

Principal Race Officer and Deputy Race Officer Training Severn Sailing Association

***Note: This Training program is designed to be
viewed with Training Videos units 2, 3 and 4 and
PRO/DRO Training Part 2***

Home of One-Design Racing in Annapolis

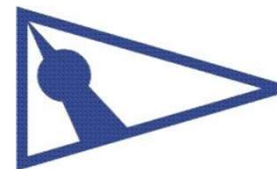
2023

Sailor's Expectations of the RC



- Perfection
- Knowledge – sport, class, event, local area
- Fair competition, accurate scoring
- Races conducted as directed by the Organizing Authority, Sailing Instructions and Racing Rules of Sailing
- Safety and common sense
- Decisiveness
- Communication
- **Fun!** – for sailors and RC

PRO/DRO Training



- *Being an effective PRO/DRO requires:*
 - **Knowledge** - knowing and following the rules!
 - **Judgement**
- SSA known for excellent one-design racing requiring excellent race committee work.
- High level RC work especially important for invitational regattas – district, regional, national, world championships
- Need highly trained PROs and DROs for *all* regattas
 - Formal training – US Sailing Basic Race Management
 - SSA-specific training – **Two parts**

Outline



Part 1 – March 29 and April 24

1. Pre-regatta responsibilities
2. Before racing
3. On the water - Starting line, course setup
4. Postponement

Part 2 – March 30 and April 25

1. The start
2. Changing conditions
3. The finish
4. Emergencies
5. After racing – Scoring, protests, scoring inquiries, incident report

Resources – US Sailing



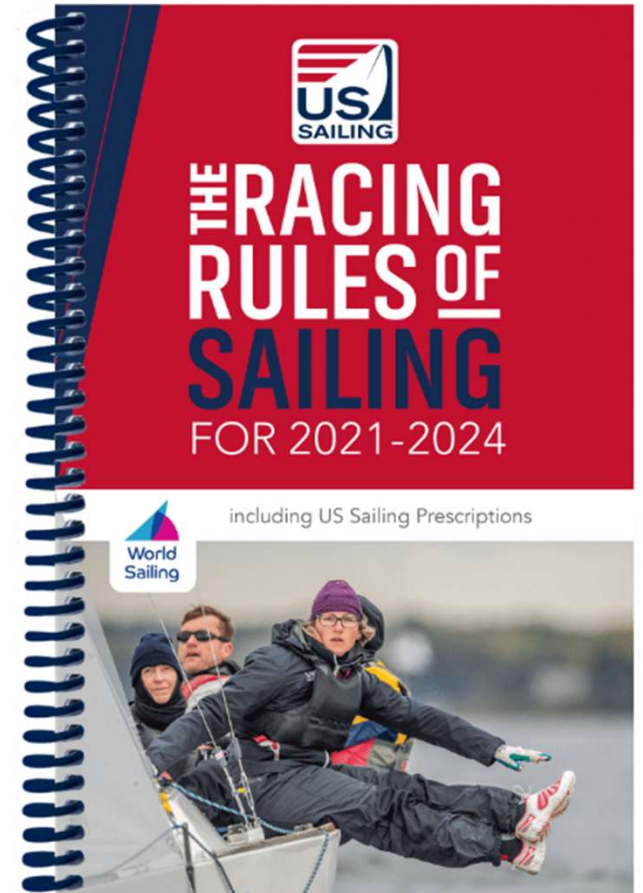
- US Sailing – join!
 - Attend Basic Race Management Seminar – Free!
 - Achieve certification
 - Maintain activity log in SOARS
 - One year – \$79; 15% off 3-year



Racing Rules of Sailing



- Fundamental document for sailboat racing – race committee and sailors
- Read, study and review
- Two versions
 - Printed edition (\$29.95; \$7 US Sailing members w/coupon)
 - Free - Digital version for iPhone, Android
- Use tabs for important items
- Bring with you when on race committee



Join the Race Committee Team



“Entry level training manual”

- Valuable reference - \$6.95
- Detailed description of all RC assignments
 - PRO
 - Recorder, scorer
 - Wind reader
 - Line sighter
 - Timer
 - Signaller
 - Mark setter

Important RRS for Race Committees



- Definitions - *Italicized*
- Part 1 – Fundamental Rules
- **Part 3 – Conduct of a Race (5 pages)**
 - Race Signals (inside back cover)
- Part 4 – Other Requirements
- Part 7 – Race Organization
- Appendix A – Scoring
- Appendix J – Notice of Race and Sailing Instructions
- Appendix U – Audible-Signal Racing System

PART 3 CONDUCT OF A RACE

- 25 NOTICE OF RACE, SAILING INSTRUCTIONS AND SIGNALS
- 25.1 The notice of race shall be made available to each boat that enters an event before she enters. The sailing instructions shall be made available to each boat before a race begins.
US Sailing prescribes that the race committee shall ensure that the notice of race and sailing instructions are readily available to competitors throughout the event.
- 25.2 The meanings of the visual and sound signals stated in Race Signals shall not be changed except under rule 86.1(b). The meanings of any other signals that may be used shall be stated in the notice of race or sailing instructions.
- 25.3 When the race committee is required to display a flag as a visual signal, it may use a flag or other object of a similar appearance.

- 26 STARTING RACES
- Races shall be started by using the following signals. Times shall be taken from the visual signals; the absence of a sound signal shall be disregarded.

Minutes before starting signal	Visual signal	Sound signal	Means
5*	Class flag	One	Warning signal
4	P, I, Z, Z with I, U, or black flag	One	Preparatory signal
1	Preparatory flag removed	One long	One minute
0	Class flag removed	One	Starting signal

*or as stated in the notice of race or sailing instructions

The warning signal for each succeeding class shall be made with or after the starting signal of the preceding class.



Pre-Regatta Responsibilities

Establish the Race Committee



- **PRO** and **DRO** and **Service Day Coordinator** are a **team** – Principal organizers of the RC
- Requirements
 - Sufficient staff for event
 - Appropriate skill levels – mix of more skilled members mentoring those with less RC experience
- **Service Day Coordinator** – helps coordinate staffing
 - PRO/DRO set RC quality, quantity and skill requirements
- **PRO and DRO should be recruiting** key RC members with core skill sets as early as possible in sailing season



Working With the Service Day Coordinator



- **Be proactive** at the beginning of the season to recruit staffing with the skills you need.
- See PRO and DRO checklists for schedule for establishing RC staffing requirements and filling positions. Communicate to the Service Day Coordinator what your staffing needs will be.
- **4 weeks** before the event
 - SDC starts promotion of the event
 - Discuss unfilled special needs such as boat drivers
 - Consider weather predictions, fleet type, minimum staffing level
 - Raise or lower staffing level due to conditions
 - How critical getting to the established cap will be
- **2 weeks** before the event
 - Work with the SDC to fill any **last minute staffing** needs.

PRO Checklist



- PRO – Responsible for *everything* to do with racing
- Detailed checklist on SSA website – print out and use!
- Main items:
 1. Review training videos
 2. Plan ahead, esp. for invitational regattas
 3. Coordination with Regatta Chair – NOR and SIs, schedule, logistics, scoring program, jury, etc.
 4. Coordinate with AYC, EYC re. their race courses
 5. Coordination with DRO and SDC re. RC members
 6. Supervise/instruct RC – Professionalism!
 7. Competitor's meeting; changes to SIs
 8. Set course, run races, adapt to changing conditions
 9. Safety and emergencies
 10. Scoring, protests

Principle Race Officer Checklist

AT THE BEGINNING OF SAILING SEASON

- PRO – Contact Fleet Captain and Regatta Chair re. Sailing Instructions. Encourage use of SSA NOR/SIs, with amendments if necessary. Inform them that regatta-specific NOR and SIs must conform to RRS Appendix J and must be approved by the Standing Race Committee at least 2 weeks prior to the regatta.

4-6 WEEKS BEFORE THE EVENT

- PRO – Contact Regatta Chairs or Fleet Captains to discuss regatta: schedule, regatta-specific NOR and SIs (if used), scoring program, logistics, VHF radios, etc.
- PRO – If invitational needs a protest committee, Regatta Chair or Fleet Captain must contact Protest Committee Coordinator (Andrew Cole, laserandy@aol.com; Andrew Cole, acole@coleschotz.com)
- PRO – Contact DRO to initiate discussion of regatta – DRO responsibilities, RC staff requirements
- DRO/PRO – Begin monitoring RC signup list on the SSA website and coordinate with PRO and Volunteer Coordinator to make sure that you will have enough people.

2 WEEKS BEFORE THE EVENT

- DRO/PRO – Contact the Service Day Coordinator to complete staffing requirements and to discuss additional skills of the members needed.
Considerations for critical staffing requirements include: types of fleets sailing, number of expected boats. Keel boats vs centerboard boats. Weather predictions.
- PRO/DRO – Review training videos
- PRO – Make sure that regatta specific NOR and SIs have been approved by the SRC

1 WEEK BEFORE THE EVENT

- PRO and DRO – Determine how scoring will be accomplished and perform dry run if necessary
- PRO – Confirm availability of jury for protest hearings
- DRO and PRO – Review the NOR/SI and any amendments to these documents specific to the event.
- DRO/PRO – Assign RC members to boats according to their stated preference and qualifications.
- PRO – Review RC roster and coordinate boat assignments with DRO according to their stated preferences. Coordinate with chair of the Standing Race Committee if necessary.
- PRO/DRO – Contact Volunteer Coordinator for additional RC members if needed
- PRO – Review mark list and send any comments/corrections to DRO for comment.

DAY BEFORE THE EVENT

- PRO – Final check of RC staff, boat assignments, mark and equipment lists

MORNING OF THE FIRST DAY (PRO)

- Conduct RC muster meeting: Introductions of PRO, DRO and RC members; health considerations; communications, courses, safety; other items; proper way to flake tackle into box
- Assign one RC member per boat as bosun to be responsible for equipment, cleaning and reporting
- Assign one RC member to staff protest desk to receive/date/time protests and post dock time
- Supervise RC with professionalism and confidence
- Make sure that when boat drivers arrive at SSA, they read information from QR codes, start all boat engines and make sure they are familiar with the boat operations.
- Have RC member rig flags on signal boat before leaving dock and check by raising and lowering all of them
- Conduct competitor's meetings
- Post any amendments or changes to SIs

AFTER RACING (PRO, EVERY DAY)

- Confirm that the signal boat dock time and end of protest time (60 min after the dock time) have been posted on the official Notice Board
- Have person responsible for receiving protest forms be on station for required hour after dock time
- If there was an emergency that resulted in a man overboard, medical issue, or weather issue that caused boat damage and particularly if EMT or the marine police, Coast Guard, or Annapolis Harbor master became involved, fill out an SSA incident report and submit to the SRC
- Assist with/perform scoring
- Post results

Protest responsibilities

- Record date/time protest received on protest form
- For invitational regattas, inform Jury chair of protest submission; for club regattas, inform Protest Committee Coordinator (Andrew Cole, laserandy@aol.com; Andrew Cole, acole@coleschotz.com) of protest submission
- Post notice of protest hearings not later than 30 min after protest time limit (see SSA SI/NOR 18.3)

AFTERNOON OF FIRST DAY WITH RACING ON NEXT DAY (PRO)

- Double check DRO/bosuns:
 - a. All boats are hosed down, marks and tackle can stay in boats
 - b. Orange boxes and briefcases can be left in cabins of FE, HE and ED; these items from RHIB must be returned to office

3/27/2023

AFTERNOON OF LAST DAY (PRO)

- Double check DRO/bosuns:
 - a. All boats have been properly cleaned, marks deflated and stored, equipment returned to office, etc.
 - b. Each boat inspected to make sure that everything is stored in its proper place

DRO Checklist



- DRO – Key assistant to PRO
- Detailed checklist on SSA website – print out!
- Main items:
 1. Review Training Videos
 2. Recruit RC members with needed skill levels
 3. Communication with RC members before regatta
 4. Assign members to boats; **assign one bosun per boat;** make sure proper equipment/marks on board
 5. Supervise/instruct RC
 6. Assist PRO – Muster meeting, equipment, personnel, racing decisions, scoring, etc.
 7. Supervise bosuns: Boat cleaning and equipment check
 8. Report service hours to Svc. Day Data Recorder

Deputy Race Officer Checklist

4-6 WEEKS BEFORE THE EVENT:

- DRO/PRO – Monitor RC signup list on the SSA website and coordinate with PRO and Volunteer Coordinator to make sure that you will have enough people.

2 WEEKS BEFORE THE EVENT:

- DRO – Contact each RC member to remind them of their commitment and confirm participation, and to discuss their RC and power boat handling experience and skills. Contact new staff as added to discuss skills.
- DRO or PRO – Contact the Service Day Coordinator to discuss additional skills of the members needed and complete staffing
Considerations for critical staffing requirements include: types of fleets sailing, number of expected boats. Keel boats vs centerboard boats. Weather predictions.
- DRO – Request each RC member watch the Training Videos appropriate to their skills and expected responsibilities on the RC.
 - a. PRO/DRO - Race Committee Part 1 and 2 and Training Videos: #3 Signal Boat, PRO/DRO and #4 When Things Go Wrong
 - b. Skilled RC members - Training Videos: #2 Mark and Pin Boat, #3 Signal Boat PRO/DRO and #4 When Things Go Wrong
 - c. New RC members - Training Videos: #1 Introduction to RC and #2 Mark and Pin Boat

1 WEEK BEFORE THE EVENT:

- DRO and PRO – Review the NOR/SI and any amendments to these documents specific to the event.
- DRO and PRO – Determine how scoring will be accomplished and perform dry run if necessary
- DRO/PRO – Assign RC members to boats according to their stated preference and qualifications.
- DRO – Email RC with details: Arrival time, Time/ location of RC meeting, what to bring (PFD, lunch, water, sunscreen, VHF, foul weather gear, proper clothing, etc.).
- DRO – Send RC roster with boat assignments to all RC members. Assign RC members to boats according to their stated preferences and in coordination with PRO and chair of the Standing Race Committee.
- DRO – Ask late joining RC members to watch training videos; remind all RC members to watch training videos if not already done so.
- DRO – Develop mark list and send to PRO for comment. Example:
 - a. Windward mark boat (Edgar D): 1 Large orange cylinder (windward mark), 1 tetrahedron (change of course), 2 small balls (offsets). Optional: additional finish mark for windward finish
 - b. Mark boat (Hugh E): 2 medium cylinders (leeward gate), 1 yellow cylinder (starting mark), 1 small mark (finish mark). Optional: tetrahedron for leeward change; additional gybe mark for triangle course

DAY BEFORE THE EVENT:

- DRO – Send short “Looking forward to seeing you in the morning!” reminder with any changes or updates. Empathize that all boats have QR codes with detailed operation information.
- DRO – Print RC rosters with cell phone numbers, one for PRO, DRO and each boat

MORNING OF THE FIRST DAY

- DRO – Assist PRO with muster: Introductions of PRO, DRO and RC members; Covid considerations; Communications, courses, safety, other items; Proper way to flake tackle into box
- DRO – When boat drivers arrive at SSA, get them to read QR code information to make sure they are familiar with the boat operations
- DRO – Have boat drivers start all boat engines.
- DRO/bosun – Make sure all boats have proper marks and tackle and equipment:
 - a. An orange box and black briefcase with forms on all boats.
 - b. Edgar D – backboard and AED (in race office)
 - c. Edgar D and Hugh E – hypothermia blankets if conditions warrant.
 - d. Edgar D and Hugh E – 1 crate each with emergency anchors when ILCA dinghies or other boats that do not carry anchors are racing.
 - e. RHIB should have handheld radio.
 - f. Favored End – laptop if scoring is to be done on water
 - g. Correct marks and tackle on Edgar D and Hugh E
- Portable iStart on signal boat if not Favored End
- DRO – Have RC member rig flags on signal boat before leaving dock and check by raising and lowering all of them

AFTER RACING (EVERY DAY)

- PRO or DRO confirm that the signal boat dock time and end of protest time (60 min after the dock time) have been posted on the official Notice Board
- DRO double check bosuns:
 - a. Portable iStart and any handheld club radios returned to office and plugged in to charge
 - b. **Very important:** Go from boat to boat and check with all RC members to see if there are any equipment issues—lost, broken, not working items. Report these using the equipment deficiency form accessed via the QR code on the boats. If there is a broken item, put it in the bin labeled Broken Parts with a **RED** tag in Shop.

AFTERNOON OF FIRST DAY WITH RACING ON NEXT DAY

- DRO double check bosuns:
 - a. Make sure all boats are hosed down
 - b. Marks and tackle can stay in boats
 - c. Orange boxes and briefcases can be left in cabins of FE, HE and ED; these items from RHIB must be returned to office
- DRO – Assist with/perform scoring

AFTERNOON OF LAST DAY

- DRO double check bosuns:
 - a. Make sure that all boats are scrubbed down with soapy water and rinsed. Buckets and brushes provided – JUST ADD WATER!
 - b. All marks should be deflated and returned to storage; tackle properly flaked and returned to storage shelving. Check to see that all tackle has counterweight and anchor (except for green)
 - c. Portable iStart and any handheld club radios returned to office and plugged in to charge
- DRO – Carefully inspect each boat to make sure that everything is stored in its proper place
- DRO – The SSA Service Day Data recorder will contact you after the event to determine who served on each day. Do not forget that some of the people may have brought a friend or family member with them for extra credit hours. The 2023 SSA Data Recorders are Taz Coffee lasertaz@gmail.com and JR Futcher jrfdelaware@gmail.com
- DRO – Email RC to tell thank them for a job well done and for their time

Notice of Race and Sailing Instructions



Three options:

1. SSA NOR and SIs with new season-long permanent amendment on protests
 - a) No amendments
 - b) Few amendments
2. SSA NOR and SIs heavily amended
3. Event-specific NOR and SIs
 - a) Major invitationals, championships
 - b) Helly Hanson, NOOD, etc.

Amendments to NOR and SIs



SSA NOR and SIs carefully written and vetted to comply with US Sailing RRS – Use if possible

Making Amendments

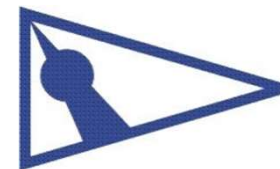
- Follow Rule 89.2(b) for NOR, Rule 90.2(c) for SI
- Use correct language (Rule 85.1)
 - Refer specifically to the rule and state the change
 - Example: **“SSA NOR and SIs rule 7.1 is changed to: The first warning signal on Sunday, May 21 will be 1000 hours.”**

Event-Specific NOR and SIs



- Use Appendix J as template
- Include all sections
- Must get approval of Standing Race Committee Chair
- Supplemental information
 - Housing, social activities and schedule, regatta chair contact, etc.
 - Can be included if clearly stated that it is **not** part of NOR or SI

Appendix J – Notice of Race and Sailing Instructions



- *A rule in the notice of race need not be repeated in the sailing instructions.*
- *Care should be taken to ensure that there is no conflict between rules in the notice of race, the sailing instructions or any other document that governs the event*

J1. Notice of Race Contents

J1.1 Items that **shall** be included

J1.2 Items to be included **if** they apply

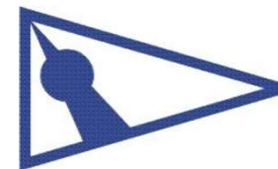
J1.3 Information to help competitors decide whether to attend; information they will need before SIs are available

J2. Sailing Instructions Contents

J2.1 Items that **shall** be included

J2.2 Items to be included **if** they apply

Appendix S – Standard Sailing Instructions



APPENDIX S STANDARD SAILING INSTRUCTIONS

This appendix applies only if the notice of race so states.

These Standard Sailing Instructions may be used at an event in place of printed sailing instructions made available to each boat. To use them, state in the notice of race that 'The sailing instructions will consist of the instructions in RRS Appendix S, Standard Sailing Instructions, and supplementary sailing instructions that will be posted on the official notice board located at ____.'

The supplementary sailing instructions will include:

- 1 The location of the race office and of the flag pole on which signals made ashore will be displayed (see SI 4.1 below).*
- 2 A table showing the schedule of races, including the day and date of each scheduled day of racing, the number of races scheduled each day, the scheduled time of the first warning signal each day, and the latest time for a warning signal on the last scheduled day of racing (SI 5).*
- 3 A list of the marks that will be used and a description of each one (SI 8). How new marks will differ from original marks (SI 10).*
- 4 The time limits, if any, that are listed in SI 12.*
- 5 Any changes or additions to the instructions in this appendix.*

A copy of the supplementary sailing instructions will be available to competitors on request.

RRS Part 7 – Race Organization Sections



85. Making Changes to Rules

86. Making Changes to the Racing Rules

87. Making Changes to Class Rules

88. National Prescriptions

89. Organizing Authority; Notice of Race; Appointment of Race Officials

- ***NOR must conform to rule J1***

90. Race Committee; Sailing Instructions; Scoring

- Conduct races as directed by OA and required by the rules
- ***SIs must conform to rule J2***
- Scoring per Appendix A
 - Note 24 h time limit for scoring changes per Rule 90.3(c)(e)



Before Racing

Before Racing

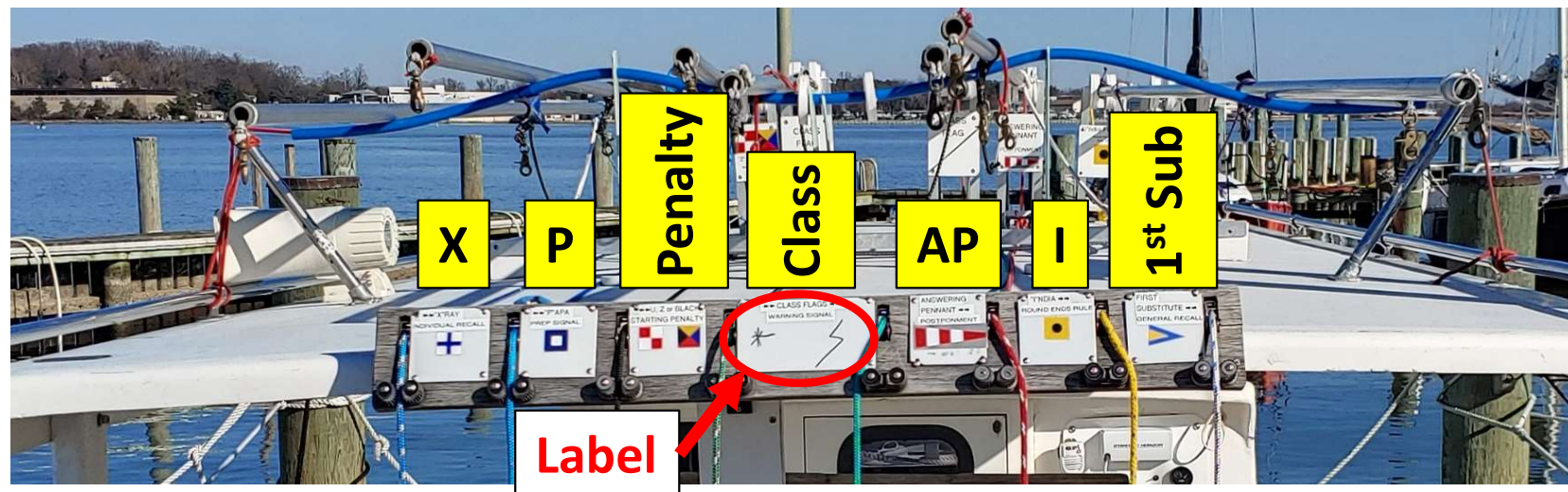


- Arrive at least 1 hour before competitors' meeting
- Launch RC boats and start **ALL** engines
 - Problems? QR codes!!!
- Print out check-in sheets
- Assemble and brief RC, confirm boat assignments
- DRO directs loading gear on RC boats:
 - Marks, tackle, anchors
 - Orange gear boxes, briefcases, radios, iStart
 - Misc.: Thermal blankets, AED, laptop
- DRO makes sure all necessary gear is on board – flags, marks, safety gear, inflators, spare batteries, etc.

Rig Starting Flags on Poles



- Class Flags – located in white box on Favored End
 - Rig on hoist poles on top of FE; label with china marker
 - If more than 2 classes, rig flags to halyards on mast in stern
- Starting Signal Flags on door and spare flags in boxes in FE cabin
- Rig on hoist poles on top of FE per labels



RC Staff Briefing



- Welcome, thanks, introduction of all RC members
- Quality of racing depends on RC
- Boat assignments, appoint bosuns, QR codes - DRO
- No verbal communication with competitors *except in an emergency*
- Encourage questions/suggestions
- Mark/tackle flaking
- Radios – Channel 65A for RC
 - Hold with back of microphone towards wind to minimize wind noise, channel
- Exchange cell phone numbers

PRO Responsibilities



- Send a boat to the race course early to check wind conditions if indicated
- Identify on-water class representative: name, sail/hull number, cell phone number, VHF?
- Conduct competitors' meeting
- Notices posted on bulletin board(s) – physical and/or electronic
- Leave dock one hour before race or earlier

Competitor's Meeting



- Welcome, introduce self and DRO
- Review location of course (A or C), starting sequence (Rule 26 or Appendix U), schedule
- ***Minimize verbal information not in SIs or NOR***
 - Post any changes to physical/electronic bulletin boards
- If answer to a question is in SIs, state, “As shown in the Sailing Instructions, ...”
- Verify on-water class representative
- Identify person/location for submitting protests and requests for redress.
- Car keys left in car or on key board



On The Water

On The Way Out

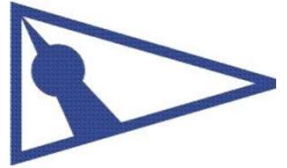


- Check wind direction; proceed to general starting area

Select starting area

- Sufficient length for weather leg
- Ability to change course direction for wind shifts
- Avoid
 - Crab pot fields in the starting area
 - Shallow water in starting area and at marks
 - High traffic areas for starting area and course
 - Areas near Government marks
 - Other club's race area

On Station

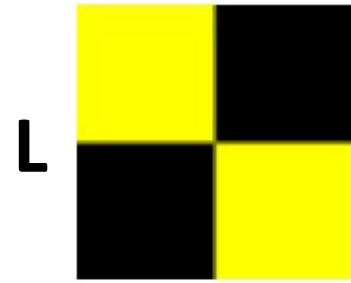


- Anchor - Use plenty of rode (at least 6 times depth)
 - Chain for increased bite
 - Heavy anchor for windy conditions if needed
- Windward mark boat proceeds to general position of mark
- Signal boat RC assignments
 - Recorder(s)
 - Wind reader
 - Flags
 - Signaler/timer/iStart operator
 - Line caller(s)

On Station – Check-In



- Hoist code flag L with one sound
- Record check-ins
 - Record on check-in sheets or write down numbers
 - Boats required by SIs to sail by Signal Boat and hail their sail/hull number (SSA SI 11.1)
 - **Loudly** acknowledge each boat
- Do not check in any boat unless they satisfy SSA SI 12.1 or equivalent if using special SIs
 - 20% Scoring penalty per SI 12.2



Wind Readings



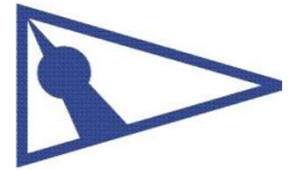
- Very important – fairness of starting line and course
- Assign one RC member to take readings
 - Wear PFD if on bow of Favored End in bad weather
 - Record direction and time on Wind Log →
- Be aware of obstructions, nearby metal (radio, etc.)
- See Training Video 3 Signal Boat

Race Committee Wind Log

Event SUMMER DS Recorder J. URBAN
Date 8/10 Boat MARLE Page Number 1

TIME	VELO- CITY	WIND DIRECTION											
		30	60	70	80	90	100	110	115	120	125		
10:30	8												
10:36	8												
10:40	9												
10:50	7												
11:00	6												
11:10	5												
11:15	6												
11:30	5												
11:40	3												
WIND DIES		~~~~~											
12:00		160 (70) 180 190 200 210											
SEA BREEZE													
1:30	8												
1:35	9												
1:40	10												
1:50	12												
1:55	12												
2:00	10												
2:15	11												
2:20	8												

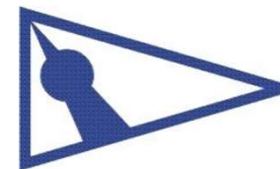
Setting the Course – Windward & Offset Marks



- Direction – generally average of wind readings
 - In shifty winds, take an average and go with it
- Distance – From AIS or GPS, apparent size of weather mark boat, time for first leg of first race
- Use radio to adjust position of windward mark boat to weather of leeward mark/center of gate (not RC signal boat)*
- Offset mark (“A” course) – does not need to be perpendicular to the wind
 - Minimum 7-10 boat lengths of largest class racing

***Don't let perfect get in the way of good!!!**

The Leeward Mark/Gate

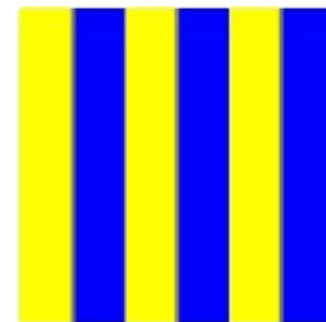


- Leeward mark boat takes mark ~75 – 150' above starting line
 - Single leeward mark – centered on starting line
 - Gate – center gate on starting line

- Gate –

- Signal boat flies code flag G for gate

G

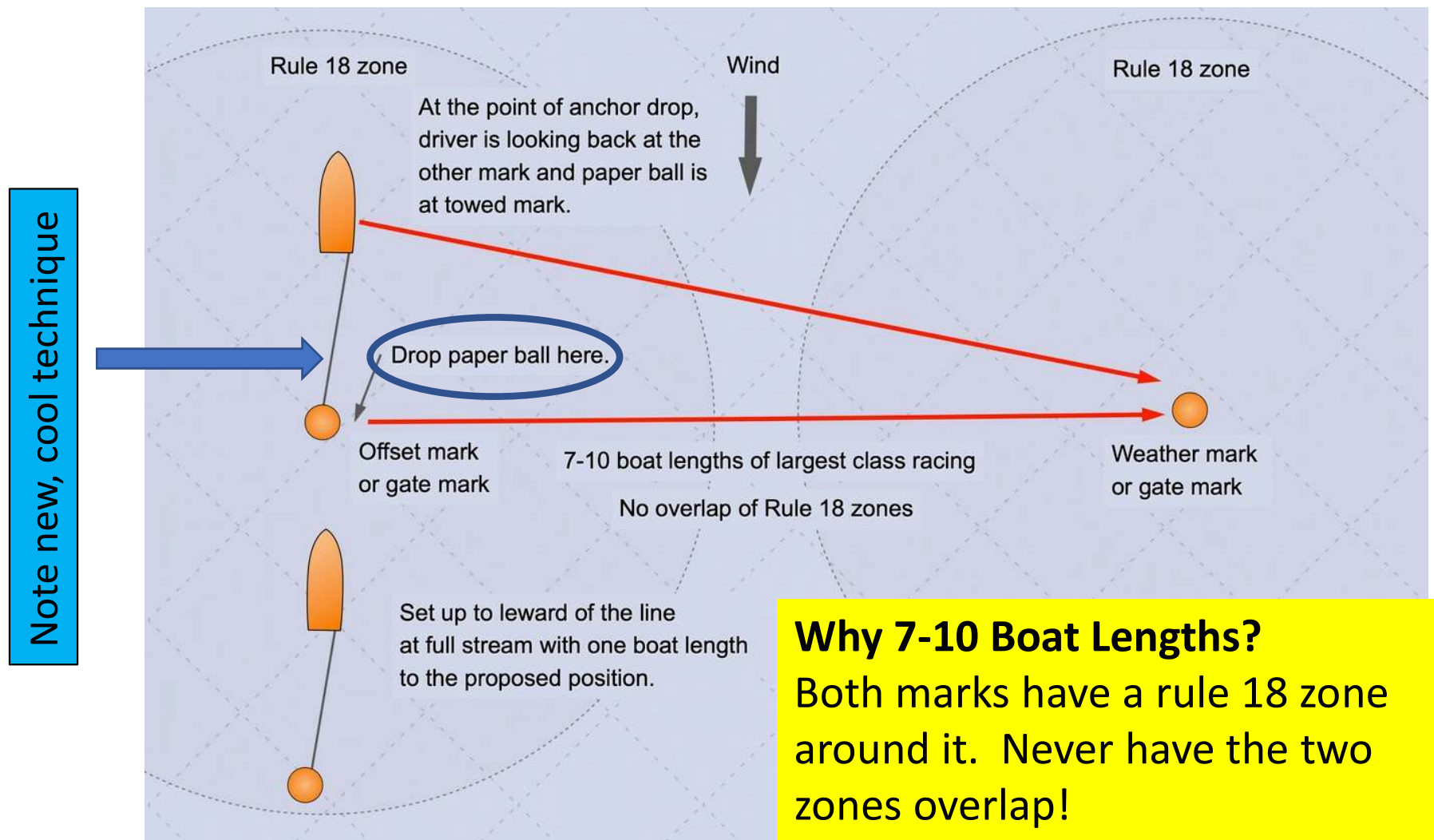


- *Minimum 7-10 boat length distance between marks*

Setting the Gate



- Minimum *7-10 boat lengths* of the largest class racing



A Cool Gate Setting Technique



- First mark in the water
- Circle back 7-10 boat lengths from first mark
- Proceed slowly upwind while streaming second mark
- Using compass, sight bearing to first mark = wind direction + 90° (if setting port gate mark) or WD - 90° (if setting starboard mark)
- When boat is at correct bearing, drop a small floatable object (balled up paper, ball, PFD) into the water
- Continue upwind; when mark is even with object, drop anchor
- Retrieve object

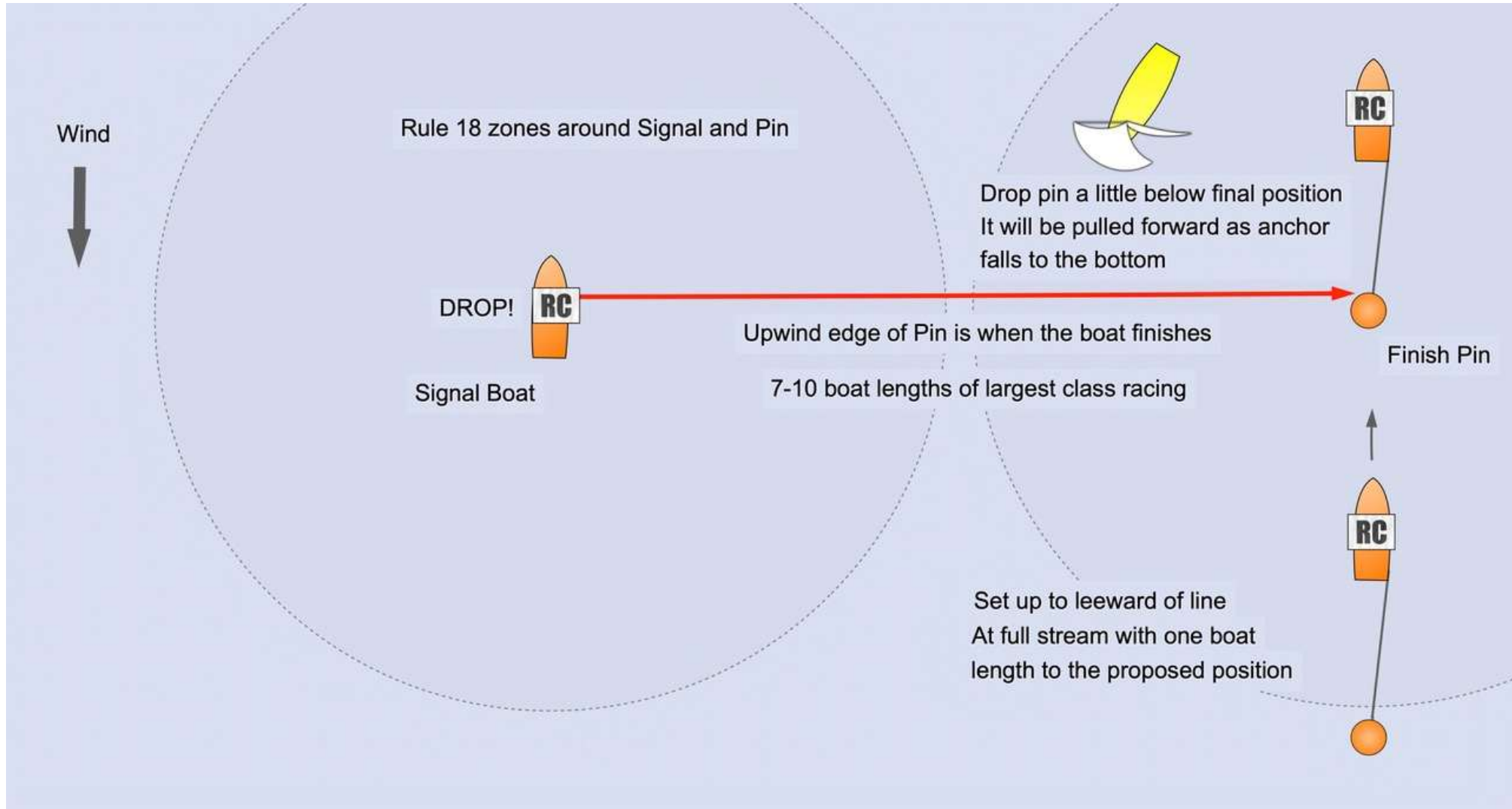
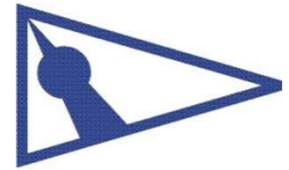
Setting Leeward Finish Line



Split start/downwind finish (“F” course)

- Mark to starboard of RC signal boat
 - Minimum *7-10 boat lengths*
 - Mark boat streams mark
 - Using compass, signal boat sights bearing of line perpendicular to the wind and commands “Drop”
- Keep short enough to be able to read sail numbers of boats at the far end

Setting the Finish Pin – “F” Course



Setting The Starting Line



- ***Single most important RC task!***

Line length

- 1 – 1.5 times # boats times length of competing boats
- Longer – higher winds, big seas, high performance boats
- Shorter – light air, flat water, displacement hull boats
- Average – 1.25 times aggregate length

Square is fair – Average wind direction minus 90°

- Boats spread out evenly
- OK to slightly favor disadvantaged side
- Angle error: $\pm 5^\circ$ ok; $\pm 10^\circ$ problem – postpone and fix

Don't let perfect get in the way of good!!!

Setting the Starting Line



- Signal boat communicates with mark boat via VHF
 - Directs boat to correct length
 - Sights desired bearing with compass
 - *In shifty winds, take an average and go with it*
- Detailed instructions in RC Training Video Unit 2 – Mark and Pin Boat



30 – 10 min Before The Warning Signal

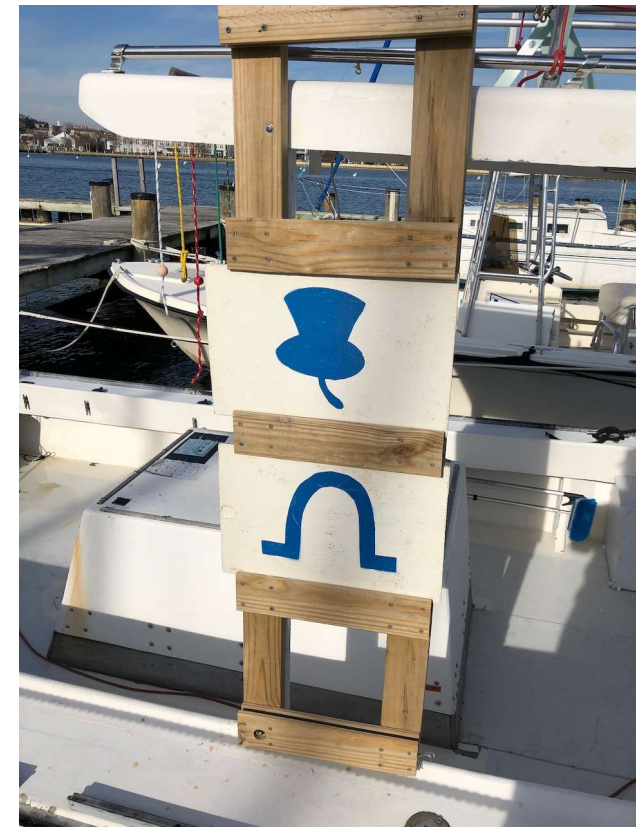


- Review starting sequence with RC
- Continue check-in
- Decide on course configuration – direction and distance to weather mark
- Hoist orange flag for boat end of starting line

Not Later Than Warning Signal – RRS 27.1

- Post compass bearing to weather mark
- Post course on course board
- Load class board with class placards in order of start

Compass Board and Class Boards



Be sure to check the Compass and Course Board twice (2 different people) to avoid inversions, i.e.,

051

150

SSA Courses – See Sailing Instructions



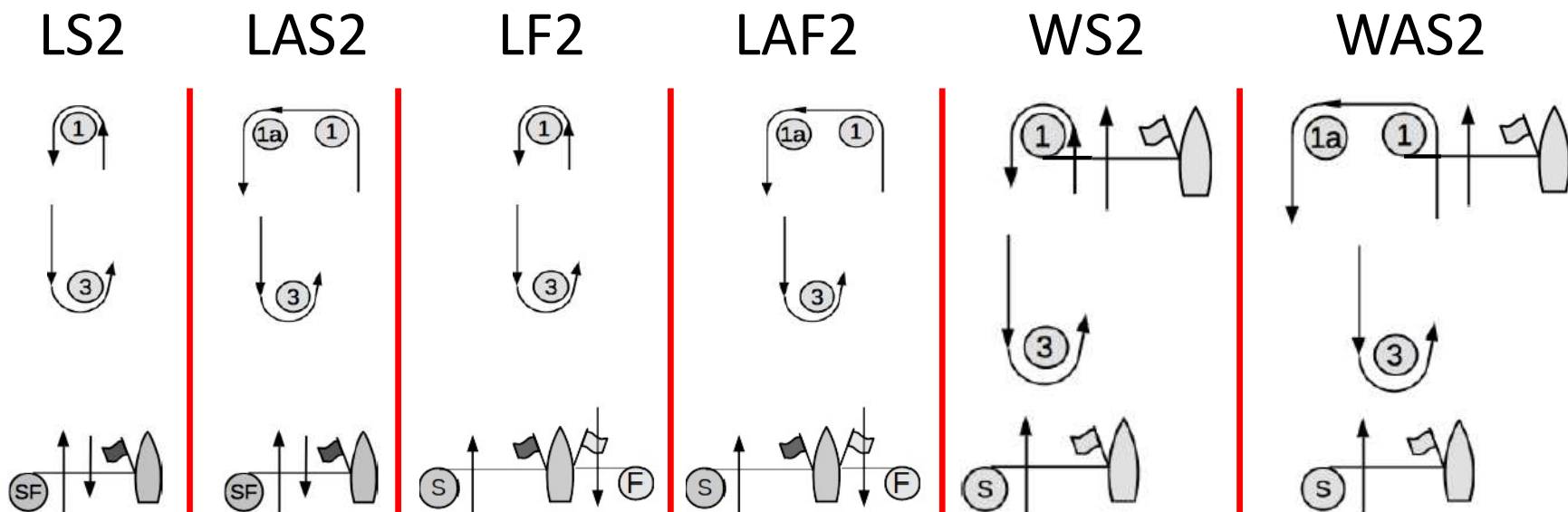
- First letter(s):
 - Windward finish
 - Leeward finish
 - TW – triangle course, windward finish
 - TL – triangle course, leeward finish
- Next letter: A – offset mark, [none] – no offset
- Next letter - Type of finish. For Leeward finish:
 - [none] - through starting line
 - S – between leeward mark and committee boat
 - F – through finish line
 - R – reaching

SSA Courses - con't



- Next letter - con't. For Windward finish:
 - **[none]** – between finishing mark and committee boat
 - **S** – between windward mark and committee boat
- **Numeral** – number of windward legs

Examples (only 1 lap shown for clarity):



Set iStart Mode



- TESOD, COSOD, Frostbite
 - Mode 22 – 2 minute sequence, automatic 15 sec **alert/attention***
- Weekend Appendix U, Thursday Night Sailing
 - Mode 30 – 3 minute sequence, w/o attention
 - Mode 32/34 – 3 minute sequence, 15/60 sec attention
- Weekend Rule 26
 - Mode 50 – 5 minute sequence, w/o attention
 - Mode 52 – 5 minute sequence, 60 sec attention

***Five short sounds**

iStart Automatic Sailboat Race Starter



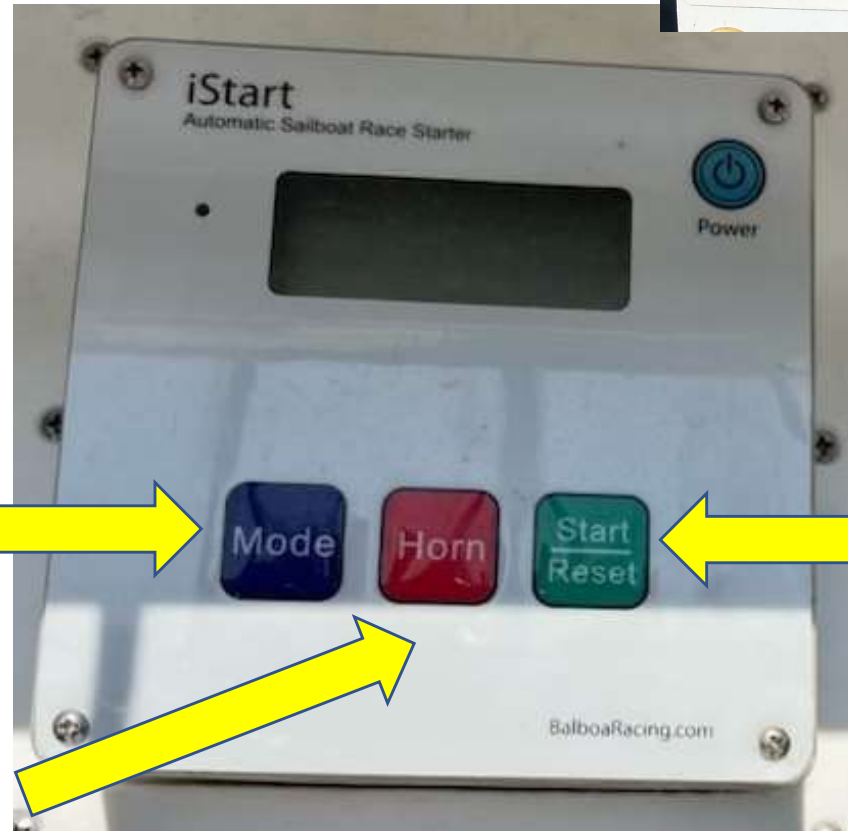
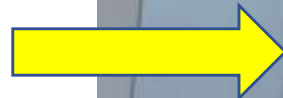
- Full table on back of iStart
 - *Hold Mode button to cycle through Modes*

iStart
Automatic Sailboat Race Starter - Balboa Racing (949)760-6050

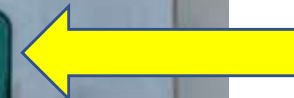
MODE	TIME	STYLE	TYPE	ALERT	MODE	TIME	STYLE	TYPE	ALERT
10	1:00	Dinghy	Once	None	41	3:00	Dinghy	Rolling 3+1	15 sec
11	1:00	Dinghy	Rolling	None	42	3:00	ICSA-C	Once	None
20	2:00	Dinghy	Once	None	43	3:00	ICSA-C	Rolling	None
21	2:00	Dinghy	Rolling	None	44	3:00	ICSA-C	Once	15 sec
22	2:00	Dinghy	Once	15 sec	45	3:00	ICSA-C	Rolling	15 sec
23	2:00	Dinghy	Rolling	15 sec	50	5:00	Rule 26	Once	None
24	2:00	Dinghy	Once	60 sec	51	5:00	Rule 26	Rolling	None
25	2:00	Dinghy	Rolling	60 sec	52	5:00	Rule 26	Once	60 sec
30	3:00	Dinghy	Once	None	53	5:00	Rule 26	Rolling	60 sec
31	3:00	Dinghy	Rolling	None	54	5:00	Rule 26 RCL	Once	None
32	3:00	Dinghy	Once	15 sec	55	5:00	Rule 26 RCL	Rolling	None
33	3:00	Dinghy	Rolling	15 sec	70	7:00	Match	Once	None
34	3:00	Dinghy	Once	60 sec	71	7:00	Match	Rolling	None
35	3:00	Dinghy	Rolling	60 sec	80	10:00	Match	Once	None
36	3:00	Rule 26	Once	None	81	10:00	Match	Rolling	None
37	3:00	Rule 26	Rolling	None	90	10:00	Rule 26	Once	None
38	3:00	Rule 26	Once	60 sec	91	10:00	Rule 26	Rolling	None
39	3:00	Rule 26	Rolling	60 sec	92	10:00	Rule 26	Rolling 5+5	None
40	3:00	Dinghy	Rolling 3+1	None	93	10:00	Rule 26	Rolling 5+5	60 sec

(1) Hold MODE button for 3 seconds, (2) Select desired mode with MODE button, (3) Wait 3 seconds to SAVC automatically.
<http://www.balboaracing.com>

Change Modes



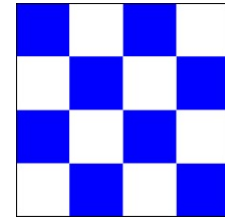
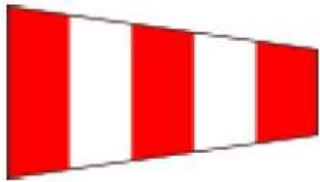
Start Sequence



Manual Horn

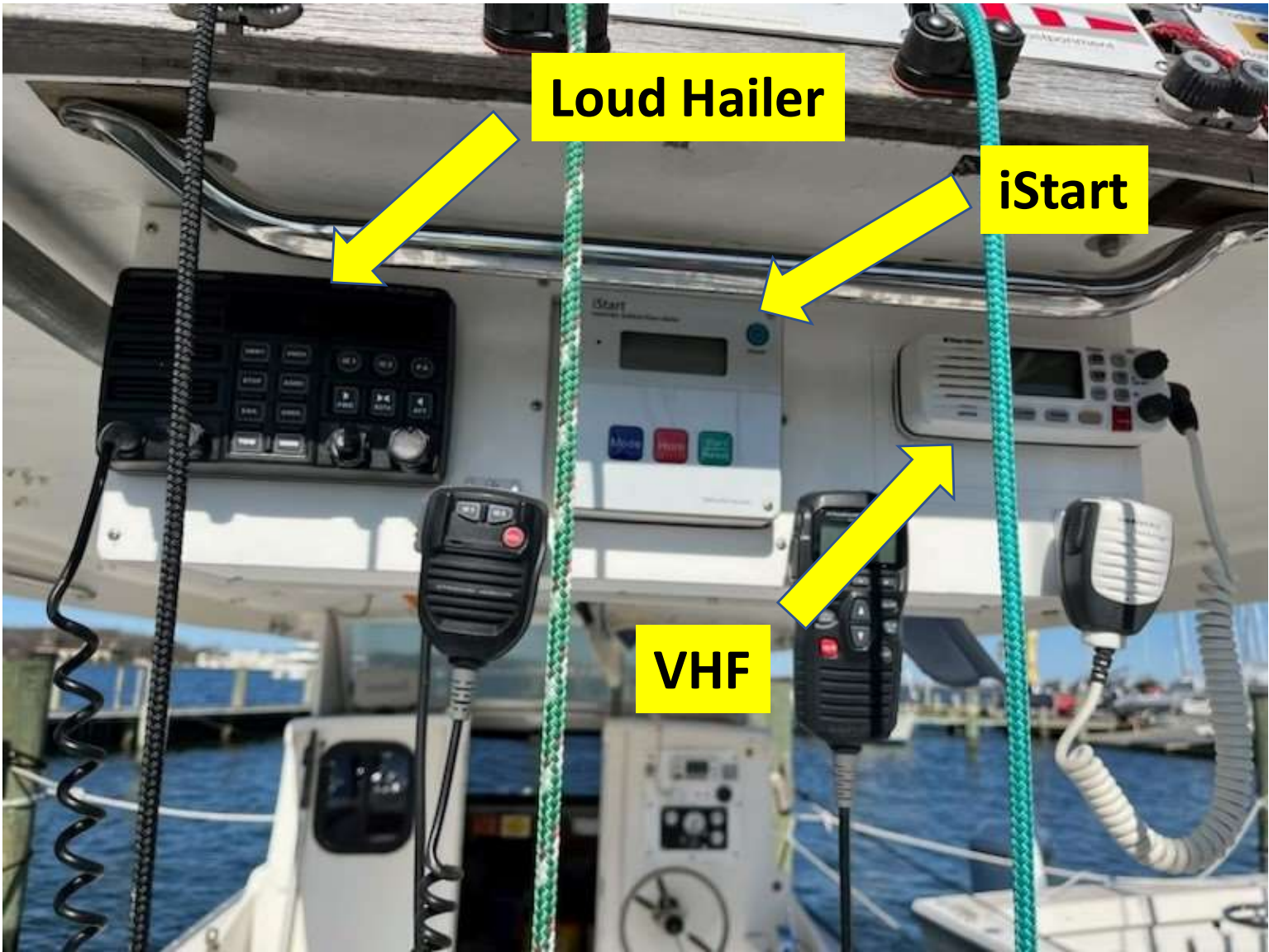


iStart Modes with Automatic Attentions



- Warning signal made 1 min after removal of AP, First Substitute or N
- **One** sound - manual
- **Cannot use iStart modes with automatic alert/attention**
 - Change Mode 52 → 50
 - Change Modes 32/34 → 30
- RRS 29.2

Console



Starting Line Problems



- One end favored more than 5 - 10°
 - Boats bunched up
 - General recall likely
- Too short
 - Several rows of boats distributed along whole line
 - General recall possible
- Strong current flowing to windward
 - Boats swept over line
 - General recall likely

Starting Line Solutions



- Solutions
 - **Postponement** prior to starting signal; straighten/lengthen the line
 - If General Recall, straighten/lengthen the line before re-starting sequence
 - Penalty starts: I, U, Z, Black Flag
 - Have AP ready; if General Recall likely, postponement just before starting signal is preferable
 - Split-second decision
- *Sailors would prefer to wait a few minutes to have a fair start with a good line*

Additional RC Training Courses



- PRO/DRO Training Part 2
- Unit 1 – Introduction to Race Committee
- Unit 2 – Mark and Pin Boat
- Unit 3 – Signal Boat
- Unit 4 – When Things Go Wrong

<https://www.severnsailing.org/race-committee>



Test