PROP TORQUE

COMMITTEE:

PRESIDENT	Peter Kidson	6394 4380
V.PRESIDENT	Merv Cameron	6344 5614
SECRETARY	Geoff Hays	6344 1920
TREASURER	Cliff Walters	6344 9931
CD	Andrew McEntyre	6384 1048
EDITOR	George Carnie	6398 2141
Committee	Greg Robertson	6343 1753

L.M.A.C., PO Box 1204, Launceston Tas. 7250
Web site: www.lmacrc.com

Official Newsletter of the...

LAUNCESTON MODEL AERO CLUB Inc.

VOLUME 12

DECEMBER/JANUARY

2003/04

SALE

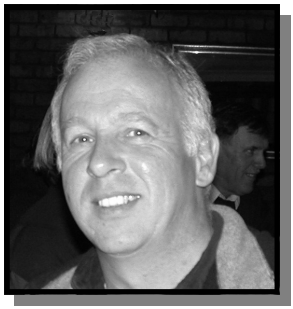
Sanwa 2 channel
radio control set
Was ~~$109.95~~
Now $59.95
*Limited stock available

Contact D'Wayne Leonard
118 –120 Brisbane st
The Mall
Launceston
PH: 1800 806 867
Fax: 03)6331 7165
Email: hobbies@birchalls.com.au

Birchalls
AUSTRALIA'S OLDEST BOOKSHOP

CAPTAIN'S REPORT

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



Hello to all for the last time this year. Yes, the big guy in the red suit will soon be with us. Bringing joy and goodwill and sometimes a gift or two. I've written my list, all I need is to find a chimney to stuff it up. Last year I shoved it up the flue of our wood heater. Didn't really think how Santa was going to get down it so it may still be there.
The club this calendar year has progressed quite a bit with more new members joining and learning to fly than any other year since I've been with the club. Good to see for all of us.

I'd like to take this opportunity to bring back a few memories of the past year. The AGM came and went with some changes to Committee positions such as Cliff Walters as Treasurer and a good job he's turned out to be doing. Next Gerry De Groot left us in favour of his work but he also did a great job and his boots were always going to be hard to fill, but Geoff Hayes with his experience has so far performed very well and just recently Greg Robertson has joined us and he is also very experienced and will fit in well.

Although there have been a few plane crashes this year most of us have gone home with a model intact. There has been an abundance of new models in the past twelve months. My Matrix is still going well and constantly out performing me. Dave Jacobs has had three (I may be wrong Dave), new planes. One was his Piper Tomahawk, One an Art Chester Jeep, the other and in my mind the best was his amazing and ungainly looking Transavia Airtruk. A small world it is too with LMAC having the ex son in law of one of the designers of the Airtruk. Kevin Hay of course has had a few new and very well finished planes. We've all come to expect this Kev, so keep up the good work. We haven't seen much of George and Kerry Carnie in the latter part of this year, but I know George has been building and should have a pletherer (I think) *(I'm sure plethora is what you meant Pete, Ed.)* of new models for next year.

Cafe Symmons has made more than a few dollars for the club this year so my thanks go to Deb and the girls for mucking in and helping this to happen. Keep up the good work girls.

Contests of all types have been run and won. Well done to all those who participated in the flying and thanks to those who got out of bed and helped our CD Andrew McEntyre to make sure the comps run smoothly.

For my part I've been building, (yes I know, slowly but surely, that's my method OK?) a third scale Citabria

(Continued on page 4)

complete with Ryobi 28cc whipper snipper motor. Should be finished for my column this time next year, maybe. The Raptor Helicopter also made a couple of appearances.

So, with the close of this year I bid you all a Merry Christmas and a happy new year. Be safe and we'll come back next year and do it all over again.

See you at the field,

Pete

SECRETARY'S REPORT

Geoff Hays
Ph: 0408 559806 or 6344 1920
ghays@netspace.net.au

Well it is about to happen 2003 is all but gone, you might recall that I made mention in my report last month of the happenings 10 years ago this month . Following that report I had an Email from Kevin Swiggs in Darwin who was our President at the time and he remarked on those comments saying that they brought back memories for him as well, in fact it was largely on his organising that we had the big weekend that coincided with the official opening of our Clubhouse, and that got me thinking maybe it would do well at this stage to mention the contestants who took part in the Pattern Champs in 1993. As I mentioned last month a good contingent came over from Victoria especially to take part, they were Ron Schulz, Henry Hutchinson, Rob Clarke, and Ray Stefaniak who finished in that order in Expert Class, and the other Victorian was Colin Lane who won Advanced Class.
The Sportsman Class was all Tasmanian, 8 of them and included in order of finishing
Terry Pearson (LMAC), Steve Cochrane (PFL), David Smith , Steve Ralph (NWA), Darren Turner (Phantom Flyers), Greg Robertson (LMAC), Peter Foxton (HMAC), Marcus Mok (Taylor Field). It was great to see all Tasmanian Clubs at the time represented, except of course (SMS) who were solely sailplane flyers. It is sometimes good to look back to where we have come from, I read with interest Dave Jacobs contribution recently and whilst I personally was not part of the scene at the time, I do remember regularly going to the cricket ground in Racecourse Cres., around 1948-50 and watching the control line flyers doing their thing , most memorable was the control line Dyna jet of Paul Roper's I believe, you had to block your ears when that machine was flying.

Any how that's all in the past and we look to the future, aviation is 100 years old this month it is amazing just what has been accomplished in that time, what about another 100 years we probably cannot even begin to imagine .

Any how I had better give you some snippets from our last committee meeting,

- The committee have decided to change the time and venue for their meetings they will be now held on the 1st Sat in each month (Club Day) at the Clubhouse, the first one being 7th Feb 2004, we will be starting our meeting at approx 3PM. Incidentally Committee Meetings are still closed meetings, but may I remind the membership that if anyone wants to bring something especially to the Committee's attention in person then this can be arranged for them to come to the meeting and present their item, otherwise inform one of the Committee members to bring it for you.
- In addition to the Club Day and contest days there will be a basic sausage sizzle on the Saturdays of the off weekends as well, courtesy of our canteen coordinator Debbie Walters, *Thanks Debbie*.
- We plan to make some minor improvements to the male toilet facility namely a new chemical toilet and some urinal improvements as well.
- 2 new tables are to be made for general use at the pit area, the other wooden one has reached it's use by date most definitely.
- As a Club we have had an invitation to stage a display at the Exeter show in Feb next year , if any one is interested to help with this could you get in touch with me on 6344 1920, it would be a static display only.
- New name tags will shortly be issued to the membership and you are encouraged to use these when at the field so that others who do not know you can identify you as they speak, a good place to keep your Name Tag would be with your Transmitter or in your car so that you may access it when needed.
- Also we must get into the habit of using the Transmitter Pound whenever 3 or more flyers are operating, it is rule 13 in our set of rules and this has not been strictly enforced as of late , it is pointless to have a safety rule that is continually being broken, it will be too late when something happens and we say if only the pound had been in use this would not have happened.
- If you have not been to the field since 13th Dec you will notice that the access to the strip from the pits has been changed, we will try this out to see if it works better in the interests of safety, so watch out for it.
- Lastly if any member wishes to use the notice board in the Clubhouse would you please put the date on your item so that it will be a guide to when it was placed on the board and not be left there forever filling the board up so that there is no room for anything else, as a guide a notice will be taken down after say 2-3 months this will make for better control of notice board space .

Members who wish to use this medium for advertising as in the Newsletter may do so FOC, Commercial advertisements incur a cost *(Refer G.Carnie for details).*

(Continued on page 6)

Well as usual I don't know when to stop writing my bit but had better at least for this year. In closing I would like to wish each and every one in the Aeromodelling Fraternity the very best of wishes for a joyous Christmas season and a bright, happy and safe New-Year.

Tech Tip

Fuel-Cooled Engines?

Our model engines have been called this- and with some reason! We all know the consequences of taking to the air with our needle valves set too 'lean'; we get airborne, the engine puts out great power but eventually sags, then dies. Actually, the little motor didn't just die because it didn't have enough fuel to run on. What REALLY happens is that the engine runs too hot at the lean mixture setting, and SIEZES due to excessive internal friction. Generally this seizure occurs at the flash point of the oil we are using in the fuel. The flash point is the temperature at which the oil burns, at about 400 degrees for most synthetic oil. When the oil burns, it doesn't lubricate, and the friction in the engine goes up dramatically, causing even more heat, causing even more of the oil to burn, causing... well, you see the point.

So what we have to do is run the engine with a rich fuel-air mixture, ensuring that all of the fuel that goes through the engine does NOT get burned! That extra fuel will keep our engine cool. How? Most all of us did a little experiment in High School, converting water to steam. We heat up a pan of water to the boiling point- and then must supply a LOT more heat to get the water to turn to steam. The same principle applies to the alcohol we're burning in our engines. If there's too much of it, it won't all burn; but the rest is turned into a gas (alcohol steam?), absorbing and carrying away considerable heat energy from the engine. Alcohol, by the way, is very 'good' at this process. Pour a bit of fuel on your arm on a hot day - you can instantly feel the cooling effect as the alcohol evaporates into the air, carrying away some of your body heat. Oil in your fuel also carries away heat, assuming that it doesn't burn. Although the oil doesn't convert to gas, it will still carry away some of the engines heat as it passes through. So, the more oil in your fuel, the cooler your engine will run, not only from the extra lubrication, but also from heat transfer into the exhaust. Humid air also gives a cooling boost- the water vapour doesn't burn, and carries some heat out of the engine.

OK, we've all had the 'run your engine a bit rich' bit drilled into our heads at every opportunity. Aside from embarrassing dead stick landings, what's the big deal? After all, the engine will start right back up, and runs fine. True. But go back up to the 'seizure' part of this article. Note that the seizure comes from lack of lubrication. Every time we let our engines get too lean, we are shortening its life span, from extra wear. Getting that little bit of extra power, by going a click or two leaner, may well be costing you.

Think about it - run rich, 'waste' some fuel = bucks. Run lean, seize engine often =

From the Editors

George & Kerry Carnie
"Glenhaven" 50-62 Fairtlough St Perth 7300
e-mail: george_carnie@bigpond.com
6398 2141 or 0418 134 672

Hello again,

Another year has almost passed and where has it gone? Very little flying for me this year but a few achievements nonetheless. Cameron Aitken joined our club and between him and I, his model was built and Cameron is now a couple of flights off flying solo. He has shown an interest in the electrics and I suspect when his budget will allow, he might take the next step. There is no doubt that electric technology is making rapid advancement and 2004 is expected to be a big year for electrics.

The website went from concept to reality and the feedback has been very good. Hopefully the members find it useful and we look forward to developing some more pages next year. Don't forget, if you have a photo you might like to display on the web, send it to me. Email is best but a print will be fine and I can return the print when I'm finished.

Thanks to those that contributed articles to the magazine. It is not easy putting together sufficient variety every four weeks. You only have time to prepare and post one month and it is time to start preparing the next. We're looking forward to the little break now as the next magazine will be the February edition.

The Christmas party has come and gone and this year we had a good turn out. Thanks to those that were able to attend and share some of the Christmas spirit. My thanks to Kerry for spending many days preparing the food and venue. Thanks also to the ladies who came on Saturday afternoon to help also. Unfortunately the weather was not kind so no flying took place.

The Christmas Hamper was drawn by Molly, Cameron's grandmother. This superb hamper was won by Michael Farrow. Thank you to all who supported the club and bought tickets.

A special thanks to the sponsors during the year.

- D'Wayne Leonard at **Birchalls**
- Brian Simpson, owner of **Perth R/C Models and Hobbies**
- Bill Bland, owner of **Gliders Australia**
- Joe Curtain of **Nick's Hobbies**

We hope Santa looks after you all and brings you what you wish for. The best we can do for you is to wish you all good health and prosperity for 2004 and may your models come back to earth when and where you want them to.

Until next month……..

Put a spark in your life—
Fly Electric
George & Kerry

Contest Directors Report

Andrew McEntyre
6384 1048 / 0408 969360
amcentyr@tassie.net.au

Hello to All

Well the festive season is with us again and we all look forward to good weather and the odd party to attend. A number of members and friends attended the clubs Christmas party at George and Kerry's on Saturday 13th December. As in past years it was a great afternoon with everyone enjoying all the best food on offer. Special thanks go to George and Kerry for providing the venue and the many hours Kerry and her helpers in the preparation of what was excellent food.

Results from the Pattern day held at the field on Saturday 29th November are shown at the end of this report. The weather on the day was excellent with very little breeze and fine. I'm not sure how it happens but on pattern events the weather has been tops for some time; shame this could not also be the case for other events. While I'm still thinking on the Pattern events I would ask fellow members to come out to the field and assist with scoring and enjoy some great flying. Thanks to George Carnie that joined in on the 29th for the first time at scoring and getting the ropes from Pete.

Now the results from the All Models Day held at the field December 13th. I had arranged 3 prizes for this big day, a lead up to the Clubs Christmas Party at George's. Also planned for the day before everyone arrived was a working bee to start at 9am. I was first and Peter Kidson arrived soon after. Closely followed by Greg and Alice, Geoff Hays, Cliff and Deb, Merv Cameron, Max Burrows. Well the working bee got underway. Somewhere with this entire going on we all forgot about the flying with the wind blowing about 20 knots.
With Greg and Peter all over the paddock with picks chipping burr myself on the mower and Geoff and Max with whipper snipper and push mower a great day was had by all. The end result on the day the field has the new roped off area around the pits and there is now only one entry through the tyres into the pits area. From a safety point of view this is a welcome change and many thanks go to all those that helped. On the day we also shared the strip with a crop dusting plane, he didn't stop long enough for me to give him a ticket in our prize draw. Peter had a couple of rounds with his helicopter and felt he should take home a couple of prizes. Sorry Pete they will be there for next time providing Greg and Alice don't win again. So this report on the All Models day has got a little wayward but this is how the day ended but lets not forget thanks to Debbie for having a sausage sizzle on the day a well earned break was had by all.

The next event to remember is the Pattern Event January 17th please come

along and help even if you're not flying your help would be appreciated. A Merry Christmas to everyone and all the best for the New Year and I hope to see you at field soon. ….. ***Andrew C.D.***

Contest Scores 2003-2004				
Pattern Event 29 November 2003				
	Name	**Pts**	**Model**	**Motor**
Sportsman				
1st	Andrew McEntyre	392.34	Dragonfly	S/Tigre 91
Advanced				
1st	Peter Kidson	761.67	Matrix	OS140 RX
2nd	Kevin Hay	578.67	Magician	YS140 FZ
Expert				
1st	Scott Kay	2000	Magic 3	YS140 Dingo
Masters				
1st	Garry Anderson	2000	Magic 3	YS140 Dingo

FUEL TIP– If it is suspected that there may be water in the fuel there is a neat trick to find out and also at least reduce the amount of water. Fill a glass jar (such as an old coffee jar) with the fuel and screw the lid on tightly. Then put the jar in the freezer. As it cools down any water in the fuel will freeze out as ice. But because ice is more dense than fuel it will settle to the bottom of the jar almost like snow. You can then carefully decant most of this cleaned fuel into another container but be careful not to let any ice pour out. Clean and dry the jar and then repeat with the rest of your fuel.

One thing you may notice (especially if you mix your own fuel) is that when you shake the container there will be foam on top. This will also happen in the fuel tank and can lead to erratic running. The cure for this is to add a few droplets of Armorall (a car vinyl cleaner) to the bulk container. A tiny amount in a 20 litre drum is enough. To see the effect it has, shake the container to foam it up then add the few droplets and magically the foam disappears.

Andrew C.D.

What Makes A Good Trainer? Part 2

What makes a good trainer?.

As you would have read last month we talked about the difference between ARF and Kits. This time I'd like to take a few lines to talk about suitable engines and radio gear to partner your new trainer.

Engines,
As you open your new box of goodies in the form of the trainer of your choice you will have read the specifications of the particular model on the side of the box. (you did read it didn't you?) Anyway you will have seen the part about what size engine is best suited to your model. What it won't say for obvious reasons is which make is best.
Since I first started flying I have used only internal combustion engines and the reason is very simple, that's mostly what was around in those days, (thirty years ago), so not much choice back then.
The manufacturer I preferred was mostly OS, and although I went through a stage of trying other types I found none, (at that time) to be anywhere nearly as powerful. So I stuck with OS and am still using them today.
That of course is not to say in today's market there are no better IC motors than OS, I think you will have to go a long way to beat them. The model box will also give an indication as to which four stroke engine size may be used. Four stroke motors are as good in every way as two stroke ones, but I have to say I would not recommend one to someone just entering this sport or hobby. They can be a bit fickle in setting them up.

Learn to fly and as you progress with various model types maybe then is the time to look at four strokes if you wish.

Other types of propulsion motors are electric ones. From the common buggy motor, (as used in model cars, hence the name), to something like a Hacker brushless type all can be used in planes of different sorts. There is a huge variety too big to mention here, but by all means have a chat to some of our electric enthusiasts within the club, I'm sure they will put you on the right track. (Yes, this is a cop out on my part. I know nothing about this type of motor).

Companies, including OS make engines of all sizes to suit all sizes of models so there's no reason why you will have any trouble finding the right one.

Radio gear.
European countries have in the past and probably even today tend to lean toward Futaba Radios. Australia in contrast tend toward JR. Why this is I have no idea and it does'nt matter anyway because I don't believe there's a great deal of difference in the two types. I mention these two radios because they are probably the best and most common. (My opinion only chaps).
There is another make on the market which I would highly recommend and that is Hitec. Hitec at present do not have the amount of knobs, switches and other

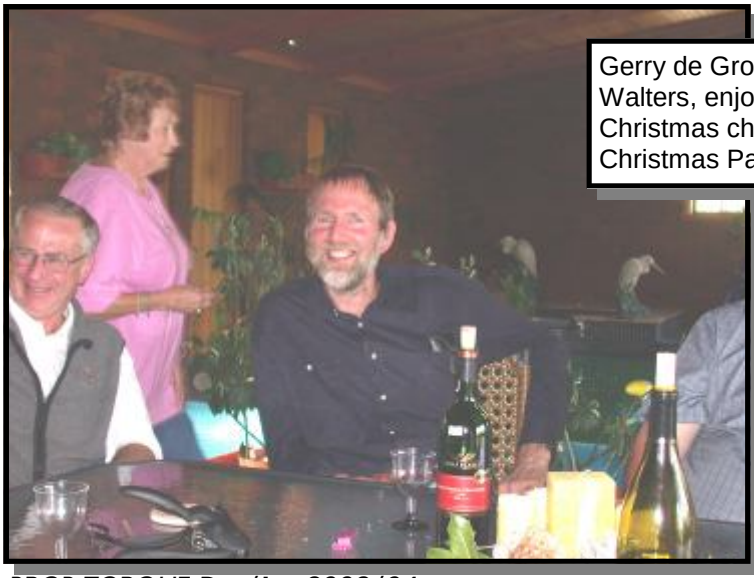
(Continued on page 11)

devices that the aforementioned ones do but that's not to say the quality suffers. Far from it as I use a Hitec receiver and servos in my Matrix and these have got to function well for Pattern flying. I have complete faith in Hitec airborne packs But in my opinion the transmitters suffer from a lack of mixing abilities, switches and other minor things. Having said that I should reiterate Hitec transmitters are of a high standard and perfectly capable of performing well under most circumstances.
It is my belief that although the cost may be more than the budget, it will in the long run pay to buy the best set of radio gear you can afford. Look to the future, very few modellers give up flying after a few sessions and so your radio gear should last for a long time. Think about this, if you start off with a low cost radio, (and all three makes I've mentioned do them), you will after a short period of time out grow it. The transmitter will not have mixing for this, or a retract gear switch, flaps, spoilers, airbrakes exponential, it goes on and on. At some point in time you will have to change the radio thus spending more than you wanted anyway. So buy a good one from the start and it will last a very long time, you know it makes sense.

As this article comes to a close I hope it's instilled some thoughts about a trainer, engine or radio gear. I've purposely left the final decision of what to buy up to you. As you have to be happy with what you've bought. Please don't forget you can always approach a club member at the field and if they for some reason are unable to help they will put you in touch with someone who can....

Good Luck and happy flying.

Pete……..



Gerry de Groot & Cliff Walters, enjoying some Christmas cheer at the Christmas Party.

Super Winter Specials

NEW FROM ZN LINE - HYDEAWAY & ENIGMA

HELICOPTER KITS

JR HELI'S

VENTURE 30 ARF	$ 1280
VOYAGER 30	$985
VOYAGER 50	$990
VIGOR60	$1900
RAPTOR 30 MK II	$840
FURY 60	$CALL
MOSQUITO	$790
MILLENIUM2	$2250

POWER KITS

TRAINERS

HUSTLER 3	$95
CLASSIC ARF	$139
BOOMERANG 40	$150
CHALLENGER	$160
CANARY	$149

SPORTS & SCALE

ATLANTIS	$270
MIDGET MUSTANG	$440
CMPRO.LARK	$358
VMAR ROULETTES 81INCH	$595
SWALLOW 90	$430
CMP BIRD DOG	$400
MIDWEST G202 KIT	$467
FOCKE-WULF 190	$415
AIRSAIL CHIPMUNK	$175
DOLPHIN 40	$199
FAIRCHILD PT19 ARF	$215

DESERT AIRCRAFT

DA 100	$2290
DA 150	$2990

ENGINES

2 STROKE

46 SIZES

MAGNUM 46	$170
THUNDER TIGER	$170
SUPER TIGER	$198
GMS 47	$165
YS 45	$345
OS LA46	$119
OS 46FX	$199
OS 50 SX	$299
OS 10LA	$104
OS 15LA	$124
OS 25LA	$135
OS 25FX	$198
OS 40FX	$190
OS 61FX	$350
OS 91FX	$445
OS 140RX	$865
OS 160FX	$605

4 STROKE

MAGNUM 30	$235
MAGNUM 52	$289
MAGNUM 54	$335
YS 53	$595
OS 30	$321
OS 40	$369
OS 52	$390
OS 70 SII	$505
OS 90 SII pump	$649
YS 91	$785
OS 120SE	$761
OS 120 SIII	$759
SATIO 72	$460

TURBINES

JET CAT 120	$4500
WREN MW 54	$2950

HELI ENGINES

OS32 SX	$280
OS50 SX	$321
OS70 SZ H	$499
OS91 C SPEC	$485

GLIDERS

DAW DRAGNETTE HLG	$122
FVK GILLETTE	$350
SALSA HLG AILERONS	$229
SKYHAWK	$319
MULTIPLEX MILAN	$799
AMD SU35	$291
BROLGA 2	$88
STARLITE	$1550
COHEN	$900
NYX	$1899
MINI ECLIPSE	$499

DAVE'S AIRCRAFT WORKS

ME109, P51 ETC	$165

LOADS OF GEAR

SPEED CONTROLLERS

SHULTZE

SLIM 20	$72
SLIM 40	$102
SLIM 55	$145
HACKER CONTROLLERS	FROM $130

PROPS

APC, BOLLY, MASTER AIRSCREW, RAM, TOP FLITE, MENZ, GRAUPNER

VIDEOS

IRCHA 2002	$59
PRO AERO TOW	$59
TOC 2002 DVD	$80

ELECTRIC FLIGHT

WINGO	$185
ALLIANCE	$230
FIREBIRD XL	$199
MULTPLEX TWIN JET	$260
KAVAN PROJET I	$165
DAW STAUDACHER EPP	$123
ALBATROSS 2M ARF	$210
ELECTRON Q 2M AILERONS	$370

NEW ARRIVALS

POWER BOX
HACKER ELEC MOTORS
AERONAUT
FVK MODELS
MK ACCESSORIES
BVM ACCESORIES
WREN TURBINES
R.F.M. PROPS
KAVAN KITS & ACCESSORIE

Inexpensive Freight Rates to Tasmania. Call us for details and those hard to find items.

MODELS & HOBBIES RC PERTH

Call Brian Simpson on: (08) 9328 8986 Fax: (08) 9328 8932 Email: perthrc@perthrc.com.au
Web: www.perthrc.com.au Perth RC Models and Hobbies 454 Newcastle Street, West Perth, WA 6005

MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA INC.

Newsletter

NO. 6/2003

President: Mike Close, PO Box 146, West Pennant Hills NSW 2125
Telephone: 02 9872 6469 Fax: 02 9871 0408

Vice President: Theo Merrifield, 25 Jecks St, Rockingham WA 6168
Telephone - 089 528 3124

Secretary: Ivan Chiselett, 1 Watson Ave, Mont Albert Nth Vic 3129
Telephone (03) 9897 1220 Fax (03) 9897 1445
e-mail; maaasec@ozemail.com.au

Treasurer: Ian Gillespie, 332 Orange Grove Rd. Salisbury Qld 4107

Technical Sec. Fred Adler 18 Ivory St. Noranda WA. 6062
e-mail; maaatechsec@touch88.com.au>

MAAA Internet: http://www.maaa.asn.au

Manual of Procedures

The M.A.A.A. Manual of Procedures, which contains procedures, policies and forms, is now on the M.A.A.A. web site. If you require information on any topic relative to the operation of model aircraft, the Manual is a very good place to start. Please be aware that it is a live document and the procedures and forms are updated from time to time. Please note that every document is dated, so if you have downloaded one recently check the date against the version on the web site to ensure you have the latest version.

World Distance Record.

Mayard Hill of the US has just claimed new world distance and duration records for a model aircraft. The distance being 3039 kms and the duration 33h 39m. 15s. This is pretty incredible when you consider that the model can only have a maximum take off mass of 5kg.

The model flew from Newfoundland in Canada to Ireland. Victorian Peter Garoni once held the distance record. He set it across the Nullabour in 1994.

Internal Navigation Systems

The M.A.A.A. has adopted a policy on internal navigation systems in model aircraft. The policy does not allow the use of any internal navigation device that allows for autonomous flight. This does not include gyros such are in helicopters or stabilisation systems sometimes used to assist in training. However, any model that uses an internal navigation device for autonomous control will be considered as being in contradiction

(Continued on page 14)

(Continued from page 13)
to M.A.A.A. policies. Therefore, it is highly likely that our insurance policies would not be applicable.

The full text of the policy is available in the M.A.A.A. Manual of Procedures on the M.A.A.A. web site.

Frequency Keys & Boards

The M.A.A.A.'s preferred method of frequency control at flying fields is the "Silvertone" © system. The original Silvertone system used 2**"** of the keyboard to represent 20kHz of frequency bandwidth. These boards were commonly called the "imperial" board. For example, a radio certified for 20kHz bandwidth used a 2" (50.8mm) wide key. This was fine for the 29MHz band but when the 36MHz band became available the width of the keyboard expanded considerably. The original Silvertone board for the 36MHz band was made in two rows. This required the use of "guard" keys for the frequency in the middle of the band where a 2 wide key would have covered another slot but it was on the other half of the board. Some clubs joined the two half rows to make one long board, but most operated with two separate rows for the 36MHz band.

To overcome the problems associated with the 36MHz keyboard being in two halves and the need for "guard" keys Silvertone released a "metric" version of the 36MHz board approximately half the total length of the "imperial" board. With the "metric" board, 12.5mm represented a bandwidth of 10kHz**.** Therefore, a frequency key for 20kHz for the "metric" keyboard was about half the width of a 20kHz key for the "imperial" keyboard.

As part of the requirements for 10kHz operation, the M.A.A.A. required that if a Club decided to allow 10kHz bandwidth radios to be used at their field they MUST adopt and use a "metric" keyboard. This requirement was designed to reduce the possibility of keys being used wrongly between imperial and metric keyboards with the safety implications that would result.

Silvertone also improved the design to remove the possibility of "metric" keys being used with "imperial" key boards by increasing the width of the tang on the back of the new "metric" keys and to widen the tang slot on all new "metric" boards manufactured. This has the affect that the new "metric" (wide tang) keys will not fit into the "imperial" keyboards. This removes the possibility of their use with the "imperial" keyboards, as they would not fit into it.

It is known that there are several early "metric" keyboards with the narrow tang slots in use at clubs and their members still using the old "metric" narrow tang frequency keys. Both the M.A.A.A. and Silvertone recommend, in the interest of safety and to bring

(Continued on page 15)

each club to a uniform standard, that the older narrow tang "metric" boards be modified to use the new wide tang "metric" key and all members discard the narrow tang frequency keys and use the new wide tang "metric" keys. To change the frequency board requires a fairly simple task of milling the keyboard slots wider to take the new keys. The new wide tang keys are available from Silvertone. For additional visual recognition the metric keys are manufactured form yellow plastic.

To summarise, the M.A.A.A. requires that the imperial keyboard can only be used for 40kHz and 20kHz frequency spacing with keys of 4" and 2" widths respectively. The metric keyboard can be used at 40kHz, 20kHz, and if the club agrees and in line with the M.A.A.A. requirements, 10kHz frequency spacings with yellow keys of 12.7, 25.4, or 50.8 mm respectively.

Team Trials for World Champs

There has apparently been a little confusion regarding team trials for World Championships. The running of World Championship Team trial/s is the responsibility of the various Special Interest Groups. It is their responsible to advise the M.A.A.A. Secretary and members of the location and dates of the trials so that members have every opportunity to participate.

The M.A.A.A. prefers a single trial system but Special Interest Groups are able to apply for permission from the M.A.A.A. Executive to run a multi trial system. It is essential that Special Interest Groups start planning for team trials at leat one year prior to the World Championship. It also the responsibility of the Special Interest Group to advise the M.A.A.A. Secretary of the members who have qualified for a position in the team.

There is a procedure in the M.A.A.A. Manual of Procedures that details the requirements for Team Trials.

If any member is interested in competing for a position in a World Championship team they should contact the Special Interest group in their state or their State Secretary for the contact details of the special interest group in their state.

World Champ Results

During 2003 5 teams represented Australia overseas. The results of our teams and their members are listed below;

F1 – Free Flight; Team Placing 22nd

F1A - Phil Mitchell 3rd ; Vin Morgan 95th ; Nickolay Nickolov 73rd ; Team 22nd

F1B - Richard Blackam 44th ; Don Blackam 15th ; Terry Bond 90 ; Team 22nd

F1C - Roy Summersby 51st ; Team 24th

F3A – Pattern; Team Placing 11th

(Continued on page 16)

(Continued from page 15)

Alfred Pye 20th, Steve Coram 29th & Bill Bloodworth 33rd

F3B – Gliding; Team Placing 12 from 25 teams.
Greg Voak 13th ; Matthew Wood 32nd & Ross Ginder 56th.

F3C – Helicopter – Team Placing 13th.
Mick Warren 36th, Rick Mailath 42nd & Robert Miller 43rd.

F3D – Pylon ; Team Placing 3rd ;
Chris & Kevin Callow 1st & World Champions and set new world record.
Ranjit Phelan & Rodney Donohue 4th ; Frank Harrod & Noel Davern 8th Rodney Donohue & Ranjit Phelan 24th.

Congratulations to all those that competed so well for Australia.

Next year we will have teams going to the following World Championships;
Control Line in USA ; F3J - Gliding in Canada ; F4C - Scale in Poland and F5B & D - Electric in the U.K.

There is also the Asia Oceanic F3A – Pattern - Championships being held at Coolum in Queensland from 15 to 24th of July 2004. If you are interested in pattern then you should start planning to be a Coolum in July. This will be a rare chance to see some the world best F3A pilots in action.

Centenary of Flight.
The centenary of flight, December 17th, is fast approaching. What is your club doing about it? I know quite a few clubs are planning events to mark this milestone. If your club is not, why not start to plan a get together at your field to celebrate this very historic event. It is amazing to think that flight has come so far in such a short time.

Membership Numbers
Several people have made comment that we will loose members this year due to the large fee increases as a result of the large rise in insurance costs. So far this year the numbers appear to be similar to last year, however it is far too early to get a good idea of the numbers. We all just have to continue to promote the value of membership and that despite the savage increases our insurance it still represent good value for the protection that we get.

Any Association/Club is only as good as its membership. It is vital that we maintain our membership numbers and preferably have them rise. If the number of members drop then it puts pressure on our revenue stream due to the loss of revenue for those that have dropped out.

The best way to ensure we continue as an active Association is to get new members involved in this great sport/hobby. Let us all try to encourage at least one new member to join us each year. Maybe it is a workmate or a friend has shown an interest. Why not invite them down to your field to have a go. Many clubs have instructors that are able to give potential members a trial lesson. Lets get more members into this great sport/ hobby so that the Associations can continue to thrive.

Tech Tip

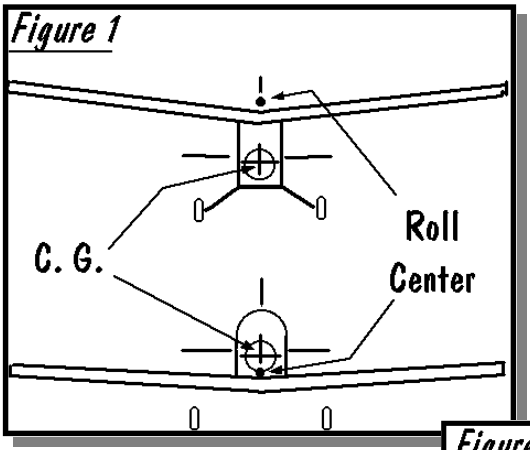
HIGH WINGS versus LOW WINGS

We finally master our high wing trainer -- or trash it, whichever comes first. Maybe then we build a shoulder wing plane. Only after we are somewhat competent at flying do we try flying a low wing plane, and then with white knuckles and shaky knees. WHY? Just what is it about low wingers that make them "tougher" to fly? Are they faster? No! All other things being equal, there's virtually no difference in drag, or therefore top speed. The illusion comes from designers' choice -- they tend to put faster airfoil sections and lower aspect ratios on low wing planes, making them speedier.

Low wing planes do have several characteristics, compared to high wingers that make them more suitable for higher performance aircraft.
1. "Nicer" (and quicker) roll response. This comes from the relative placement of the Centre of Gravity, being closer to the natural roll centre of the wing. The CG will be at or only slightly above the roll centre of a low wing, but well below that of a high wing. Assuming at least a little dihedral, the roll centre of the wing will be slightly above the centre of the wing. See figure 1. In a roll, the wing (providing the "power") wants to roll about its own roll centre. the roll centre of the wing will be slightly above the centre of the wing. In a roll, the wing (providing the "power") wants to roll about its own roll centre. The rest of the plane (the "resistance") wants to roll about the CG. The wider the distance between roll centre and CG, the funnier-looking is the roll (i.e., "non-axial").
2. The low wing lends itself to a less stable stabilizer position, leading to more pitch manoeuvrability. With a high wing, it's simple, and natural, to have the stabilizer well below the wing. When the nose is pulled up, the stab drops down well below the wing's downwash, and becomes increasingly resistant to further AOA increases. This is great for stability, and makes stalls less likely. The opposite is true for the low winger -- or a pull-up, the higher stab drops into the wing's downwash, making further AOA increases easier, and the plane more manoeuvrable.

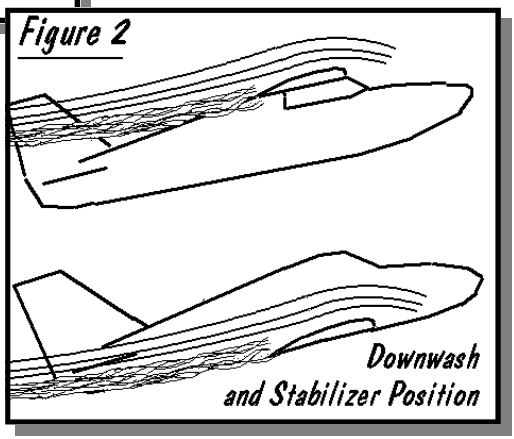
3. The low wing reacts more neutrally to power changes. Our old high wing trainer, with the thrust line very low, will respond by pitching nose up when power is added, nose down if power is reduced. This contributes to stability, with the nose going the way we want it to on a trainer. On the other hand, the low winger will be more neutrally stable, without much pitch reaction to power changes. The low winger will also be more wind "resistant" on the ground, a function of wing height above the wheels. The high winger will naturally be more "tipsy," reacting to wind while taxiing and during takeoff and landing.

We must all understand that we're only talking of tendencies here. There are many other variables that have an impact on the characteristics involved -- the designer can juggle these around to get the desired handling. But wing placement is definitely one of the biggies when it comes to establishing how a plane is going to handle.



"….. the roll centre of the wing will be slightly above the centre of the wing." … "The wider the distance between roll centre and CG, the funnier-looking is the roll (i.e., "non-axial")"

"….. the higher stab drops into the wing's downwash, making further AOA increases easier, and the plane more manoeuvrable."



Coming Events

DATE	EVENT	DETAILS	TIME
Jan 17	**Pattern Day**	**Round 4**	**9:30**
Feb 21	**State 7 cell Glider**	**Championships**	**9:30**
Mar 6&7	State Pattern Champs	Highclere	9:30
Mar 13&14	State Fly-In	Kelly Field	9:30
Mar 20	**Pattern Day**	**Round 5**	**9:30**
Mar 27	**All Models / Thermal**	**Rounds 3**	**9:30**

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.

"Club Day" is the first Saturday in each month.
"Cafe Symmons" will operate each Contest Day and Club Day (Sausage Sizzle on other Saturdays).
(Please come along to both these events. These are important fund raising events for your club . Ed.)

Christmas Party Snapshots

John de Groot, Debbie & Cliff Walters (not sure what Debbie had in mind for the knife!)

Candid Camera

Christmas Party Snapshots

The Aitken family; Bronwyn, John and Cameron.

Alice & Greg Robertson

Robyn & Andrew McEntyre

President Pete and Molly
(Cameron's grandmother)