



PROP TORQUE



Official Newsletter of the...
LAUNCESTON MODEL AERO CLUB
VOLUME 10

JUNE

2001

LAUNCESTON MODEL AERO



CLUB INC.



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EXECUTIVE...

PRESIDENT	Peter Kidson (03) 6394 4380
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NEW COMMITTEE...

George Carnie (03) 6398 2141
Geoff Hays (03) 6344 1920
Greg Waddle (03) 6391 8248

Safety Officer	Whole Committee
Contest Director	Geoff Hays
Public Officer	Gerry de Groot
Newsletter Editors	George & Kerry Carnie
Publicity Officer	George Carnie
Symmons Cafe Mgr.	Alice Robertson

COVER PHOTO

Greg Robertson's own design Excel 7 cell electric glider. Powered by a Plettenberg motor.

Read all about it on page 14



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Prop Torque is the Members Magazine Why not make a contribution?

How? Contact the editors George & Kerry - **Postal:**
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Telephone: 6398 2141 Perth, Tas. 7300

Copy Deadline: Friday after 2nd Monday of each month

**Next Committee Meeting:
Monday, July 9th at 7:30pm
at Greg Waddle residence
35 Collins St., Evandale**



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CAPTAIN'S REPORT

Peter Kidson (03) 6394 4380
p.kidson@microtech.com.au

Hello to all,

Well, winter is here, but Saturday 16th June was one of the best days flying in terms of weather I think I've seen for a long time. Calm, warm and to top it off we held a contest with quite a few entrants.

I had an e-mail from Steve Ralph at the Northwest club, He asked me to let you all know of an item stolen from one of their members cars a short time ago. It was a VMAR Ramrod airplane, with Futaba airborne pack and a Super Tigre 45 motor with a tuned pipe.

Please keep your eyes and ears open in case someone tries to sell it off cheap. If you hear or see anything let me know and I'll contact North West. Sad to think some one would want to steal something like that but there we are.

At the last Committee meeting last Monday 11th June we discussed the Frequency board and the decision we took to only allow odd numbers to fly at our field, Well It now seems we got it wrong and so we changed back to how things were, odds and evens can fly. I won't say anymore as Gerry will take you all through it with his report.

This years contest calendar is now officially out and if there's anything on it you would like to enter please feel free to do so by coming up to the field on the due date and having a go.

As I said at the start of this we held one last Saturday, just a fun fly but we had eight or nine entrants and we all had some fun. Some won, some didn't, but fun was had by all.

Clarrie Murray said he was physically shaking with excitement as this was his very first contest, (I had to take him to the toilet three times), well done Clarrie, we look forward to seeing some more of you budding pilots at other events. The way we are trying to run the contests should mean there are more and more chances for other than the top few pilots to win or at least get a placing. Geoff Hays should have more on this subject for you in his article.

Well, that's about it from me for this month. Don't forget to keep your eyes and ears open for the stolen model from the North West and hopefully we'll meet again at the field.

Pete.



SECRETARY'S REPORT

Gerry de Groot

Ph: 0417 536 200 (BH) or 6369 5284 AH

gdegroot@vision.net.au

Welcome to another column. Quite a few things have happened recently that are worth reporting. The AGM came and went and the Committee have quickly settled in to the new year. The office-bearers are listed inside the front cover of this newsletter and so are not repeated here. However, we welcome George Carnie in his new role as a committee member and also George and Kerry as they tackle the challenges of producing a newsletter every month. In looking back at the job done by Tim and Ros Sydes it is not an exaggeration to say that George and Kerry will have a hard act to follow! The other two committee members are Geoff Hays and Greg Waddle. We are all pleased to see Greg back on deck after a stay in hospital.

A final reminder to those who have not yet renewed their subscriptions: the MAAA insurance year ends on 30 June. If you are not financial by the end of June you may not be covered by insurance and shouldn't be flying. Worse still, you will no longer receive *Prop Torque*!

Annual Dinner:

This year the LMAC Annual Dinner will be held on Friday 7 September, at the Centennial Hotel in Launceston. It promises to be a great night so make sure you don't miss it (put it in your diary now).

More on Frequencies:

If you attended the AGM, you may recall the decision that LMAC would not operate on even radio frequencies. Since that decision was made, a lot more information on frequencies has come to light. As a result, the frequency question has been discussed both informally and also at the last Committee meeting. After investigation, we can now confidently say that the odd frequencies are OK for aircraft, but they are shared with model yachts. The *even* frequencies are reserved exclusively for model aircraft. Where there is a possibility of interference from model boats, *even frequencies*



are preferred. The committee is now working on a more appropriate frequency policy. In the meantime, if you want to know more, you may wish to look at the paper on LMAC frequencies posted on the clubhouse notice-board. If you want a copy, please let me know.

LMA C access road:

We owe a great deal to Mr John Youl, the landowner on whose property we are permitted to conduct our model flying operations. The club traffic contributes to wear and tear on the farm's access road and so we have again, as we do from time to time, made a contribution towards its upkeep. Notwithstanding, club members should drive slowly when on this road in order to minimise road damage.

That's all for this month. Until next time, happy flying
Gerry de Groot

The AdventuRes of JAKE

Jake greets the Enemy. Part 2

Finmere aerodrome had been used in the First World War but had recently been renovated to today's standard, (1939). A new wire fence had been erected round the perimeter track to keep people out, although it had been used to catch the odd plane once or twice as they overshot the runway.

Jake had been posted to Finmere three days ago and was relaxing, drifting in and out of a light sleep when over the loud speaker system came the words some pilots wanted to hear and some dreaded. "Scramble, Scramble". "Come on Jake, lets go". this from Alf.

Alf was Jake's roommate and had been ready to act at the sound of the loud speakers ever since he had arrived ten days ago.

Jake and Alf swiftly gathered their gear and ran out toward the waiting aircraft. The infamous Hawker Hurricane's of 211 squadron. Although the Spitfire took the glory it was the Hurricane that was the backbone of the British RAF during the Battle of Britain. The sun was just touching the horizon as 211 squadron took to the skies, this was going to be a night sortie. Jake had only flown at night during training. This time it was the real thing.

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He pulled in behind red leader. Suddenly, over his radio came, “enemy at three o clock, enemy at three o clock”. Jake looked over to his right. The Messerschmitts had somehow got level with them unnoticed until now. It was up to 211 to stop these planes. “This is red leader, this is red leader, pick a plane and engage the enemy, I repeat, pick a plane and engage”. All four Hurricanes banked in unison and headed off into battle. Jake picked out the last Messerschmitt in the line. Pushing forward on the joy stick he went down below his target. Flying down and under the 109 he pulled back on the stick into a large loop. Up and over the Messerschmitt Jake went until he was in a vertical dive straight down on top. Jake saw the pilot look up at him. He fired. The Messerschmitt slowly began to roll over to the left and down. The Pilot had died as soon as Jake pressed the trigger.



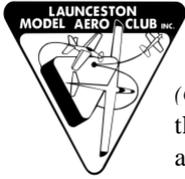
Red Leader, Alf and Sam had chased off the remaining two 109’s and had regrouped. Seeing Jake’s plane Red Leader said, “return to base, Well done all”.

What Red Leader had not seen was the fourth 109 coming in fast from behind. Jake saw small holes appear in the Plexiglas cockpit screen in front of him and smoke began to rush backwards from the engine bay. “What the?, I’m being shot at”. He mashed the stick as far forward as it would go and hard over to the right. It was a vain attempt to get the 109 in his sights. The damage had already been done. Jake’s plane went quiet.

“You ok?”. This from Alf. “I think so, I’m not hit but my planes pretty banged up, I’m going to ditch in the water”. Jake replied. Red Leader said, “I’ll get someone back to pick you up shortly, don’t forget about the liferaft in the back of your plane”. “Thanks sir”, said Jake.

“Right, Flaps 20 degrees down, leave the gear up and keep the wings level and flare at the last moment, should be easy”. The plane hit the water smashing the flaps off and crushing the belly pan as if it were paper. As the plane began to slow down the port wing dipped, caught

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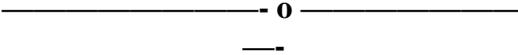


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the water and spun the plane through 180 degrees, coming to a stop instantly leaving just a bobbing motion in rhythm with the waves.

Jake pulled the liferaft from behind his seat threw it over the side, climbed in to it and settled down for what was going to be a long night or two. More next time..



INDOOR HAPPENINGS From Norm Bainbridge

The first evening of winter opened with five Hangar Rats in action. It was also a night which saw John Kitson establish a new record Hangar Rat time for the hall of 2:02 and to show there is potential for more to come, this flight was terminated by the model coming to a stop as a result of hitting a wall, rather than running out of turns.

During the evening John exceeded the two minute mark twice to prove it was no random event.

Another first was an OOS (Out of Sight) time of 44 seconds for Andrew Campbell's Rat when it veered off course and made its way through the doorway and out of view into the adjacent passage way.

Daniel Penkevics put in some good flights recording a personal best of 1:29. Bruce Nye, John de Groot and myself others in the Rat pack.

An evening where all fliers posted times over the minute mark, even my tired old model! Bruce put in some airtime with his Mini Stick, among flights an effortless 2:39.

Andrew continued to exercise his throwing arm and using a conventional HLG model, was consistently timed by Mary, around the 30 second mark with a best of 36.2 seconds.

We enjoyed the company of Sara Nye and Stephen Boag who looked in on activities.

Early Flag - With the experience gained with Hangar Rats there is scope for a new challenge.

EZBs are an 18 inch wingspan model and represent the next stage in indoor flying and at our September meeting we aim to run an EZB Competition.

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WATCH OUT FOR THE CENTREFOLD IN NEXT MONTHS COPY OF THIS NEWSLETTER

**The next Indoor Night will be on Friday 6th July, 7 to 9 pm.
On this occasion there will be a Paper Plane Chase. Paper supplied**

From the Editors

What a great feeling preparing this months' newsletter - so many articles and how to fit them in!. Thanks to all the contributors. Keep them coming we'll find room so don't get complacent :-)

I must echo the comments from the CD. Saturday, June 16 was a great day. Sure it was a competition but it was in keeping with what club competition is about; A great day out, enjoy a hamburger or saveloy and give the club some income, share some laughs with friends (often at the expense of the current competitor but as we learnt our time came around for a bit of stick too). It was a great turnout from the regulars but there is an opportunity for other members to participate. The competitions are what we make them. No need for fierce rivalry.. just friendly banter. Come along next time you'll enjoy the day. And if the spouse will miss you too much. Bring her along too! There's quite a women's club going who, I suspect they talk about "secret women's business" watching the boys with their toys.

A thank you to Keith Drew from Hobart MAC who earlier this month paid us a visit and paid us an even bigger compliment in their newsletter stating LMAC "had the best club room" he had seen. It was a pleasure to meet he and his wife Robyn, demonstrating that you don't have to be a regular to fit in and enjoy the company and the day.

Congratulations to Kerry and Julie Gray on the birth of their new Grandson Alex weighing in at 8.lb.

Keep on Flying - George & Kerry

NOTE: If a receipt is not attached to the inside cover, you have not renewed your membership but please renew now to ensure this is not your last Prop Torque.



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CROSSWORD - Last months answers

ACROSS

- 1. BI
- 3. ARC
- 5. SIG
- 8. YAW
- 10. THERMAL
- 12. OS
- 13. PYLON
- 14. CUB
- 16. JR
- 17. SITE
- 18. BOOMERANG
- 22. BARON
- 23. AMMO
- 25. PETER

DOWN

- 2. ICY
- 4. CITABRIA
- 5. TORQUE
- 6. ST LOUIS
- 7. GAY
- 9. ATOM
- 11. SYMMONS
- 15. CELL
- 19. MOTH
- 20. RUNWAY
- 21. SLOPE
- 23. AIR
- 24. MAH



Cafe Symmons

June 2nd - Club Day. Eleven out of Ten for a good day. A couple were very wet with the flying. Fun Fly was also a good canteen day on June 16th. Thanks go to Andrew for the new lids on the garbage bins
Alice R.

Trimming Your Model - Part 6

As I mentioned last month this issue we would talk about Differential and what is it.

As we all should know for anything to fly a formula has to be reached. That is, Lift must exceed Weight and Thrust must exceed Drag. If for instance the aircraft is heavier than allowed for in the wing loading then it won't matter how fast the plane shoots across the runway it will not leave the ground. The same goes for Drag. If the drag of the plane is greater than the thrust, the plane will not get up enough speed to take off and if it does then it will return to earth very quickly. I can hear you all asking what does this have to do with differential. Well, differential is basically drag on the ailerons. Some times if we have an airplane that refuses to turn correctly we add more aileron, this by definition is the right thing to do. Well, not all the time, in some circumstances it can make things worse. As you increase the movement on the ailerons the drag of the ailerons is also increased and if it was the drag of the ailerons causing the problem in the first place then you have made it worse. See easy eh!! (Of course it is if you are an areodynamacist.)

So what do we really do to find and fix this differential thingo. OK get the

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plane up in the air and flying into wind. Now pull up into a 45 degree up line and roll to the right. You have to watch very carefully for what happens and as I've said many times during these articles do these manoeuvres quite a few times before you make any adjustments. what may happen is as you roll to the right the plane will wander to the right out of or off line only a few degrees or so but enough. This means the plane is trying to positive barrel roll. What we do is increase the movement on the upward travelling aileron in both directions that is if you roll left the plane will wander left as well . So make adjustments to both sides.

Now, if when you roll right the plane wanders off to the left this is Negative barreling what we do here is to increase the downward movement, again on both ailerons. By making these adjustments you should find it will improve you turns as well. The last thing I'd like to talk about before I bring these particular articles to a close is Power of Tracking. What is Power off Tracking?. Have you ever noticed that when closing the throttle, say on a landing approach the plane dips it's left wing?. Well this is power off tracking as is a vertical dive with the plane wanting to pull out of the dive toward or away from the canopy. This also is power off tracking. Any situation where the engine is shut down can be classed as power off tracking.

So how do we fix the roll to the left on shutting down. (Some of Peter Goldsmith's designs have 1/4 degree built in to the wing to avoid the roll). This time the problem has to be fixed with a computer radio. Select a programmable mix with throttle as master and aileron as slave. Keep dialling in small and I mean small increments of right aileron until you can power down and have no effect on the plane. This works best on radios whereby the throttle can be the switch. If you have trouble with your verticals then select a mix with again throttle as master and this time elevator as slave. Dial in small amounts of the required elevator until a vertical dive is sustained without the plane wanting to pull out. By the way the cause of bad tracking in this situation is your stab is either too high or too low depending on which way the plane wants to pull out of the dive. You may want to fix this but by the time you have cut your wing to correct

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dihedral and realigning you stab for engine thrust maybe you don't want to once again cut the stab out and start again. On a brighter note you may have found that you are getting better at repairing the plane. Well that's it. No more should we have planes that given a left command proceed to turn right. We are beginning to take control. In the words of one TV presenter, let us not be the weakest link. See you at the field.. Pete...

Contest Directors Report

The morning of 16th June dawned fine, cold and calm with the distinct possibility of a great day. This turned out to be just that; one of those days. Just made for models to take to the sky without having to compete too much against the elements.. Just the morning for the planned Free Flight/Power Scramble to happen.

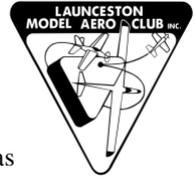
So yours truly arrived at the field to find just one free flighter ready to do battle but alas, the battle for the shield which by the way is attached to this event, did not happen due to no more contestants arriving for whatever reason. (Perhaps it is time to lay to rest the trusty free flighters with their smelly, oily, ether laden engines and body exhausting exertion and move on to the new fields of modelling).

The Fun Fly at 11 am on the same day was a complete contrast and attracted 9 contestants who revelled in the perfect conditions. We ran 5 events albeit of a similar nature that everyone seemed to enjoy to the fullest and we did not have any serious bingles during the running of these events at all.

The first event was a power and glide coupled with a power ratio. What made our Fun Fly interesting, we mixed and matched "normal" IC planes with electric gliders and electric planes. With a bit of juggling of times this worked very well and all scored fairly evenly on the day.

It was interesting to see 1st and 2nd were IC powered, 3rd was an electric glider and 4th was an electric plane. (*Electrics are starting to spark! Ed.*) Our second event was a balloon burst on ground and all took part again and the outcome was very remarkable to say the least - 1st and equal 2nd were IC powered (*It helps if you have wheels - Ed.*) and all the rest came equal 3rd. Our last event was 2 pronged again - a high speed run through a measured distance, then a

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slow speed run through the same distance. This too was performed by all contestants, IC and electric. The fastest run through was 1.69 to 4.6 sec. The slowest through the distance was 9.17 to 3.4 secs. The final scores were -

Fun Fly June 16, 2001		
Name	Score	Club Points
Greg Robertson	194	100.00
Peter Kidson	185	95.36
George Carnie	167	86.08
Jacques Wakae	156	80.41
Andrew McEntyre	136	70.10
Mike Linton	94	48.45
Kevin Hay	87	44.84
Clarrie Murray	44	22.68
Dave Jacobs	41 DNF	21.13

As I said earlier, a great day of flying, competition and togetherness. The next competition is planned for July 21 and will be a 7 cell electric glider event, run to standard rules. The August 18 event will be another Fun Fly but as I will be interstate for the next 2 months, someone else will run these two events and and pick the tasks for the next Fun Fly.

You may be wondering about our Annual Dinner which is usually held around this time each year but this year will be held on Friday, September 7th. Please let either the Secretary, President or myself know, no later than Monday, September 3rd if you will be attending. This function will be held at the Centennial Hotel, Bathurst St. at 7pm.

Well that's it from me for a while.

Happy landings all..... Geoff



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How I Entered Electrics

by Greg Robertson

My interest in Electric modelling was triggered about six or seven years ago when Michael Linton joined our Club.

He had moved over from the other big Island and brought his electric models with him. He was just starting to get me going, then he moved back to the Mainland. So my interest in Electric waned until Merv Cameron started back into modelling.

He had a modified Gentle-Lady with a speed 600 in it and, it flew okay. Merv, not being convinced electric was the way of the future, said he didn't like flying it so he let me use it and that was the end of me (or the start). So credit card in hand, 'Wings and Things' were sent an order for the bits and pieces I thought I wanted. Next it was out to the shed and I started designing my first electric model.

Model completed and ready to go out to the Flying Field and away we go. The model had a span of ninety inches, 1 Robbe 500 motor with a 3.7.1 gearbox, a 13½ X 7 folding prop, 8 1000 mAh cells all of which took a long time to get the model to any decent height.

While this model flew acceptably (for my first attempt) it ended its life a short while after. Getting into a monster thermal the model got that high I tried to fly out of it. As the model sped up one of the wingtips departed and a new kit was the result. No damage to gear so after that I decided to redesign my models so the first Excel 7 was born.

This one was a lot smaller about sixty inches with a direct drive speed 600 with an 8 x 4 folding prop and seven 1250 M.A. cells.

It was very good, (I was happy). Then somebody bought it so Excel 7 Mk 2 went into production. This model had a long shaft gearbox with a Leisure Gold motor and same batteries. This one went even better than Mk1. This model went to Hobart. So Mk3 came on the scene and went even better till the wing broke. So back to the building board. Mk4 was born. This one with ailerons with Hitec 80 metal geared servos and much higher powered ND10 motor and 8 x 4 prop, but this model was getting above the weight I was after about 34-36 Oz was OK. Mk4 was over 40 Oz but it still flew very well. Till the wingtip broke off at a great height (thermals again).

Anyhow, this model came down so fast I panicked and started the motor to full power (boy did I come down). After about an hour with 5 or 6 people

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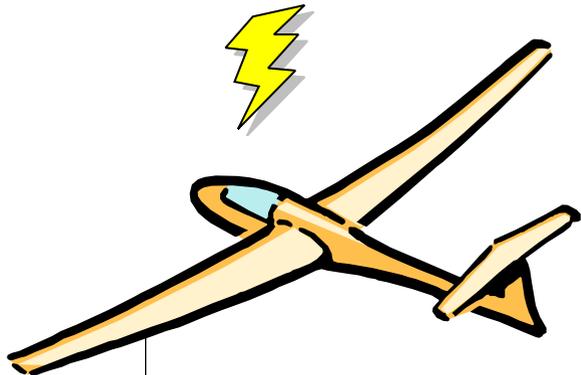
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looking for it (the grass was about four feet high) the model was found without any wing whatsoever. So there are still two wingtips out there somewhere with Hitec 80 servos in them. Well I was getting the hang of building these models so a week later we were out to the field with stunning performance. I think by now some of the other modellers were taking notice of these machines. People were asking questions about my machines, by the way Mk5 weighed in at just 34 Oz. Not too bad I thought so feeling pretty good about things I suggested to our Committee that we could hold a competition for seven cell Gliders. Thumbs up was the answer. Mk5 won its first competition. Our Club was the first to hold the State Championship for seven cell Gliders which I was also lucky to add to my collection. But it wasn't easy. Some of my competitors are almost on an even footing with me and it is down to one or two seconds that takes the prize Mk6 and 7 were built with modified wing section and wing length, Mk7 being outstanding with a wing section of top R.G. 15, bottom S.D. 7037 which as far as I can see is superb. Most of the flying members have seen my ups and (downs) and wonder if I will ever get it right.

Good things come to those who break (I mean wait).

Some of you may or may not know Kellyfield held the State Championships for 7 cell models (February this year). While once again I was successful, but if I don't pull my finger out it will be the last as some of my competitors are on an equal footing. While flying time is easy to achieve, landing on the spot without brakes is another challenge. But that's what it is all about isn't it?

Greg Robertson





CLASSIFIEDS *Free to Members!*

WANTED - 2 Channel 29mHz Receiver.
Contact **John Derrick 6394 7509**

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FOR SALE -

- Hitec Prism 7x Computer Radio Set. In box includes Tx, Rx, 4 HS422 servos (brand new), switch, manual etc Price \$395 ono (new \$570)
- Lion Electronics Tx/Rx Charger/Discharger (Cost \$110) sell \$50 ono.
- Astro 110D Charger charges up to 18 cells. Also included Astro 102 6-10 cell discharger. Offers above \$150.

All with original instruction manuals.

Phone **George Carnie 6398 2141** or **0418 134672**



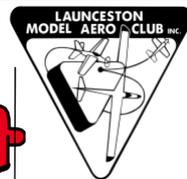
Contact **Peter Haworth**
42 Newland Street,
RIVERSIDE 7249
Ph **6327 3634** after 8:30 pm
Fax **6327 1140**

Join the increasing number of people who are enjoying hassle-free **Electric Flight**.

For advice and products you won't find at your local hobby shop!!



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Coming Events

Tear out this page and keep it handy

DATE	EVENT	DETAILS	TIME
June 16	F/Flight Power Scramble		9am
	Fun Fly	Round 1	11am
<i>June 30</i>	<i>NWAM</i>	<i>Pattern Day</i>	<i>10am</i>
July 6	Indoor Evening	PCYC Abbott St	7-9pm
July 21	7 Cell Electric Glider	Round 1	10am
<i>July 28</i>	<i>NWAM</i>	<i>Glider Day</i>	<i>10am</i>
Aug. 3	Indoor Evening	PCYC Abbott St	7-9pm
Aug. 18	Fun Fly	Round 2	10am
<i>Aug. 25</i>	<i>NWAM</i>	<i>Glider Day</i>	<i>10am</i>
Sep 7	Indoor Evening	PCYC Abbott St	7-9pm
Sep 7	Annual Dinner	Centennial Bathurst St	7pm
Sep 15	Pattern Day	Nov./S p'man/ Adv./Exp.	10am
<i>Sep 29</i>	<i>NWAM</i>	<i>Pattern Day</i>	<i>10am</i>
Oct. 5	Indoor Evening	PCYC Abbott St	7-9pm
Oct. 20	Open Glider	Round 2	10am
<i>Oct. 27</i>	<i>NWAM</i>	<i>Glider Day</i>	<i>10am</i>
Nov. 2	Indoor Evening	PCYC Abbott St	7-9pm
<i>Nov. 10</i>	<i>NWAM</i>	<i>Scale Day</i>	<i>10am</i>
Nov. 17	7 Cell Electric Glider	Round 2	10am
<i>Nov. 24</i>	<i>NWAM</i>	<i>Pattern Day</i>	<i>10am</i>
<i>Dec. 1</i>	<i>NWAM</i>	<i>Glider Day</i>	<i>10am</i>
<i>Dec. 8</i>	<i>NWAM</i>	<i>All Models Day</i>	<i>10am</i>
"BOLD" text denotes LMAC events			



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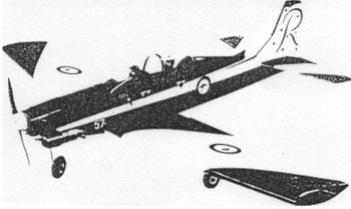
Coming Events *cont.*



DATE	EVENT	DETAILS	TIME
Dec. 15	Fun Fly	Round 3	10am
Jan 19	Scale Fly In		10am
Feb. 16	Pattern Day	Nov./Sp' man/ Adv./Exp.	10am
Mar 9,10,11	SMS	State Open Glider C'ship	10am Bothwell
Mar 16	7 Cell Electric Glider	State Ch'ship.	10am
<i>Nov. 24</i>	<i>NWAM</i>	<i>State Pattern Ch'ships</i>	<i>10am</i>
Apr. 20	Fun Fly	State Fly'in	10am
"BOLD" text denotes LMAC events			
Contests to be on the day specified. If weather is not suitable, then the next day, Sunday. If that too is not suitable then the event is cancelled and we move to the next contest scheduled.			
<p>"Club Day" is the first Saturday in each month.</p> <p>"Cafe Symmons" will operate each Contest Day and Club Day. <i>(Please come along to both these events. These are important fund raising events for your club . Ed.)</i></p>			



PC-9 Semi Scale ARF Model



\$299.95

FACTORY BUILT MODEL

SPECIFICATIONS

Wingspan	161 cm
Wing Area.....	4025 sq. cm
Approx. Flying Weight	2.6-2.9kg
Recommended engine.....	0.40-0.46
Recommended R/C.....	4 Ch
Flying skill level.....	int./adv.

Additional items required

- Engine
- 4 Ch or greater radio
- Glues
- Tools
- Starting Equipment

Kit Features

- Ready-made — minimal assembly and finishing required
- Ready-covered — including decals, trim and covering
- Factory-installed pushrods
- Factory-installed metal engine mount
- Factory pinned & glued control surface hinges for ultimate safety
- Comprehensive hardware pack including wheels, tank, spats, undercarriage & spinner
- Photo-illustrated step-by-step Assembly Manual

Hitec Flash 5 System X

The Flash 5 System X transmitter features several creature comforts to help customise the transmitter to your individual style. The control sticks are adjustable in height, allowing you to raise or lower the stick length to better fit your fingers. You may adjust the stick length by simply twisting the upper portion of the stick counter-clockwise.

A low voltage alarm is featured with the System X. This audible alarm will sound as a series of “beeps” to warn you that the transmitter battery is almost depleted. The System X radio is equipped with a trainer cord jack and activation switch to allow “buddy box” flight instructions with another Hitec FM transmitter. With 5 model memory, 3 pre-set mixes, 3 model flight modes and auto save features, this is a great bargain not to be

missed. **GET YOURS**

BIRCHALLS
118-120 BRISBANE ST
LAUNCESTON
1800-806-807

If not claimed within 14 days
please return to
P.O. Box 1204
Launceston Tas. 7250

