be made using class legal equipment.

5.8 RUNNING RIGGING and associated blocks, shackles and cleats are not

controlled except as specified in these rules.

## 6. SAILS AND BATTENS

6.1 CONSTRUCTION. The material, method of construction and design of the sails shall be in accordance with the sail plan. The sails for the Nacra 4.5, 4.5uni, 5.0, 5.2, 5.5 uni, 5.5 SL, 5.7, 5.8, 5.8na, 6.0na and F-18 shall be built for Nacra from patterns and sail cloth approved by Nacra. Sails shall be fabricated by builders licensed by Nacra for Nacra. Battens may be of wood, carbon, foam fiberglass. A set may consist of a combination of these types. All but the bottom batten must be used for racing (only one batten per pocket is permitted).

6.2a ALTERATIONS. The jib sail may not be re-cut. Windows, telltale windows, and chart pockets are optional. Class insignias may not be repositioned or altered in any manner.

6.2b SAIL REINFORCEMENT. Chaffing strips may be added to the mainsail batten pockets where they come in contact with the shrouds. Spreader patches are allowed.

6.3 LUFF ROPE. The entire mainsail luff rope must be in the mast luff grooves except where the sail extends below the bottom of the extrusion on boomless rigs.

6.4 CLEW TRAVELER. A clew traveler assembly (factory supplied) may be added to any boomless sail plan that was not equipped with one originally.

6.5 SAIL REPAIR. Any sailmaker may make minor repairs to a damaged Nacra sail. Minor repair is defined as a repair that does not alter the original shape or outline of the sail. Should a sail be so badly damaged as to require a large percentage of new material, such as a complete panel replacement, it should be returned to an INCA licensed sail maker.

## 7. CREW AND BOAT WEIGHTS: Class Legal Minimums

7.1a The 4.5/450 class legal minimum crew weight is 135lbs. (minimum person)

7.1c The 5.0/500 class legal minimum crew weight is 260 lbs- (minimum two people),

7.1d The 5.2 class legal minimum crew weight is 280 lbs. (minimum two people).

7.1e The 5.5 uni class legal minimum crew weight is 150 lbs. (minimum one person),

7.1f The 5.5sl class legal minimum crew weight is 275 lbs.. (minimum two people). 5.5sl without jib is considered a class legal 5.5uni.

7.1g The 5.7/570 class legal minimum crew weight is 290 lbs. (minimum two people).

7.1h The 5.8/5.8na class legal minimum crew weight is 290 lbs. (minimum two people). A class legal 5.8 must weigh 420 lbs. minimum.

7.1i The 6.0na class legal minimum crew weight is 325 lbs. (minimum two people).

7.1j *The F-18 Class minimum crew weight using 3.14sm jib with 19sm spinnaker is 286lbs.*

7.1j1 *The F-18 class legal minimum crew weight is 286 lbs. (minimum two people). Crew may weight up carrying ½ the different to 286lbs. in dead weight, but actual crew weight may not be less than 253 lbs..*

7.2j *The F-18 Class minimum crew weight using 4.15sm jib with 21sm spinnaker is 330lbs.*

7.1j2 *The F-18 class legal minimum crew weight is 330 lbs. (minimum two people). Crew may weight up caryring ½ the different to 330lbs. in dead weight, but actual crew weight may not be less than 308 lbs..*

7.1k F-18 crews that weigh more than 286lbs, but less than 308lbs. must use the 3.14sm jib & 19sm spinnaker.

## 7.2 WEIGHT.

### 7.2a. CREW WEIGHT

Minimum crew weights shall apply to all sanctioned Nacra regattas. Crews are to be weighed bare-footed and wear as a maximum, clothing consisting of one pair of shorts or pants (pockets empty) and one t-shirt or similar. Normal undergarments may also be worn with the aforementioned clothing. The maximum amount of weight to be added to reach legal class weights exceed:

### 7.2b. BOAT WEIGHT

Boats not reaching class crew weights are considered not class legal.

## 7.3 CORRECTION WEIGHTS.

Boats and crew correction weights must be separate weights. Boat and crew correction weights must be secured on the boat in a stationary position and be easily accessible for inspection.

## 7.4 SAFETY EQUIPMENT.

All Nacra catamarans must carry safety equipment required by the Coast Guard while racing.

7.4a One Coast Guard approved type I, II or III PFD must be worn by each crewmember while racing.



7.4b A righting line of 3/8" minimum diameter and 14' minimum length.

7.5 CREW BALLAST. Additional clothing, vests or containers may not be worn or carried while racing for the purpose of varying or increasing crew weight when so desired.

## 8. SPINNAKERS, POLES, AND RIGGING

8.1 Spinnakers are not considered class legal for Nacra sanction regattas except the F-18, but are legal for long distance type regattas if the Nacras are racing against one another as a one design class. Spinnakers shall be fabricated by builders licensed by Nacra for Nacra. Spinnakers may not be re-cut.

### 8.2 POLES

Nacra 6.0na and F-18 poles are factory supplied.

8.3 All Rigging lines and blocks are left to the boat owner. The boat stock configurations may not altered, when rigging the boat for spinnaker [example: changing bridle length, foiler, and/or any change that would change the structure of said boat.] Adding a spinnaker may void any manufacture warranty.

8.4 All spinnaker retrieval systems must be factory supplied.

## 9. WARRANTY

9.1 MODIFICATION allowed by these class rules may not necessarily be covered by the manufacturer's warranty.

## 10. COMMUNICATIONS, RULE INTERPRETATION AND AMENDMENTS

10.1 Valid questions regarding these rules must be mailed to INCA headquarters.

10.2 Class rules may vary slightly from one country to another. Do not assume that the rules that apply for the U.S. will apply in another country. Be certain to familiarize yourself with the class rules of the country in which you are competing. A licensed Nacra builder in another country may modify the INCA class rules for that country provided that they have been approved by Nacra USA.

10.2a The manufacturer (Nacra) reserves the right to make changes to the class rules, if the class [4.5 etc.] membership falls below fifty active class members.

10.2b Class vote is to be held only by active class members, that are class members prior to the issue being voted on. An Active class member is a Nacra class boat owner, who annual class dues have been paid.

10.2c Annual Class Dues cover membership membership from Jan. 1st. thru Dec. 31 st. of the year paid.

10.3 For International Events the class rules will be approved by INCA and the Nacra manufacturer and listed in the racing instructions.

10.4 INCA consists of a governing board of directors, Fleet Directors, and an Official Rules and Policies Committee. Class rules are governed by the manufacturer.

10.4a Rules changes a proposal to amend an existing class rule or a change in a boat design. Send a detailed letter to Rules and policies committee. Ballot wording and content is the responsibility of the Rules And Policies Committee.

The INCA mailing address is:

International Nacra Class Association  
1800 East Borchard Avenue  
Santa Ana, California 92705  
U.S.A.

revisions

7.1a changed

7.1b removed

F-18 added 6-4-03