

Aerobat



Merry Christmas to all

December – January 2015/16

Issue Number 4 Volume 15

Web site

www.hcrf.co.nz

Facebook

Hibiscus Coast Radio Fliers

Committee contacts

President

Pete Denison
president@hcrf.co.nz
(09) 426 2455

Secretary/Treasurer

Hayden Purdy
secretary@hcrf.co.nz
(09) 427 5906

Club Captain

Nigel Grace
clubcaptain@hcrf.co.nz
(09) 420 3182

Social Secretary

Ngaire Ladd
ngaireross@hotmail.co.nz
(09) 4260840

Frequency Officer

Jim Hall
jimh,geo@clear.net.nz
(09) 426 1478

Editor

Ross McDonnell
ngaireross@hotmail.co.nz
(09) 4260840

Cover Picture

A bald Eagle in a well photo
shopped picture

*One of the 3 things that fly very
well*

- 1 Bald Eagle
- 2 Ngaire on her broom stick
- 3 Lazy Bees

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From The Editors Desk



Well it is said that with an infinite number of monkeys and an infinite number of typewriters they would produce the full works of Shakespeare. Well I have been trolling the net and the number of contributors must be getting close to infinite and I am still getting mostly rubbish. This brings one to consider the comparison between human and monkey intelligence.

The club is getting into its true role as a social flying club, with wives and family getting to mix with and know other fliers. We now start the round of Christmas dinners and twilights. This is one of the best parts of this club. Those of you who have visited some other clubs that are only a flying clubs will have found that it makes the whole experience much more enjoyable for all if it a social club as well. Nothing worse than having groups on the same field not bothering to talk or even socialise with others. It just splits the club and creates bad feeling. If people don't want to socialize then there are any number of clubs that will cater for them, just not this club.

The committee is going through the "Health and Safety" for the flying field. This brings up the questions that all of us hoped would just go away, but of course we knew they wouldn't. What to expect? There will be changes to the rules and more stuff for the poor overworked instructors to drum into the befuddled trainees. The rest of the fliers can expect more adherence to the rules and a slap on the hand if they are not obeyed.

Well as you will probably know Ngaire and I are on the move up north and have put our house on the market. We just feel it is time to move on.

Ross McDonnell



FROM THE PRESIDENTIAL SUITE

Well once again it's that time of year folks when we think "Jeepers its almost Christmas again !!!!!" Though thinking back over the year it's been a good one apart from of course Selwyn's passing.

Selwyn's passing was a very sad occasion for our club, a lovely man who will be missed, along with other things his visits to the field on his quad bike when he used to stop for a chat. A true gentleman our thoughts are with Jean, Richard and the Lloyd family.



I am writing this with some difficulty having egg all over my face, this morning suggesting and confirming that we cancel our fantastic Twilight evening as the weather forecast was for heavy thundery showers developing late afternoon so of course it turned out to be one of the nicest evenings we have had with no rain, thunder, almost cloudless even. So please accept my apologies. It's been reorganised for the 9th December.

On a positive note though, flying through the winter in a bit of a breeze or even a near gale has improved our flying remarkably even if Hobby City and Speedy products have been rubbing there hands with glee as we repair our loved ones again and again in some cases. No we are not naming names but let's just say that next year's crash of the year award will be a hard one to pick, a bit like the All Blacks so many good ones to choose from. Good old foam though so easy to bring them back to life isn't it , well most of the time anyway.

Our last gliding morning was for once a lovely day, and of course our Christmas lunch was as usual a great time to get together. To Ngaire and Ross a big thank you!

Our health and safety is just about finished, we (committee) have agreed on the changes needed to help meet the standards for Model Flying NZ, this will be discussed at our December meeting and hopefully agreed to, bearing in mind we will probably have to modify and add to it as we progress in the future.

Well that's about it for this year folks remember we have no meeting in January, I hope you have had a great year of flying, I know I have it's been a privilege to be part of our club, really looking forward to next year.

I hope you all enjoy a lovely Christmas and we all have a great 2016.

Keep safe and happy landings.

Merry Christmas to you and your family

Pete Denison

Turnigy AE-30a ESC Programming.

Author Robert Berger, New Zealand.

Programming the ESC will be by selecting the level you want on each setting with the throttle stick. Throttle down for low, Throttle halfway for medium and throttle full for top (see chart 1 below)



Start with the transmitter off and the ESC off.

Step 1. Transmitter throttle stick to full throttle.

Step 2. Switch transmitter ON

Step 3. Turn the ESC ON

Step 4. The ESC will go through a series of beeps. Wait until all the beeps have stopped.

The first program will be the "BRAKE" so be ready to set that.

Step 5. Lower throttle all the way down. You will hear musical beeps in a second or two. At that point leave the throttle down if you want "BRAKE OFF", or move throttle to half for "SOFT BRAKE" or full for "HARD BRAKE". The ESC will be going beep pause beep pause beep (5 times) Now wait for musical Beeps.

Step 6. After musical beeps the ESC will now emit two beeps pause two beeps and so on. If you want the timing to be "LOW" move throttle down, if you want timing medium, move throttle to half position and for High, move it to full. Wait for musical beeps and move throttle to desired position for Battery Protection Setting

Wait for Musical beeps Plane Mode and move throttle down for "FIXED WING" half for HELI SOFT START or full for "HELI HARD START"

Once you have gone through all 6 settings wait for the last musical beeps and then unplug the ESC battery. Wait for a second or two and plug it back in to test the settings..

Chart 1.

		STICK OFF	STICK HALF	STICK FULL
1 Beep	Brake Setting	OFF	SOFT	HARD
2 Beeps	Timing Setting	LOW	MEDIUM	HIGH
3 Beeps	Battery Protection	HIGH CUT OFF	MED CUT OFF	
4 Beeps	Plane Mode	FIXED WING	HELI soft start	HELI hard start
5 Beeps	Throttle Response Speed	NORMAL	MEDIUM	HIGH
6 Beeps	Loudness of motor beeps	LOW	MEDIUM	HIGH

To set your model as below as an example

HARD BRAKE, TIMING MEDIUM, BATTERY PROTECTION LOW, PLAND MODE FIXED WING, THROTTLE RESPONCE HIGH, MOTOR BEEPS HIGH.

Do the following	
1. THROTTLE STICK FULL	11. STICK TO LOW (Battery Protection low)
2. SWITCH TRANSMITTER ON	12. WAIT FOR MUSICAL BEEPS
3. PLUG IN ESC BATTERY	13. STICK TO OFF (Fixed Wing)
4. WAIT FOR ALL BEEPS TO STOP	14. WAIT FOR MUSICAL BEEPS
5. MOVE STICK DOWN	15. MOVE STICK TO FULL (Throttle Response Speed)
6. WAIT FOR MUSICAL BEEPS	16. WAIT FOR MUSICAL BEEPS
7. STICK TO FULL (Hard Brake)	17. LEAVE STICK AT FULL (Motor Beeps High)
8. WAIT FOR MUSICAL BEEPS	18. WAIT FOR MUSICAL BEEPS
9. STICK TO HALF (Medium Timing)	19. UNPLUG ESC POWER.
10. WAIT FOR MUSICAL BEEPS	20. ALL DONE, SO PLUG IT BACK IN AND TEST.

Starting and tuning IC motors the proper way

From the Super Tiger manual and other photos

Suggested by Ray Wood

Caution

1-Do not place anything in the path of the propeller.

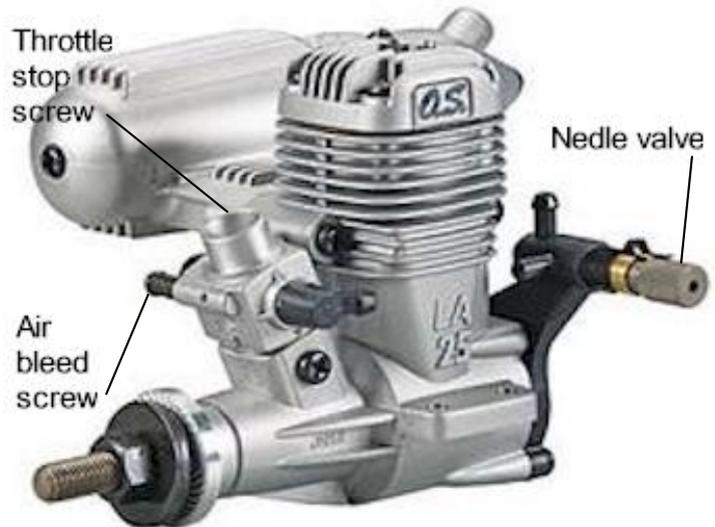
2-Practice flipping the propeller quickly without connecting the battery. Quick flipping and adequate priming are important factors for starting your engine successfully.

Pre-Adjust Needle Valve

Turn the needle valve clockwise until you begin to feel resistance. This is the fully closed position. Do not force the needle valve or you may damage your carburettor! Now turn the needle valve counter-clockwise about 2 - 2 1/2 turns. This will be a good place to start. (Turn the needle valve clockwise to "close" for leaner mixture, or counter-clockwise to "open" for richer mixture.

Choking/Priming Your Engine

Using your radio control system, move the throttle stick to open the throttle to 1/2-3/4. Place your finger over the carburettor opening (without the glow plug battery connected!) and rotate the propeller 2-3 turns or until fuel flows through the fuel line into the carburettor. The quantity of fuel drawn into the engine by priming is an important factor for starting your engine successfully. It needs more fuel for the first starting and when the engine is cold.



Flipping Propeller to Start

Using your radio control system, move the throttle stick so the carburettor barrel is 1/4 to 1/2 open. Flip the propeller to start the engine by using a "chicken-stick" or an electric starter. The engine should fire after a few flips. When starting the engine, have a helper hold your aircraft, (*or tether it as you were taught Ed*) to prevent it from moving.



Needle Valve Adjustment

After the engine starts, advance the throttle to full open. At this point, the engine should be running very "rich" (i.e. dense smoke coming from the exhaust). Lean (turn clockwise) the needle valve gradually until you hear a noticeable sound due to an increase in R.P.M. Remove the glow starter from the engine with care so that it does not touch the rotating propeller. The engine should keep running. If it stops, lean the needle valve a little further, and re-start the engine. To obtain optimum needle valve setting **AFTER THE ENGINE IS BROKEN IN**, have someone hold the airplane (see above Ed,) and advance the throttle to full open. Slowly lean the needle setting until the R.P.M. slows down, then richen to where the maximum R.P.M. is achieved. At that point, richen the needle setting slightly until you hear a slight (but noticeable) decrease in R.P.M. You should never set your engine for maximum R.P.M. on the ground, as the mixture always leans out slightly in flight due to the "unloading" of the propeller in the air.

Stop Your Engine

Cut off the fuel supply to the carburettor by pinching closed the fuel line or disconnecting the fuel line. You may also stop the engine using your radio control system, by going below the idle position with the throttle trim lever on your transmitter.

Caution-Do not use your hands, fingers, or any other parts of your body, or throw any object into the propeller to stop the engine. Be careful not to touch the rotating propeller or the hot engine.

FINE TUNING YOUR CARBURETTOR

The air-bleed carburettor with a throttle rotor and an air-bleed screw provides a wide range of engine speed control from idling to full power. The throttle rotor with the throttle lever linked to a servo under the control of the R/C system in your model will enable engine speed to be varied. As the carburettor of your engine has been factory set for approximate best running with fuel tank correctly located as previously described, it should not be required to adjust anything except the needle valve. After the engine has been broken-in, check the operation of the throttle according to the following and re-adjust the air-bleed screw when necessary.

Needle Valve Adjustment

In order to determine the best position of the needle valve, you should hold your aircraft and rotate the nose up approximately 15° slowly. If the engine speeds up and attempts to stop, rotate the aircraft nose down to the horizontal position and open (counter-clockwise) the needle valve 1/4-1/2 turn. Then repeat the nose up procedure again to get the best setting of the needle valve.



Throttle-Stop Screw Adjustment

- 1 Start the engine and open the throttle fully.
- 2 Adjust the needle valve for maximum R.P.M.
- 3 Close the throttle gradually from the highest speed to idle.
- 4 Find and fix the idling position where the lowest possible R.P.M. with steady running is obtained by means of the "throttle trim" on your transmitter or by adjusting the throttle stop screw to obtain minimum R.P.M. without risk of the engine stopping.
- 5 Open the throttle completely and make sure that the engine runs at the highest speed.
- 6 Keep running at the highest speed for about 10 seconds, then close to the lowest speed abruptly. Run at idle or about 5 seconds and make sure it does not stop, or else re-set the idle position a little higher.
- 7 Repeat the procedure a few times to ensure the best running is obtained. If your engine stops in the middle range or it does not speed up from idling to full power, adjust the air bleed screw as following step.

Air-Bleed Screw Adjustment

- 1 Start the engine and open the throttle fully.
- 2 Adjust the needle valve to the best position.
- 3 Close the throttle gradually from the highest speed to idle.
- 4 Find and fix the idling position where the lowest possible RPM with steady running is obtained by means of the throttle trim on you transmitter or by adjusting the throttle-stop screw with out risk of the engine stopping.
- 5 In order to determine which way to adjust the Air-bleed screw, first determine the present condition of the idle fuel mixture. If any adjustment is needed, you must first determine which way to turn the idle air bleed screw.



Option A (The one preferred by the Ed.)

Disconnect the fuel tubing from the carburettor while the motor is idling and observe carefully what happens.

If the engine speeds up before quitting the mixture is too rich and the air bleed needs opening.

If the engine speed decreases and then quits the mixture is too lean and air bleed needs closing.

Option B

Close the throttle below the stable idle position. When the engine starts to run unevenly open the throttle all the way.

If the engine hesitates before picking up speed, then the idle mixture is too rich. If this is too hard to observe then allow the engine to idle slightly longer before opening the throttle.

If the idle mixture is too rich, there will be plenty of smoke and unburnt fuel from the exhaust.

If the mixture is too lean the engine will stop abruptly when the throttle is opened.

Cri-Cri Twin EPO 1050mm (Henny's latest model.)



(Looks just like the real thing but needs a pilot. Ed.)

From one of the overseas model shops

Features:

- Plug and Fly - Complete final assembly, install your choice of radio and battery
- Rugged molded EPO airframe
- Rugged aluminium landing gear with light weight foam wheels
- Steerable Nose wheel
- Large magnetically secured hatch
- Counter Rotating Propellers
- Quick assembly

Specs:

Wingspan: 1050mm

Length: 850mm

Flying Weight: 1100g

So you want to get into ¼ scale but don't have the room!

How about one of these?

Single engine

Bumble Bee II was the world's smallest piloted airplane.

The Bumble Bee II was built by Robert H. Starr. Its first flight was on 8 May 1988. Unfortunately the Bumble Bee crashed on the same day due to engine failure. Robert Star was seriously injured in the crash, but he fully recovered from his injuries. With a wing span of 1.68 meters it would come out at .42 meters. (That's under half a meter.)

Maximum speed: 165 knots (190 mph, 305 km/h)

Wingspan: 5 ft. 6 in. (1.68 m)

Empty weight: 396 lb (180 kg)

Power plant: 1 × Continental C85 85 hp. (63 kW)

Propellers: 2-bladed

Unit cost: Not known

Designer: Robert H Starr



Why not A Twin

How about the **Cricri**? (Pronounced like in creak without the k, and is the sound made by a cricket!) This is the smallest twin in the world and would come out at just over 1.2 meters wingspan at ¼ scale.

The Cricri is a small single seat home built designed in the 1970s by Michael Colomaban and came with many power units including electric, (this was the first electric aircraft to fly the English channel,) and jet.(One was flown with two model jet engines.) The aircraft is also capable of aerobatics within the limitations of twin-engine aircraft and will climb with only one engine. The Cricri is still being built today by home builders and there are several in New Zealand.

Top speed: 220 km/h

Range: 463 km;

Wingspan: 4.9 m

Weight: 78 kg

Powerplant: 2 × JPX PUL 212 single-cylinder piston engines,

Propellers: 2-bladed x 2

Unit cost: Not known

Designer: Michel Colomaban.



Why not a jet

The world's smallest jet is the **BD-5 Micro** and was made by Bede Aircraft Corporation and with a wing span of only 4.4 meters it would mean a span of 1.1 meter for ¼ scale

The BD-5 Micro is a series of small, single-seat homebuilt aircraft created in the late 1960s by US aircraft designer Jim Bede and introduced to the market primarily in kit form by the now-defunct Bede Aircraft Corporation in the early 1970s.

Top speed: 341 km/h

Range: 1,625 km

Wingspan: 4.40 m

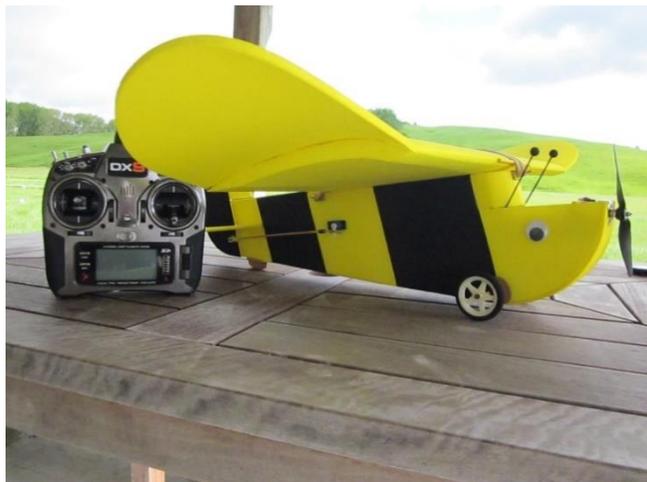
Weight: 140.6 kg

Unit cost: 2,675–2,875 USD (1970)

Designer: Jim Bede



AROUND THE CLUB



Henny's new Lazy bee and Transmitter. He reckons it is the ideal setup for a learner.



For sale 1 club project Vampire. Photo shows Ross's plane 2 seconds into first flight.



Working bee required after the farmer pointed out that the grass from our field cutting was rotting his new hay.



A great mixture of planes on a typical day at a great social flying club.



The Weather Witch is everywhere

After much niggling we have again published Ngaire's much guarded family recipe.

NGAIRE'S FAMOUS RUM MUFFINS.

After many requests and with great cunning we observed Ngaire while she made a batch of her famous RUM muffins. We now bring you the secret of these terrific delicacies.

1 cup mixed fruit
3 Tbsp. RUM
2 cups flour
1 ½ tsp. baking soda
2 tsp. cinnamon
2 tsp. mixed spice
¼ tsp. ground cloves
¾ cup sugar
½ cup chopped walnuts
75 grams butter
1 egg
1 cup yoghurt
¾ cup milk



Sample RUM to insure quality. Put the mixed fruit and RUM into a small plastic bag. Knead bag gently. Leave to stand in a warm place while you mix the other ingredients.

Sample RUM to insure quality has not changed. Sieve the flour, soda and spices into a large bowl. Add sugar, chopped walnuts and stir to mix thoroughly.

Sample RUM again. Melt butter in a pot or microwave dish. Add the egg, yoghurt (any flavor) and milk. Add marinate raisins with any remaining liquid and mix well. Now combine the liquid and dry mixtures. This is done as if it was a husband. (i.e. Do not over beat.)

Insure RUM is still of acceptable quality. Divide the mixture evenly between 12 medium-sized muffin pans that have been well coated with non-stick spray or marg.

While baking at 210C for about 12 minutes or until centers spring back have a RUM,

Leave in muffin pans a few minutes then remove to cake rack to cool which gives you just enough time to have a RUM.

All finished! Now you can have a well-deserved RUM

Ngaire Ladd

Here's wishes for a Merry Christmas and a Happy New Year to you and yours.

A special thanks to those who have helped me through the year with our Christmas Luncheons, Twilights and Open Day. I appreciate it very much.

Our Christmas Luncheon on the 22nd was attended by a very happy group and I am now looking forward to our twilight BBQ on the 9th December.

See you all there

Ngaire (Weather Witch) Ladd



H.C.R.F. Calendar 2015 - 2016

Pony Club Rally days are every Tuesday afternoon at the field starting September 2015.

NB ones with Pony in the day (and in yellow for those in colour,) are Pony Club. **THEY MAY NOT AFFECT US.**

As our fixed flying times are every Wednesday, Saturday and Sunday morning.

Date	Day	Event	Where/When
2 December 2015	Wed Pony		Wainui
5 December 2015	Sat	Winch Gliding	Wainui 8.30 am – 12.00 noon
7 December 2015	Mon	Club Night	Whangaparaoa Guide Hall 7-30 pm
9 December 2015	Wed	Twilight 2 Rain Date	Wainui 5-00 pm
12 December 2015	Sat Pony	Pony Club Exams	Wainui All day
2 January 2016	Sat	Winch Gliding	Wainui 8.30 am - 12.00 noon
1 February 2016	Mon	Club Night	Whangaparaoa Guide Hall 7-30 pm
3 February 2016	Wed	Twilight 3	Wainui 5-00 pm
4 February 2016	Thu Pony	Cross Country Practice Evening	Wainui 4.00 to 7.00
6 February 2016	Sat	Winch Gliding	Wainui 8.30 am - 12.00 noon
10 February 2016	Wed	Twilight 3 Rain Date	Wainui 5-00 pm
28 February 2016	Sun Pony	Wainui ODE	Wainui All Day

HINTS AND TRICKS

