The RUDDER

Duke City Model Yacht Club

American Model Yachting Association Club #213

January – February 2009 Newsletter – VOL 15; NO. 1

The Duke City Model Yacht Club, sanctioned by the American Model Yachting Association, promotes radio controlled model sailboat racing for the benefit of the membership. Club activities include racing the nationally sanctioned Soling 1 meter, one design class as well as special events which may be opened to other R/C sailboats.

First DCMYC Newsletter of 2009

Message from the Commodore:

Hello to all the DCMYC members and thanks for electing me Commodore. It's my intent to keep the club running as smoothly and fiscally soundly as my predecessors did. We have some exciting times ahead, what with the imminent acceptance of the RG65 by AMYA and our plans for a second Rio Grande Cup for that class, which should be a boost to both our reputation and our finances.

I hope to hold a meeting of the officers and any and all members who want to attend once a month or so, as a breakfast at the Bio Park's Shark's Reef restaurant at 10:30 prior to a sailing day. Our (ahem) transition team met there and the food was both good and reasonable. I'll announce meetings by email. As always, if you have suggestions, comments, or concerns, don't hesitate to call me at 505-823-1046.
Cheers,

Earl

********** ***

Membership Dues for 2009 Are Due Now!

A note from the treasurer:

The dues for 2009 will remain the same at $18.00 and are due by January 31, 2009. If you receive a hardcopy of the newsletter by mail instead of email and have joined the club within the last 2 years, then the dues will be $25.00. Please make checks payable to **DCMYC** and send them to Bruce at the following address:

DCMYC
C/O Bruce Wagner
3201 La Ronda Pl NE
Albuq, NM 87110

Please include a note updating your information (email address, phone #, address, etc) with your dues so we can keep our roster up to date.

****

Member Roster

A current membership roster is included in this email. Please check your information and let Jim Scheibner know if anything needs to be changed.

DCMYC Annual Banquet

The Officer's Club at Kirtland was the setting for this year's Annual Award banquet on Friday, January 9th. We had a good turnout; good food; great conversation, awesome trophies and lots of fun. We were pleased that Rebecca Houtman, the manager of the Bio Park, was able to join us. Thanks Victor, you did a great job of taking care of the trophies and organizing the banquet!

As mentioned in the January-February 2008 Newsletter -- VOL. 14; NO. 1, a New Trophy Award System was adopted to allow DCMYC to award more and better trophies. We also discontinued the A & B fleet system. In its place we awarded trophies based on the following: Except for the novice award, (see below), in order to qualify for a trophy, skippers must complete 10 races within the year. GOLD CLASS - The top three qualifying skippers will receive trophies. All qualifying skippers will be listed and the list divided in the middle. SILVER CLASS - The top three skippers from the bottom half of the list will receive trophies. Novice Award – A plaque or trophy will be awarded to the top finishing first year skipper who has completed 8 races within the year. If a first year skipper qualifies for a SILVER or GOLD trophy, he/she will not qualify for the novice award. The Season Standings and trophy winners for 2008 are listed below.

Season Standings for Skippers with 10 or more races

Place	Skipper	Sail	Races	Average	Award *
1	Eschman, Pete	671	14	1.0	Gold 1
2	Scheibner, Jim	52	16	1.7	Gold 2
3	Bailey, Steve	67	13	2.2	Gold 3
4	Jiron, Mike	73	12	2.3	Novice
5	Perry, Ryan	511	10	3.5	Silver 1
6	Dickhaut, Richard	801	14	3.7	Silver 2
7	Boebert, Earl	79	16	4.1	Silver 3
8	Wagner, Bruce	1191	11	6.0	

The official Season Standings spreadsheet for 2008 is attached to this email for anyone wanting to see the actual scores from each of the races held during the past year. Pete Eschman does an awesome job of keeping track of all the scores for each race and verifying our scorekeeper's math.

****

DCMYC Ship's Store

Our hard working Treasurer, Bruce Wagner, has set up a DCMYC Ship's Store, which he brings to the pond in a handy suitcase. Be sure to check out some great stuff (check or correct amount in cash is appreciated):

Handsome Hats AND Stylish Shirts

The hats and shirts can be purchased for $15.00 each.

Genuine Guides to the Racing Rules (two types):

Handy Guide to the Racing Rules 2009-2012, US Sailing - cost $7.25

16 Pages, "This highly visual, condensed guide to the 2009-2012 racing rules is a must-have for any racing sailor. The Handy Guide is a pocket-sized, 16-page self-cover booklet containing full-color illustrations of the primary rules governing sailboats on the racecourse. It's a valuable quick reference for any sailor, new or experienced."

Racing Rules Companion 2009 – 2012, by Bryan Willis - cost $11.00

24 Pages, "A quick reference to any situation that should arise during a race, this trim, splash-proof guide offers beginners instant access to the newest racing rules for yachts, dinghies, and windsurfing. A summary of the latest ISAF regulations, which are revised every four years, this practical, user-friendly guide covers the basic rules of sailing, covering everything from changing course, visual signals, penalty turns, and even includes advice on protesting or appealing a decision. Here is the perfect onboard thumb-through guide for meeting any racing challenge as it happens."

Article by Jim Scheibner:

More on radio problems

A couple of people asked me why there was a problem with using two channels differing by 23, so I will attempt to answer here.

Our surface 75 MHz (AM, FM, or PCM) radio system uses a 20 KHz channel separation, ie, channel 61 with a frequency of 75.410 MHz compared to channel 62 frequency of 75.430 MHz, the difference is 0.020 MHz or 20 KHz. [M means mega (million) and K means kilo (thousand)] The highest channel in our band is channel 90 at a frequency of 75.990 MHz. The difference between, say, ch 61 and ch 84 (23 channels) is 20 KHz multiplied by 23 which equals 460 KHz.

Almost any electronic circuit will generate difference and sum frequencies from input signals and reradiate (re-transmit) them. Lets assume transmitter (Tx) A and Tx B are on channels 61 and 84 and are close to another electronic device (another Tx, the boombox, an iPod, hearing aide, a car radio or one of our boat receivers for example). The signals from A and B will enter the third device which MAY generate and reradiate the difference signal of 460 KHz. In most cases the resulting signal is much too weak to cause problems, but if the signal is caused by another Tx the signal MAY be strong enough to cause a problem.

So far, this means nothing so lets look at how our AM receivers work. A heterodyne receiver converts the transmitted radio frequency to a much lower frequency where it is much easier to tune the bandwidth of the receiver. Normal AM receivers are single conversion, but more elaborate (and expensive) receivers use double or even triple conversion.

Our radio signal is “picked up” by the antenna, which routes it to the receiver “front end” tuned circuit which passes (ideally) only the wanted frequency band, in this case roughly 75.4 MHz to 76.0 MHz. In reality, this tuned circuit is broader than needed and is not sharp enough to reject other strong frequencies, but it does accentuate the desired frequencies over most others (KOB, police radios, cell phones, radar etc). This signal is then routed from the front end to a mixer where the incoming signal is combined with another frequency controlled by the plug-in crystal in the receiver. This crystal frequency is exactly 455 KHz higher than the desired signal put out by our transmitter. The output of the mixer is primarily the difference frequency (455 KHz) but includes the inputs to the mixer. This difference frequency is then amplified by a very selective tuned circuit called the IF (intermediate frequency) amplifier, which passes only 455 +/- 10 KHz, or 445 to 465 KHz. Note that this IF band includes the above mentioned 460 KHz interference signal. If the 460 KHz signal is of sufficient strength, it will interfere with your transmitter signal and cause “glitching” or jerking in the servos, or even complete loss of control.

The 455 KHz IF was chosen because it is used in normal broadcast radio receivers (parts are cheap) so that won’t be changed. Double conversion receivers eliminate the problem but are only available with FM radios which are in general higher quality (more channels and controls, higher transmitter power etc, generally for planes). The hobby industry thinks AM is used only for toys, so they keep it cheap. The AM system is a good one if you are all by yourself. It is not a good system when transmitters are massed close to each other. Note that at flying events, participants are spaced away from each other, transmitters of participants not flying are turned off and impounded, and that only a limited number fly at one time—all in the name of eliminating interference. A crashed airplane is worse than a glitching sail servo.

January 2009 Race Results

RG-65 Race at Tingley on January 3, 2009

Bruce Wagner ran the heats, while Kathy Bailey served as scorekeeper. Jim Scheibner served as RD.

	SKIPPER	SAIL	1	2	3	4	5	6	7	8	9	10	11	12	Gr. Total	Total w/ discard
1	Bailey, Steve	67	2	1	1	2	2	1	2	1	1	2	2	1	18	14
2	Jiron, Mike	73	3	2	3	1	1	2	1	3	3	1	3	2	25	19
3	Scheibner, Jim	99	1	3	2	3	4	3	4	2	2	3	1	3	31	23
4	Boebert, Earl	1	4	4	4	4	3	4	3	4	4	4	4	4	46	38

Soling Race at Tingley on January 10, 2009

Kathy Bailey served as scorekeeper. Pete Eschman served as RD, and provided this event summary: Conditions were clear and cold with winds from 4 to 12 mph from the north-northwest; typical wind speed was around 7 mph. Cool temperatures took their toll on transmitter and receiver batteries as the event moved beyond heat 9. The course consisted of a mark to windward, rounded to port, followed by a reach mark, also rounded to port. Skippers then sailed a run to the southern end of the pond where a two mark gate was located, then back to windward to cross the start/finish line located near the center of the pond. Competition was spirited, and most felt that warmer clothes and hotter batteries would have been nice. DNS =DNF = Number of boats + 1 = 9.

	SKIPPER	SAIL	1	2	3	4	5	6	7	8	9	10	11	12	13	Gr. Total	Total w/ discard
1	Jiron, Mike	73	1	1	1	4	2	1	2	1	1	1	1	1	2	19	13
2	Scheibner, Jim	52	3	2	4	5	1	2	6	2	3	3	3	2	1	37	26
3	Boebert, Earl	79	4	3	8	1	3	4	5	5	5	4	2	9	9	62	44
4	Wagner, Bruce	1191	6	6	6	3	4	6	4	3	2	6	4	4	3	57	45
5	Dickhaut, Richard	801	5	5	3	8	8	8	7	8	4	2	5	3	5	71	55
6	Bailey, Steve	67	2	4	2	2	6	5	1	7	9	9	9	9	9	74	56
7	Boucher, Paul	17	8	7	7	6	7	7	8	4	7	5	6	5	4	81	65
8	Roupas, Peter	77	7	8	5	7	5	3	3	6	6	9	9	9	9	86	68

RG-65 Race at Tingley on January 17, 2009

Paul Boucher served as scorekeeper. Bruce Wagner served as RD. Jim Scheibner provided this event summary: The wind was up enough at 12 P.M. to require smaller sail rigs, but by 12:30, the wind was down to the predicted 6-7mph from NNE. As the afternoon proceeded, wind dropped at times to 0, and direction became the usual spooky swirls. It was good to have Karveth come down from Taos with his nice new set of yellow paneled sails. Mike arrived late and missed the first 3 heats. DNS = Number of boats + 1 = 5.

	SKIPPER	SAIL	1	2	3	4	5	6	7	8	9	10	11	Gr. Total	Total w/ discard
1	Scheibner, Jim	99	1	1	1	1	1	1	1	1	2	2	2	14	10
2	Boebert, Earl	1	2	DNS	3	2	3	3	2	4	1	3	1	29	20
3	Jiron, Mike	73	DNS	DNS	DNS	3	2	2	3	3	3	1	3	35	25
4	Kramer, Carveth	111	3	2	2	4	4	4	4	2	4	4	4	37	29

Soling Race at Tingley on January 24, 2009

Kathy Bailey served as scorekeeper. Ryan Perry served as RD. Mike Jiron sailed Ryan's boat with sail number 11, but we are scoring him here under his own boat's number, which is 73. DNS =DNF = DSQ = Number of boats + 1 = 11.

After the race results were announced, Ryan (the RD) pointed out some rule violations he observed and suggested some alternatives and ways to avoid the situations. Great job, Ryan!

	SKIPPER	SAIL	1	2	3	4	5	6	7	8	Gr. Total	Total w/ discard
1	Eschman, Pete	671	2	1	1	1	1	2	1	1	10	8
2	Scheibner, Jim	52	3	3	3	2	2	1	5	2	21	16
3	Bailey, Steve	67	1	2	4	5	4	3	6	7	32	25
4	Jiron, Mike	73	DNS	4	2	7	3	4	4	4	39	28
5	Dickhaut, Richard	801	7	6	DNF	4	9	6	2	3	48	37
6	Wagner, Bruce	1191	4	5	7	3	7	9	7	8	50	41
7	Bannerman, John	59	DSQ	8	6	6	5	5	3	10	54	43
8	Roupas, Peter	77	6	7	5	9	6	7	8	6	54	45
9	Rotolo, Vic	7	5	9	9	8	10	8	9	9	67	57
10	Boucher, Paul	17	DNF	10	8	DNF	8	10	10	5	73	62

****

Watch for the next issue of The Rudder to arrive in your inbox sometime in April. Anyone wanting to contribute articles to be included in the next issue of the newsletter should email them to Kathy. Please note that this is a new email address for Kathy and change it on your membership roster. Her Juno address had some compatibility issues!