AVANZ NEWS

AVA
ASSOCIATION of VINTAGE AEROMODELLERS

Newsletter of the Model Flying New Zealand Vintage Special Interest Group SAM 55

Issue 148 *March / April 2016*

In this Issue

From the Editor

Nostalgia is what the Vintage movement thrives on, but our nostalgia is not limited to an attraction to aeromodels of the past. With just a few days to go before the major aeromodelling event of the year gets underway at Clareville, fliers with many a Nationals under their belts may be feeling as I do, that they will be returning home, to the right and proper location for the Nationals.

They will be looking forward to reliving, or at least remembering, those things that have kept them coming back each year : the cameraderie of the campsite, evening get-togethers, Aggregate madness, pulse-jets on New Year's Eve, and the contest flying.

Most of us long ago swapped a tent for a motel room and camp cooking for dining out in the evenings. In most cases, what we fly has also changed. As age makes the wide free flight fields less appealing, the dreaded "wireless" draws us in to manicured radio control landing circles where enthusiasm for playing with toy aeroplanes can be recreated in many other, different forms.

Whatever the changes in ourselves and our hobby, meeting with the like-minded remains a major drawcard of the Nationals.

The afternoon of the last day is reserved for business, which includes the Vintage AGM. There are several remits to discuss, so be there if you can. Scrutineer Graham Main has collated the results of voting for best 2015 contribution to AVANZ News, and the winner will be announced at the meeting.

Bernard Scott

Contributors to this issue :
Bill McGarvey Dave Richardson
John Butcher Wayne Cartwright
Dave Crook

On the Cover *Long-time free flighter Rex Bain with wireless IC Tomboy at Tuakau.*

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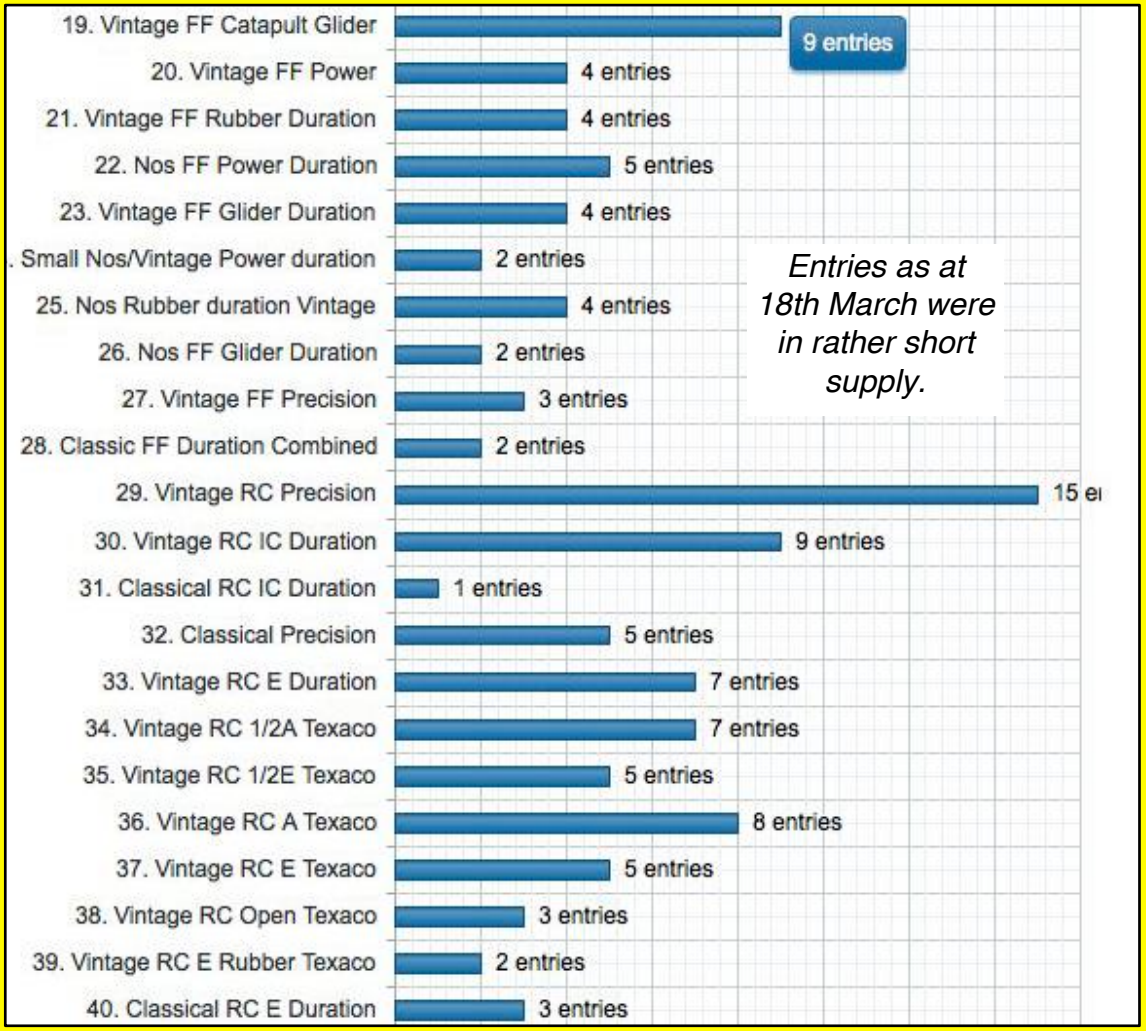


Entries as at 18th March were in rather short supply.

VINTAGE FREE FLIGHT	day
Vintage FF Catapult Glider	1
Vintage FF Power	1
Vintage FF Rubber Dur	2
Nos FF Power Duration	2
Vintage FF Glider Duration	3
Small Nos/Vintage Power Dur	3
Nos Rubber Duration Vintage	4
Nos FF Glider Duration	4
Vintage FF Precision	5
Classic FF Duration Combined	5
VINTAGE RADIO	
Vintage RC Precision	1
Vintage RC IC Duration	1
Classical RC IC Duration	1
Classical Precision	1
Vintage RC E Duration	2
Vintage 1/2A RC Texaco	2
Vintage 1/2E RC Texaco	2
Vintage RC A Texaco	3
Vintage RC E Texaco	3
Vintage RC Open Texaco	4
Vintage RC E Rubber	4
Classical RC E Duration	4

National Decentralised Contests

NDC events for each month may be flown on any Saturday or Sunday of that month.

Send results to : *mfnz.recordingofficer@gmail.com*
For the Leader Boards, Cc the Editor at : *scott.scott@xtra.co.nz*
(Include NDC event number and model details)

APRIL

#89	Vintage	FF 1/2A / Min. Replica
#90	Classic	FF Power Duration
#91	Vintage	RC 1/2A Texaco Scale
#92	Vintage	RC 1/2E Texaco
#93	Vintage	RC A Texaco
#94	Clasic	RC Precision

MAY

#95	Nostalgia	FF Rubber Duration
#96	Vintage	FF Precision
#97	Vintage	FF Power Duration
#98	Nostalgia	FF Power Duration
#99	Classic	FF Rubber Duration
#100	Nostalgia	FF Gilder Duration

JUNE

#101	Vintage	FF HLG
#102	Vintage	FF CAT
#103	Classic	RC E-Duration
#104	Vintage	RC Precision

North Island RC Contest/Rally Schedule 2015 / 16

April 23, 24
Vintage and Glider Rally Cambridge

May 8
Bob Burling RC Fly-in Levin

May 22, 23
NNI Contest and Rally Pukekawa

September 11
LNI Vintage RC Champs Levin

[NNI = Northern Nth Island LNI = Lower Nth Island]

Waikato Nostalgia Free Flight Champs

Saturday May 7th 2016

9:00 am - 2:00 pm Piako Road

$5 Field Fee Liquid 1st Place prize for FF events

1. Power 3 x 120
2. Rubber 3 x 120
3. Glider 3 x 120
4. Precision 3 x 120
5. HLG / CAT 6 x 60
7. RC Tomboy IC or Electric (2S, 180mA max)

Models for 1-5 may be from Vintage, Nostalgia or Classical periods
Fly-offs at 2:30 CD : Bernard Scott scott.scott@xtra.co.nz

EVENT REPORT Tuakau 20-21 February

MFNZ Vintage SIG: Report of Tuakau Contest/Rally 20-21 February 2016

Report I could not make it to this event due to a leg problem, so thanks to Bernard Scott and Dave Crook for handling the CD tasks on Saturday and Sunday respectively. The entry was very good, given the blustery conditions – 46 entries recorded 128 flights. Several models stayed safely in vans on Sunday.
It is good to see interest remaining strong despite the chancy weather so far this season.Thanks also to Tuakau club for hosting this event. ***Wayne Cartwright***

Comments from John Butcher The mornings were calm with good lift but by 10.30 wind began to increase to become a little unpleasant particularly for landings. By 2.30 a noticeable decrease soon produced good flying conditions but with little lift. Sunday, unfortunately, was more extreme. After 10.30 the wind began to increase until it was fairly unpleasant with no sign of a decrease. With the Nationals so close some of us were reluctant to fly - the prospect of repair work or rebuilding was not very appealing. I think that everyone enjoyed the weekend. There also seems to be an appreciation of having a BBQ on the job. Unfortunately Don Mossop suffered a badly cut hand due to a freak accident and we wish him a quick recovery. I have since spoken to Don and he has stitches and a cast on the wrist - no tendon damage fortunately. The cast is expected to come off in ten days and stitches coming out. He assures me he will compete at the Nationals. Also, it was very good to see Laurie Chrystall and Keith Williamson back competing.

Results

		R1	R2	R3	Total	FO
Vintage Precision						
Brian Harris	Bomber	200	200	200	600	200
John Butcher	Miss Fortune X	200	200	200	600	197
David Gush	Miss Fortune X	200	200	200	600	173
Graham Main	Miss Trenton III	200	200	200	600	
Gordon Meads	Lanzo RC1	200	195	200	595	
Dave Crook	Playboy	200	200	176	576	
Stuart Lightfoot	New Ruler	198	194	181	573	
Bernard Scott	Lanzo RC-1	188	200	184	572	
Don Mossop	Bomber	164	200	200	564	
Rex Anderson	Trenton Terror	200	163	200	563	
Tony Gribble	New Ruler	200	200	158	558	
Doug Baunton	Miss Arpiem	176	164	186	526	
Laurie Chrystall	Thermal Magnet	191	180	49	420	
Keith Williamson	Bomber	102	0	0	102	

Classical Precision					
Graham Main	Gigi	198	193	190	581
David Gush	Tyro	194	196	188	578
Brian Harris	Humbug	180	198	178	556
Vintage IC Duration					
John Butcher	Miss Fortune X	260	260	255	775
Gordon Meads	Playboy Senior	228	207	260	695
David Gush	Miss Fortune X	208	195	260	663
Vintage E Duration					
John Butcher	Miss Fortune X, 600 sqin, 3S, 20C	300	249	305	854
Brian Harris	Bomber, 460 sqin 1000, 4S, 25C	228	320	252	800
Tony Gribble	Stardust Spl, 740 sqin 1000, 4S, 25C	243	310	207	760
Stuart Lightfoot	New Ruler, 577 sqin 1350, 3S, 30C	188	206	224	618
Bernard Scott	Lanzo RC-1, 460sqin 1300, 3S, 20C	180	149	175	504
Classical E Duration					
Brian Harris	Humbug, 460 sqin 1000, 4S, 25C	249	300	300	844
Graham Main	Gigi, 290 sqin 800, 3S 25C	268	103	130	501
Vintage A Texaco					
Charles Warren	So Long, PAW 1.5	525	496	600	1621
Vintage E Rubber Texaco					
John Butcher	Gollywock, 290 sqin 260, 2S, 25C	620	620	620	1860 + 1257
Keith Trillo	Yonder, 272 sqin 240, 2S, 25C	620	620	620	1860 + 942
Doug Baunton	JA Skokie, 272 sqin 240, 2S, 25C	620	525	0	1145

Vintage 1/2E Texaco

Keith Trillo	Stardust Secial, 206 sqin	740	740		1480 + 1115
John Butcher	Miss Fortune X, 150 sqin	740	740		1480 + 941
Bernard Scott	Bombshell, 226 sqin	740	740		1480
Dave Crook	Playboy Senior, 309 sq in	706	673		1379
Tony Gribble	Stardust Spl, 306 sqin	561	740		1301

Vintage E Texaco

John Butcher	Miss Fortune X 600 sqin, 540, 2S, 25C	580	620	521	1721
Rex Anderson	Kerswap, 401 sqin 360, 2S, 20C	560	620	450	1630
Doug Baunton	PB 2 570 sqin 500, 2S, 25C	612	561	0	1698
Bernard Scott	Bombshell, 328 sqin	338	0	0	338

Tomboy IC

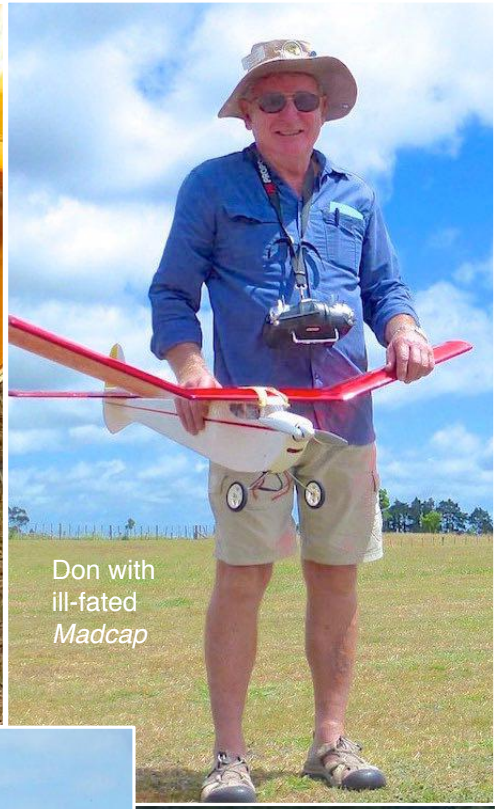
Keith Trillo	Mills .75	241	235	476
Charles Warren	Mills .75	194	0	194
Rex Bain	Mills .75	82	0	82

Tomboy E

Keith Trillo	180, 2S	624	641	1265
Graham Main	180, 2S	427	454	881
Bernard Scott	180, 2S	400	370	770

Classic IC Duration, Vintage 1/2ATexaco, Open Texaco - None flew


Slide-out battery holder on Doug's *Miss Arpiem*


Don with ill-fated *Madcap*

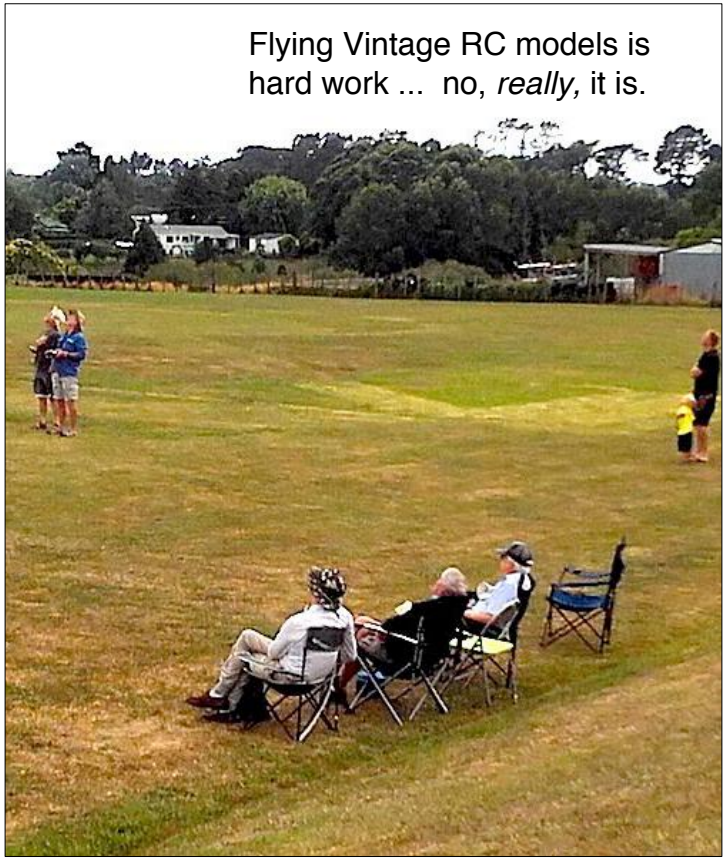

Rex's *Miss FX* gets safely away in the wind ...


... as does Laurie's *Thermal Magnet* when caught by a gust

EVENT REPORT Tuakau 20-21 Feb Photographs by Dave Crook

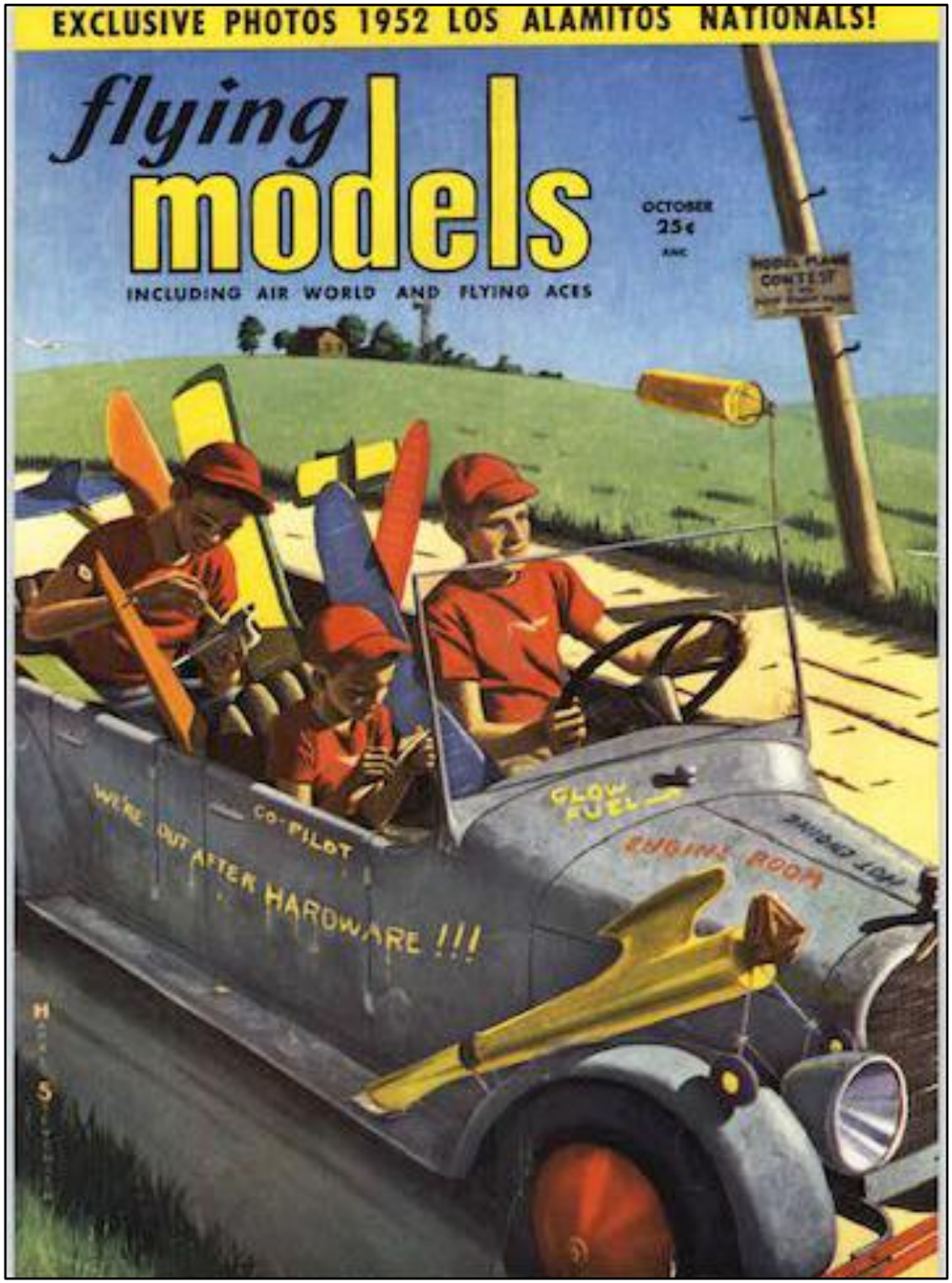
Refuelling for the next flight

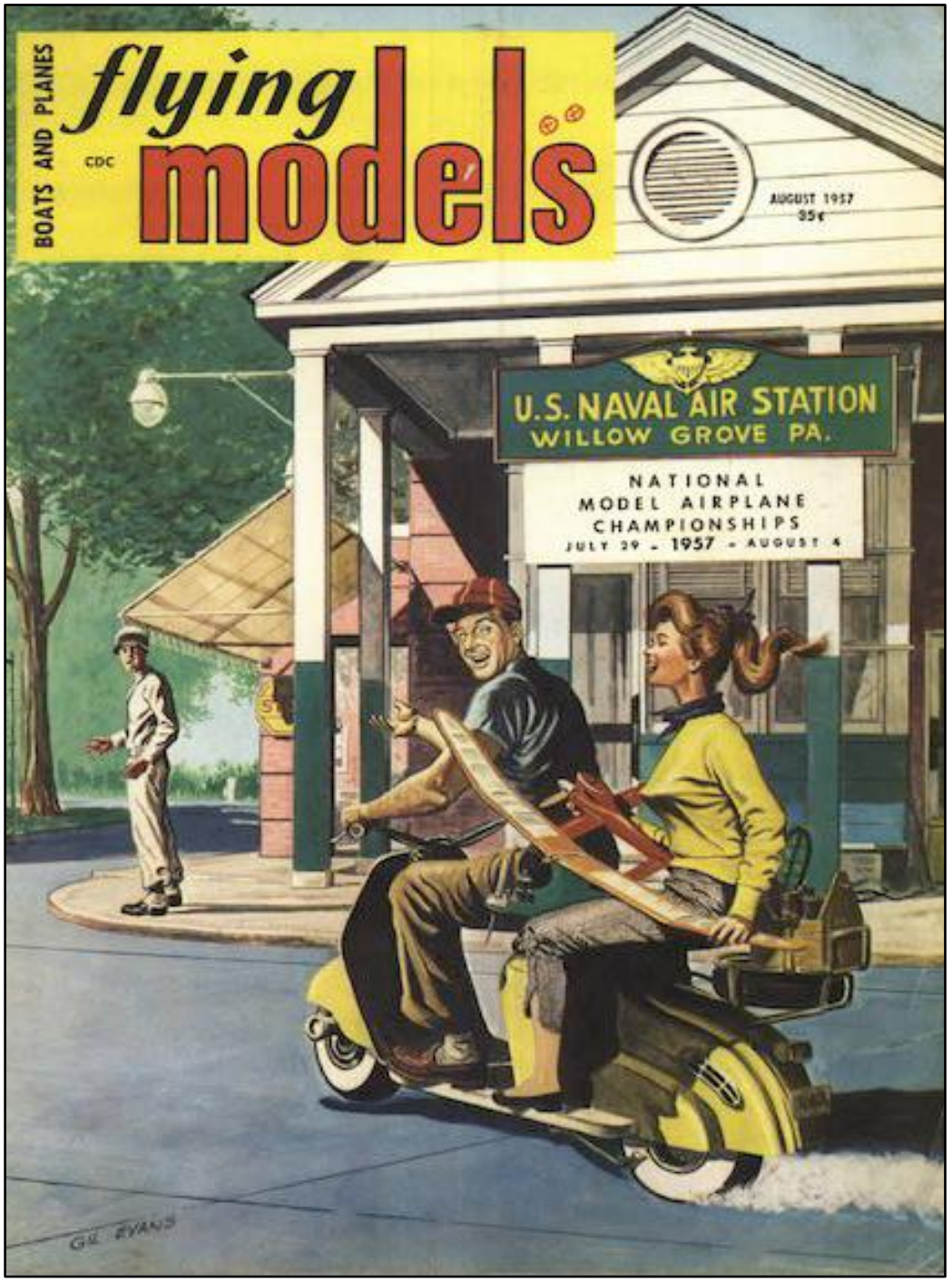
Don with *Bomber*

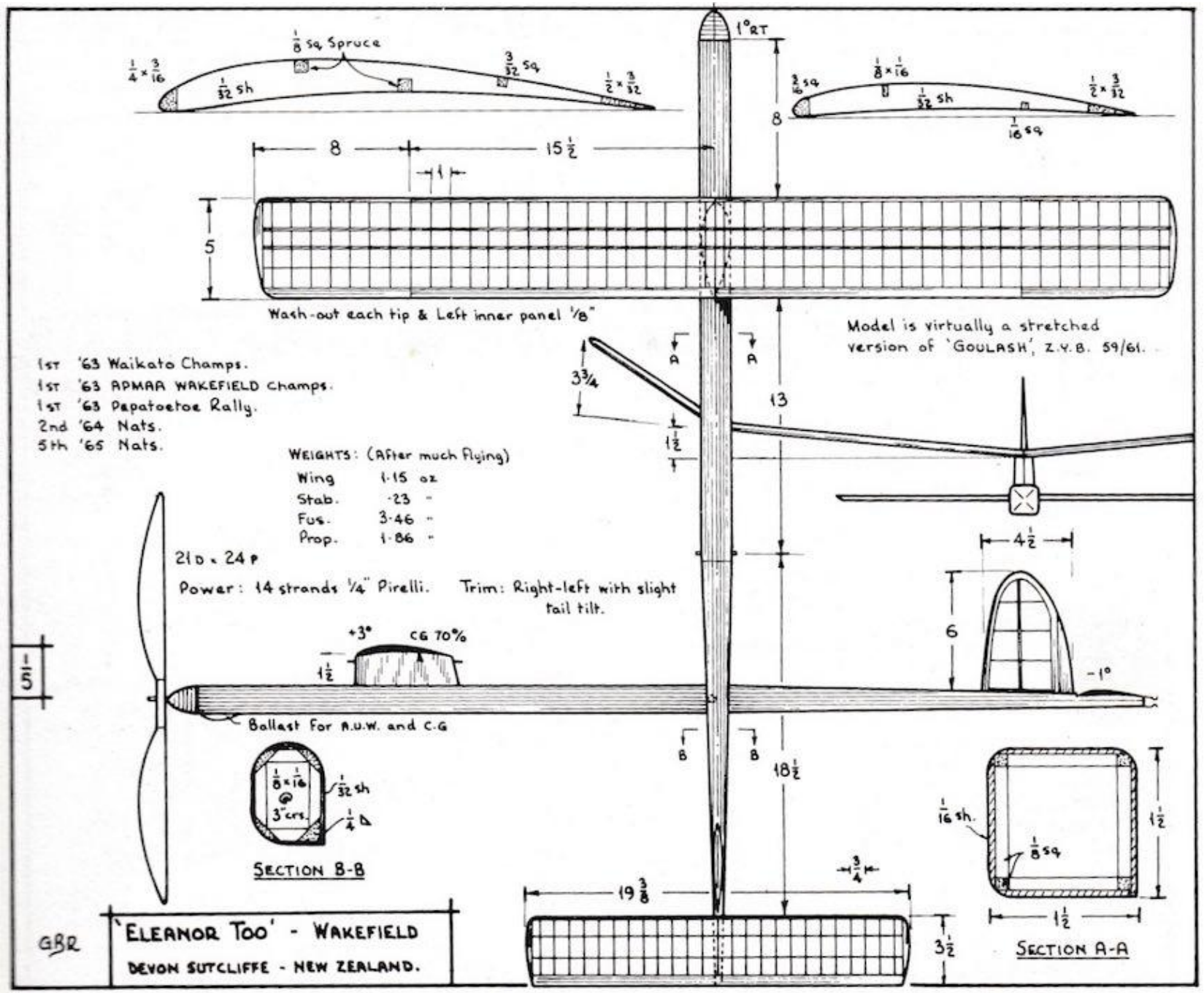


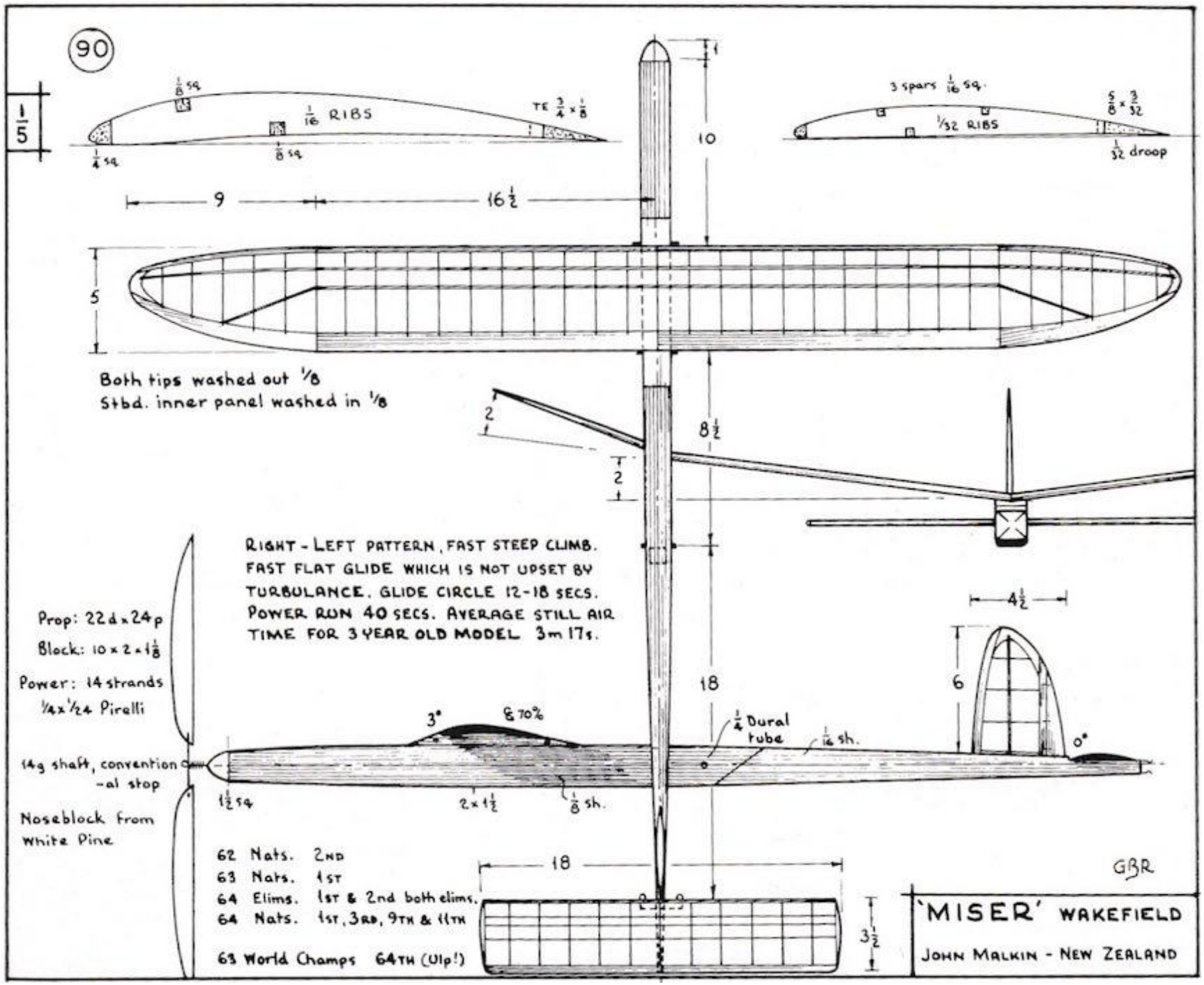
Flying Vintage RC models is hard work ... no, *really,* it is.

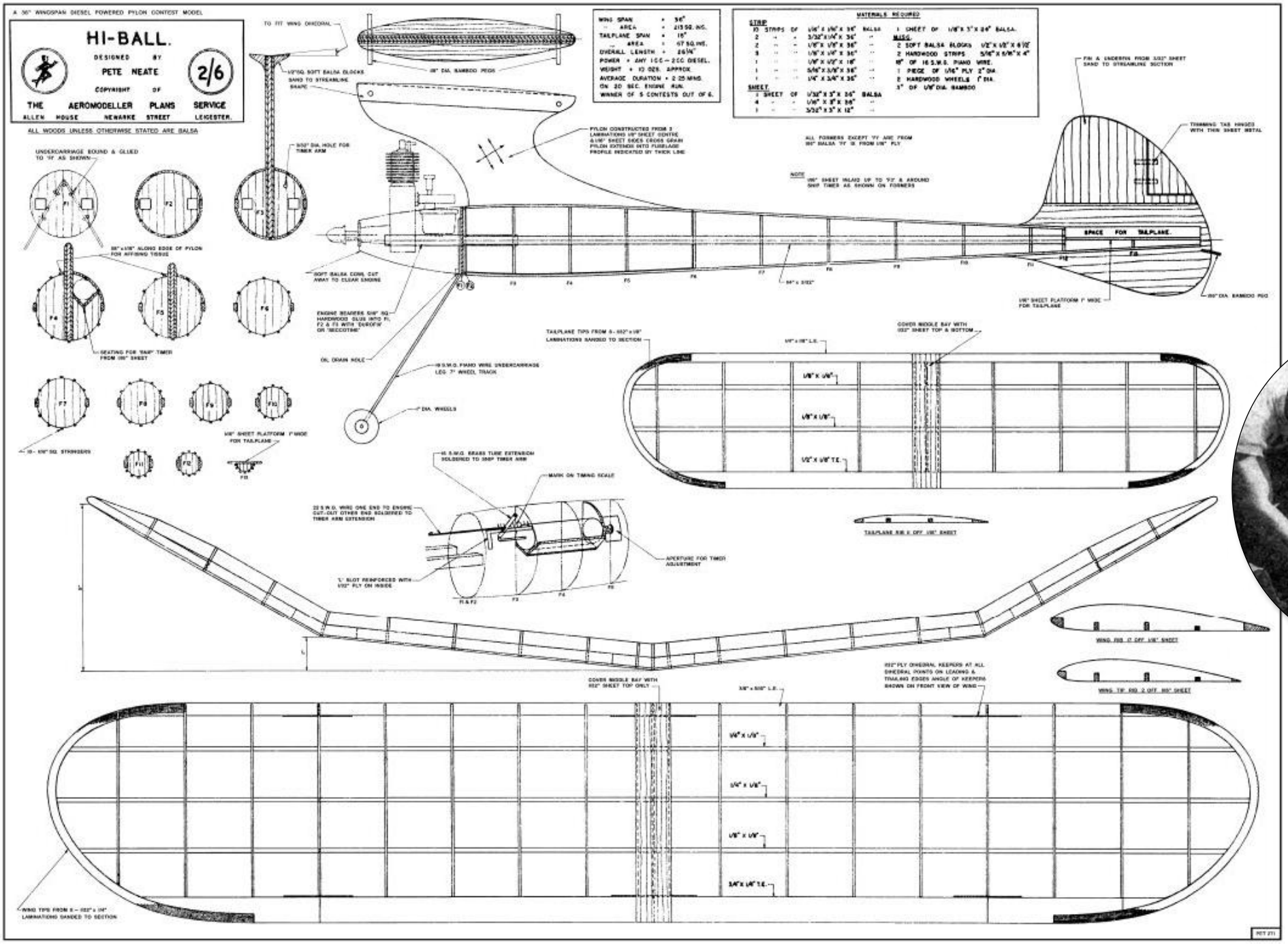
A wagon-full of potent models


EXCLUSIVE PHOTOS 1952 LOS ALAMITOS NATIONALS!
flying models
INCLUDING AIR WORLD AND FLYING ACES
OCTOBER
25¢
CO-PILOT
GLOW FUEL
ENGINE ROOM
WE'RE OUT AFTER HARDWARE !!!


BOATS AND PLANES
flying models
AUGUST 1957
35¢
U.S. NAVAL AIR STATION
WILLOW GROVE PA.
NATIONAL
MODEL AIRPLANE
CHAMPIONSHIPS
JULY 29 - 1957 - AUGUST 4
GIL EVANS


1° RT
8
15½
1
5
Wash-out each tip & Left inner panel ⅛"
Model is virtually a stretched version of 'GOULASH', Z.Y.B. 59/61.
1ST '63 Waikato Champs.
1ST '63 APMAA WAKEFIELD Champs.
1ST '63 Papatoetoe Rally.
2nd '64 Nats.
5th '65 Nats.
WEIGHTS: (After much Flying)
Wing 1·15 oz
Stab. ·23 "
Fus. 3·46 "
Prop. 1·86 "
21D x 24P
Power: 14 strands ¼" Pirelli. Trim: Right-left with slight tail tilt.
3¾
13
4½
6
+3°
CG 70%
-1°
Ballast for A.U.W. and C.G
18½
19⅜
3½
SECTION B-B
SECTION A-A
'ELEANOR TOO' - WAKEFIELD
DEVON SUTCLIFFE - NEW ZEALAND.
GBR


90
1/5
1/8 sq
1/16 RIBS
TE 3/4 x 1/8
1/4 sq
1/8 sq
3 spars 1/16 sq.
1/32 RIBS
5/8 x 3/32
1/32 droop
10
9
16½
5
Both tips washed out 1/8
Stbd. inner panel washed in 1/8
2
8½
2
RIGHT - LEFT PATTERN, FAST STEEP CLIMB.
FAST FLAT GLIDE WHICH IS NOT UPSET BY
TURBULANCE. GLIDE CIRCLE 12-18 SECS.
POWER RUN 40 SECS. AVERAGE STILL AIR
TIME FOR 3 YEAR OLD MODEL 3m 17s.
Prop: 22d x 24p
Block: 10 x 2 x 1 1/8
Power: 14 strands
1/4 x 1/24 Pirelli
14g shaft, convention -al stop
Noseblock from White Pine
3°
@ 70%
1/4 Dural tube
1/16 sh.
1½ sq
2 x 1½
1/8 sh.
4½
6
18
0°
62 Nats. 2ND
63 Nats. 1ST
64 Elims. 1ST & 2nd both elims.
64 Nats. 1ST, 3RD, 9TH & 11TH
63 World Champs 64TH (Ulp!)
18
3½
GBR
'MISER' WAKEFIELD
JOHN MALKIN - NEW ZEALAND


HI-BALL.
DESIGNED BY
PETE NEATE
COPYRIGHT OF
THE AEROMODELLER PLANS SERVICE
ALLEN HOUSE NEWARKE STREET LEICESTER.
2/6
A 36" WINGSPAN DIESEL POWERED PYLON CONTEST MODEL
ALL WOODS UNLESS OTHERWISE STATED ARE BALSA
WING SPAN = 36"
AREA = 213 SQ. INS.
TAILPLANE SPAN = 18"
AREA = 67 SQ.INS.
OVERALL LENGTH = 26¼"
POWER = ANY 1.5 C.C. – 2.5 C.C. DIESEL.
WEIGHT = 10 OZS. APPROX.
AVERAGE DURATION = 2.25 MINS.
ON 20 SEC. ENGINE RUN.
WINNER OF 5 CONTESTS OUT OF 6.
MATERIALS REQUIRED
STRIP
10 STRIPS OF 1/16" x 1/16" x 36" BALSA
2 " " 3/32" x 1/4" x 36" "
2 " " 1/8" x 1/8" x 36" "
8 " " 1/8" x 1/4" x 36" "
1 " " 1/8" x 1/2" x 18" "
1 " " 5/16" x 3/16" x 36" "
1 " " 1/4" x 3/4" x 36" "
SHEET
1 SHEET OF 1/32" x 3" x 36" BALSA
4 " " 1/16" x 3" x 36" "
1 " " 3/32" x 3" x 12" "
1 SHEET OF 1/16" x 3" x 24" BALSA.
MISC.
2 SOFT BALSA BLOCKS 1/2" x 1/8" x 6 1/2"
2 HARDWOOD STRIPS 5/16" x 5/16" x 4"
18" OF 16 S.W.G. PIANO WIRE.
1 PIECE OF 1/16" PLY 2" DIA
2 HARDWOOD WHEELS 1" DIA.
3" OF 1/8" DIA. BAMBOO
TO FIT WING DIHEDRAL
1/2" SQ. SOFT BALSA BLOCKS
SAND TO STREAMLINE SHAPE
3/8" DIA. BAMBOO PEGS
FIN & UNDERFIN FROM 1/32" SHEET SAND TO STREAMLINE SECTION
TRIMMING TAB HINGED WITH THIN SHEET METAL
PYLON CONSTRUCTED FROM 3 LAMINATIONS 1/8" SHEET CENTRE & 1/16" SHEET SIDES CROSS GRAIN PYLON EXTENDS INTO FUSELAGE PROFILE INDICATED BY THICK LINE
ALL FORMERS EXCEPT "F" ARE FROM 3/32" BALSA "F" IS FROM 1/16" PLY
NOTE 1/16" SHEET INLAID UP TO "F2" & AROUND SHAFT TIMER AS SHOWN ON FORMERS
UNDERCARRIAGE BOUND & GLUED TO "F" AS SHOWN
3/32" DIA. HOLE FOR TIMER ARM
3/8" x 1/16" ALONG EDGE OF PYLON FOR AFFIXING TISSUE
SOFT BALSA CORE CUT AWAY TO CLEAR ENGINE
ENGINE BEARERS 5/16" SQ. HARDWOOD GLUED INTO F1, F2 & F3 WITH "DERBYFIX" OR "SECCOTINE"
OIL DRAIN HOLE
SPACE FOR TAILPLANE.
1/16" SHEET PLATFORM 1" WIDE FOR TAILPLANE
3/32" DIA. BAMBOO PEG
SEATING FOR "BABY" TIMER FROM 1/16" SHEET
16 S.W.G. PIANO WIRE UNDERCARRIAGE LEG. 7" WHEEL TRACK
DIA. WHEELS
10 - 1/16" SQ. STRINGERS
1/16" SHEET PLATFORM 1" WIDE FOR TAILPLANE
TAILPLANE TIPS FROM 5 - 1/32" x 1/8" LAMINATIONS SANDED TO SECTION
COVER MIDDLE BAY WITH 1/32" SHEET TOP & BOTTOM
1/8" x 1/8" L.E.
1/8" x 1/8"
1/8" x 1/8"
1/2" x 1/8" T.E.
16 S.W.G. BRASS TUBE EXTENSION SOLDERED TO 3/16" TIMER ARM
MARK ON TIMING SCALE
22 S.W.G. WIRE ONE END TO ENGINE CUT-OUT OTHER END SOLDERED TO TIMER ARM EXTENSION
APERTURE FOR TIMER ADJUSTMENT
"L" SLOT REINFORCED WITH 1/32" PLY ON INSIDE
F1 & F2
F3
F4
F5
TAILPLANE R/H & OPP. 1/16" SHEET
WING RIB (7 OFF 1/16" SHEET
WING TIP RIB (2 OFF 1/16" SHEET
1/32" PLY DIHEDRAL KEEPERS AT ALL DIHEDRAL POINTS ON LEADING & TRAILING EDGES ANGLE OF KEEPERS SHOWN ON FRONT VIEW OF WING
COVER MIDDLE BAY WITH 1/32" SHEET TOP ONLY
3/8" x 1/16" L.E.
1/4" x 1/8"
1/8" x 1/8"
3/4" x 1/4" T.E.
WING TIPS FROM 5 - 1/32" x 1/4" LAMINATIONS SANDED TO SECTION

SNUFFER TUBE TIMERS 1

Bill McGarvey

INTRODUCTION

I have used Mike Woodhouse 5/32 fuse for years in Vintage and Open models and standardised on a K&S 3/16 I.D. aluminium snuffer tube. As fire bans increased in frequency I lost a few aeroplanes trying to fly them without thermal assistance before adopting a version of a tube-in-tube silly putty timer which replaces the fuse in the snuffer tube. I currently use SPTs in my Korda and Talisman Vintage models.

Figure 1 Shows the general arrangement on the Korda and Talisman. The Korda has a hinged fuselage D/T and the Talisman a normal tip up tail D/T. Note the difference in tension needed for each layout. Putting the snuffer near the CG takes care of any weight difference between the fuse and timer upsetting glide trim and provides enough length for the timer band. I make my snuffers full width of fuselage so that spent ends of fuse can be pushed through.

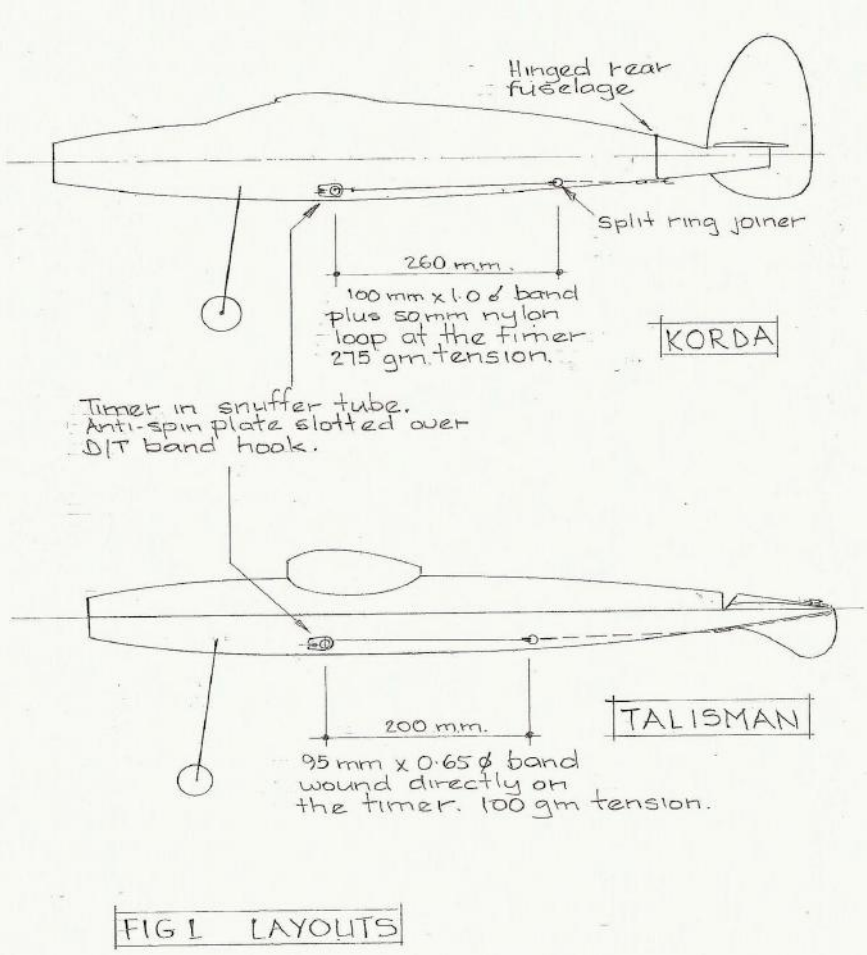
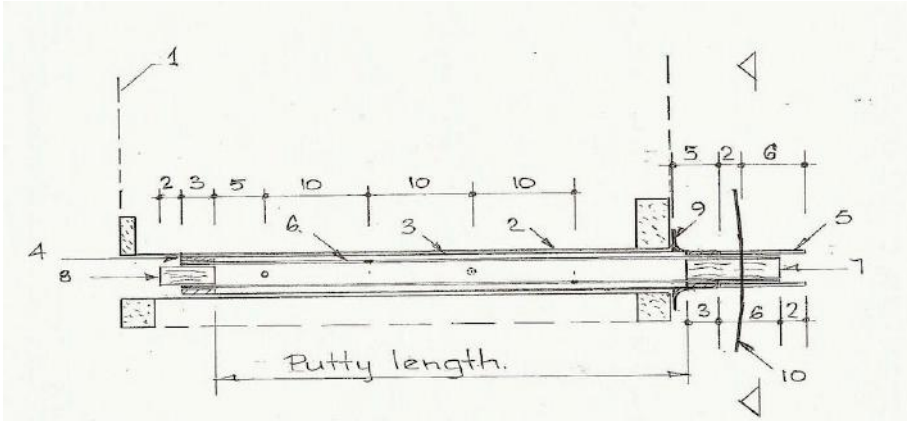


FIG 1 LAYOUTS

Figure 2 Shows a long section of timer construction. The 3/16 I.D. aluminium snuffer tube sets the outer tube size for the drop in timer. K&S have a series of tubes which fit loosely inside each other as shown and are ideal for making this type of timer.



Timer Long Section - scale 2:1

Key:

1. Fuselage outline
2. 3/16 I.D K&S tube as snuffer tube
3. K&S tube as timer body
4. K&S brass tube as shaft bearings. Epoxy.
5. K&S tube as thrust bearing. Epoxy.
6. K&S tube as shaft. Drill 1.4 mm ø holes in spiral pattern as shown.
7. Wooden plug. Epoxy
8. Wooden plug. Tight fit.
9. 0.5 mm. anti-twist plate. Dimpled and epoxied to the body. See pics for shape
10. 0.8 m.m. wire 20 mm. long.

FIG 2 TIMER DETAIL

TIMER ACCURACY

Two frequent criticisms of SPTs are lack of accuracy and a tendency to behave unpredictably. The first criticism is due to lack of manufacturing precision introducing random friction into the movement. The second is due to unsuitable putty. Slight variation in initial start point is also a factor leading to variation in d/t times.

Two spirals of Woodhouse d/t fuse in a gentle breeze of 23 deg C at 50% relative humidity yielded the following burning times:

3 min 52 secs, 3min 59 secs, 4 min 06 secs. For this particular day and a 3min competition max trimming the fuse to 1+5/8 spirals would be a prudent move.

Two turns of a 30mm long timer under constant line pull of 92 gm. yielded the following turning times under similar conditions to the fuse:

4 min 45 secs, 5min 09 secs, 4 min 40 secs. For this particular timer and a 3 min max a higher average band tension or fewer turns would be needed. Some more information about the band average tension is needed. As the band unwinds from the shaft the tension in it reduces and the rate of timer revolution slows.

The figures show, however, that SPT accuracy is about the same as fuse.

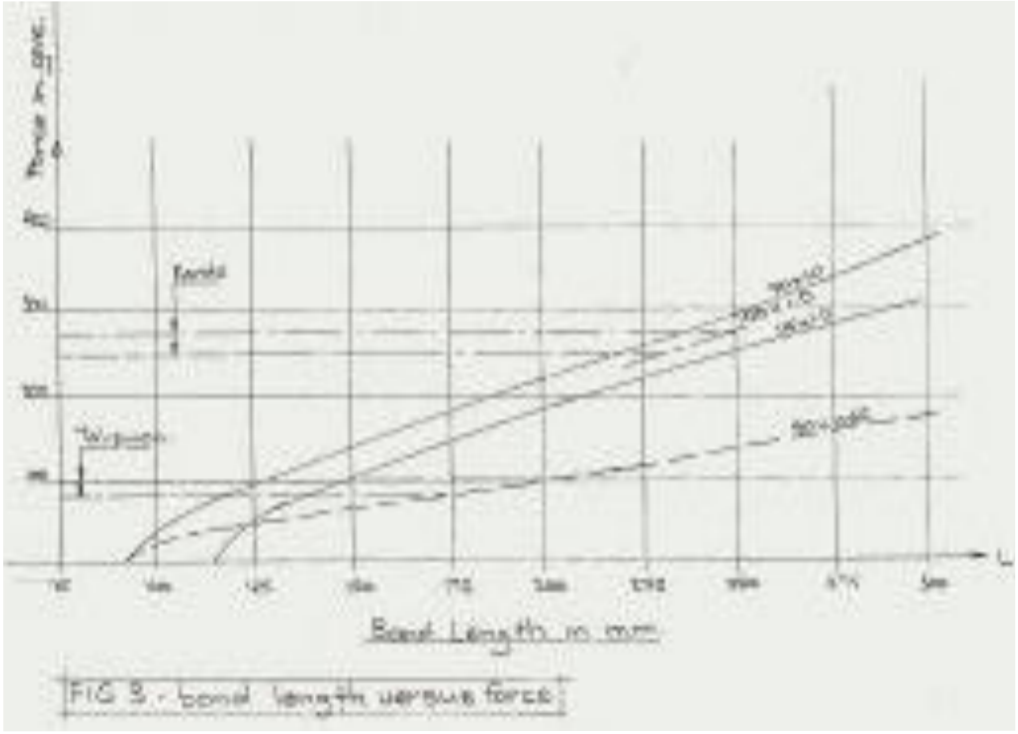


FIG 3 - band length versus force

OPERATIONAL MATTERS

The SPT timer is slipped into the snuffer tube and a small keeper band stretched around the barrel to prevent the whole thing falling out. Alan Douglas is the architect of the anti-twist arm and the cunning dimple for epoxy.

I use a secondary aluminium tube parallel to the snuffer. This takes a pull pin which is inserted after winding the timer and before winding the rubber motor or starting the engine. This gets over the problem of trying to set the d/t one handed while hanging on to the model with the other. Note that the location of the pull pin is only approximately correct. Just prior to launch after the pin is out the shaft can be wound back one handed or allowed to rotate normally until it is time to launch.

The geometry of the SPT is such that when installed in a snuffer tube the shaft pin stands proud of the fuselage by at least 5mm. This creates a small angle between the band and the fuselage centreline. Tension in the band has a component tending to pull the shaft into the timer body . Consequently, the brass and aluminium tubes forming an end bearing at this location need to be smooth and square ended. The other consequence is that the shaft needs no restraint to stop it coming out. That is why there is no restraining tube glued on the inner end. This allows the shaft to be removed whenever maintenance is needed on tubes or putty.

THE TIMER BAND

The operating band is best made with round section white rubber strand found in shock cords when the outer covering is stripped off. This material seems to have good solar resistance, a maximum stretch ratio of about 6 (stretched length divided by original length) a nice straight force versus stretched length curve, and good fatigue properties i.e. it holds its tension through the contest. Mitre 10 sell shock cord in various diameters but invariably the individual strands are of 0.65mm or 1.00mm diameter .

I use a simple loop of rubber and put the knot at the split ring end so that it does not scrape across the fuselage and create friction as the band unwinds on the SPT shaft. The unknotted end of 0.65mm diameter rubber can be looped over the shaft pin directly while for 1.0mm diameter rubber a separate nylon winding loop is best added to the band to allow the required number of turns to physically fit on the shaft neatly.

Getting the band wound evenly on the shaft can be achieved by using no more than 2 turns and putting the loop around the pin then straddling the next pin end before sweeping out on the shaft. The aim is to reduce friction between adjacent turns as they unwind and keep what friction there is the same for each successive winding. To prevent the pin and band snagging bend the pin so that it is parallel with the band as the loop releases.

The other reason for winding the band (or nylon) evenly around the shaft is to keep the band diameter the same, and hence, keep the twisting moment on the shaft the same. A variable twisting moment due to a bunched band will affect the rate of rotation and introduce erratic timing.

SILLY PUTTY PREPARATION

The two criteria which seem to matter are :

a) The shear stiffness

b) The stickiness

Shear stiffness provides the torque resistance needed to stop the shaft whizzing around too fast under band tension. A sign the stiffness is too high is a small amount of elastic “spring back” when the timer is wound backwards then released.

Stickiness keeps the putty firmly glued to both rotating and fixed tubes even when the shaft is being wound “backwards” after placing the band loop around the pin. A sure sign that separation of putty and tube is occurring is a wide disparity in rate of rotation between successive runs.

Putty is sold in plastic “eggs” that split for access. Sometimes it is sold as “tricky putty” in novelty or toy stores. As purchased it is usually too stiff and not sticky enough. Add silicon oil (used by F1B flyers) to make it softer and stickier and knead well to get thorough consistency. The amount of oil I add is 3gm per 10gm of putty. The consistency resulting is not as soft as toothpaste but more like that of linseed oil putty used to seal glazing into wooden frames.

I have found that when putty consistency is right there will be leakage of it through the bearing tube clearance. Regular replacement of putty loss and removal of the leakage inside the snuffer tube avoids a slow friction build up there and a gradual slowing of the rate of rotation.

MAKING THE BITS

Tube can be cut by hand using fine toothed saws then sanded and honed square with a bench stop and fine abrasive glued to squared balsa blocks then finished with a fine stone. Remove all burrs and make sure tubes are straight before glueing on the bearings and stops. The anti twist plate needs to be dimpled before cutting out. A metal anvil plate with a hole in it and a suitably shaped punch will form the dimple. Start with a 3.5mm hole in the anti twist plate and use a rat tailed file to ream to final size. Some experimentation is needed to get the dimple the right shape. Drill a hole in block balsa to take the body and make it a friction fit. Insert the body. Cut a matching hole in thin polythene and use this to stop the epoxy seeping into the block. Fit the plate and hold it in place with pins or a clamp then turn the block over so the epoxy tends to fill the plate dimple rather than the block.

Martin Gregorie’s website has an excellent article on making a simple tube in tube timer and describes a jig system for cutting tubes. Martin’s design uses wound nylon bearings whereas mine uses brass tube. His website is at:

www.gregorie.org/free flight/silly_dt/index.html

ASSEMBLY AND TESTING

Clean the body and shaft of excess epoxy paying particular care at bearing surfaces. Check for shaft straightness with a steel rule. Remove any bends by rolling the shaft under the rule on a flat surface. Oil the bearings and assemble without putty. Spin the shaft by hand to wear in the bearings. Dissassemble and clean out the fine particles formed by wearing in. Oil and assemble again then check for binding in the bearings. A headband magnifier is useful at this stage to spot the rubbing portion of bearing. Use a fine abrasive stick rubbed radially on the offending lump on the outside of the shaft bearing or a rat tail file to do the same inside the brass bearings. Keep on at this exercise until the parts spin without friction spots. Clean and oil one last time then fill the body and shaft with putty.

Sounds easy but unless you have some sort of squeeze tube or syringe you will be obliged to put your finger over the far end, push small quantities of putty in the near end and compact with a dowel of smaller diameter than the inside of the tube. This allows air to escape and the void to be filled solid. A small amount of putty will exude from the shaft holes as the shaft is filled

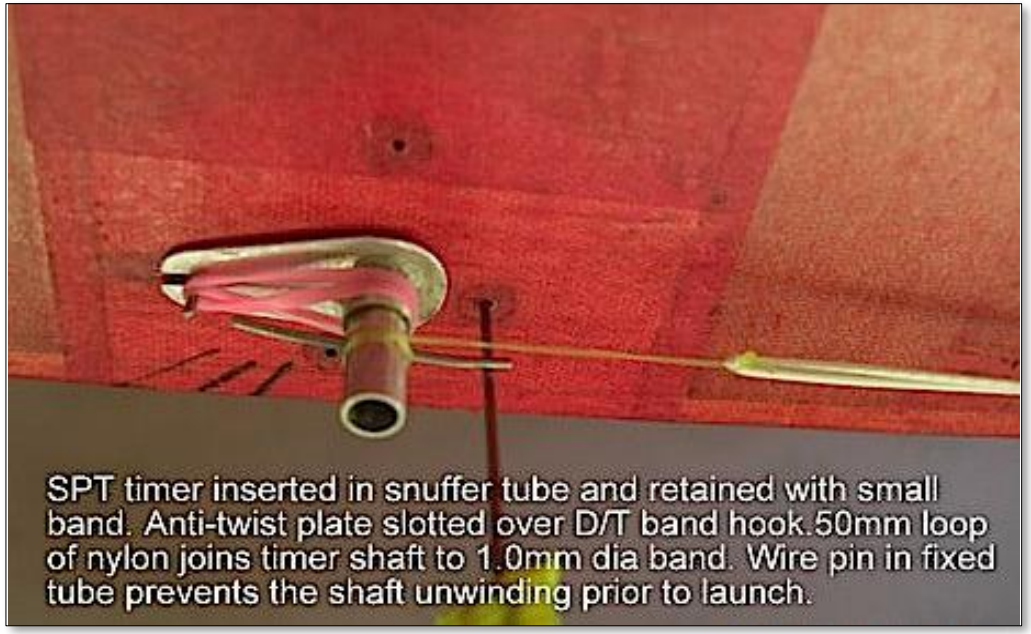
Make the wooden plug for the end of the shaft but don’t fit it yet. With finger over the far end of the tube slowly push the shaft in to the body. Fill the shaft holes as they disappear into the near bearing. Allow excess putty to escape from the far end but keep a decent finger pressure on to encourage compaction of putty inside both tubes. The aim is to get intimate contact of the putty at the shaft exterior and the body interior by pressurizing the putty during the filling operation. Pick out the putty at the shaft end and push in the wooden plug. You are done.

Test the timer by mounting it in the aeroplane and powering it with the intended band. Test turns and times and the band tension. At this point band tension and number of turns are the variables unless a different length timer is available. Settle on your choices then make up a small polythene bag with a card inside noting times versus turns and the name of the model. Make a spare band, put in a wire stop pin with a high viz tag and some keeper bands plus a band pick. You are ready to fly.

Note: For the Korda the putty length is 70mm and 21/2 turns gives 3.00min. For the Talisman the putty length is 38mm and 11/2 turns gives 3.00min

Talisman (upper) and Korda timers showing different lengths to match different line tension.

Korda. D/T fuse in snuffer tube. Band on D/T hook.



SPT timer inserted in snuffer tube and retained with small band. Anti-twist plate slotted over D/T band hook.50mm loop of nylon joins timer shaft to 1.0mm dia band. Wire pin in fixed tube prevents the shaft unwinding prior to launch.

Talisman. 0.65mm dia rubber wound direct on shaft

Vintage Precision

1 Brian Harris	Bomber	Tuakau	600 + 200
2 John Butcher	Miss Fortune X	Tuakau	600 + 197
3 David Gush	Miss Fortune X	Tuakau	600 + 173
4 Stuart Lightfoot	New Ruler	Champs	600
5 Graham Main	Trenton Terror	Tuakau	600
6 Gordon Meads	Lanzo RC-1	Tuakau	595
7 David Thornley	Bomber	Champs	587
8 Bernard Scott	Lanzo RC-1	Champs	581
9 David Crook	Playboy Senior	Tuakau	576
10 John Warner	Record Breaker	Champs	571

Vintage IC Duration

1 Bernard Scott	Playboy Cabin	Champs	780
2 John Butcher	Miss Fortune X	Tuakau	775
3 Allan Knox	Cumulus	NDC #85	709
4 Rex Anderson	Playboy Senior	Champs	697
5 Gordon Meads	Playboy Senior	Tuakau	695
6 David Gush	Miss Fortune X	Tuakau	663
7 David Thornley	Bomber	Champs	507
8 Charles Warren	So Long	Champs	359
9 John Selby	Brooklyn Dodger	NDC #85	422
9 Wayne Cartwright	Bomber	Champs	138

Vintage E Duration

1 Keith Trillo	Stardust Special	Champs	901
2 John Butcher	Miss Fortune X	Champs	869
3 Allan Knox	Scram	NDC #86	839
4 Rex Anderson	Anderson Pylon	Champs	811
5 Stuart Lightfoot	New Ruler	Champs	807
6 Brian Harris	Bomber	Tuakau	800
7 Tony Gribble	Stardust Special	Tuakau	760
8 Bernard Scott	Lanzo RC-1	Champs	638
9 Wayne Cartwright	Top Banana	Champs	589
10 John Warner	Playboy Senior	Champs	573

Vintage 1/2A Texaco

1 Bernard Scott	Stardust Special	Champs	1448
2 John Butcher	Miss Fortune X	Champs	1228
3 Martin Evans	Miss Philadelphia IV	Champs	239

Vintage 1/2E Texaco

1 Keith Trillo	Stardust Special	Champs	1480 + 1175
2 Wayne Cartwright	Arrow Nut	Champs	1480 + 1163
3 John Butcher	Miss Fortune X	Champs	1480 + 1040
4 Bernard Scott	Bombshell	Champs	1480 + 1028
5 Dave Crook	Playboy Senior	Tuakau	1379
6 Martin Evans	Brigadier	Champs	1324
7 Tony Gribble	Stardust Special	Tuakau	1301

Vintage A Texaco

1 John Butcher	Lanzo RC-1	Champs	1852
2 Charles Warren	So Long	Tuakau	1621
3 Bernard Scott	Simplex	Champs	1432
4 Rex Anderson	Cloud Snooper	Champs	1338

Vintage E Texaco

1 Keith Trillo	Stardust Special	Champs	1860 + 694
2 Wayne Cartwright	Cruiser	Champs	1860 + 573
3 Rex Anderson	Kerswap	Champs	1860 + 369
4 John Butcher	Miss Fortune X	Champs	1855
5 Dave Crook	Bomber	Champs	1852
6 Doug Baunton	PB-2	Champs	1698
7 Bernard Scott	Bombshell	Champs	1616

Vintage Open Texaco

1 John Butcher	Lanzo RC-1	Champs	1836
2 Bernard Scott	Playboy Cabin	Champs	853

Vintage E Rubber Texaco

1 John Butcher	Golliwock	Tuakau	1860 + 1257
2 Keith Trillo	Vonder	Tuakau	1860 + 942
3 Wayne Cartwright	Lanzo D	Champs	1860 + 741
4 Doug Baunton	JA Skokie	Champs	1600

Classic Precision

1 Brian Harris	Humbug	Champs	598
2 Graham Main	Gigi	Tuakau	581
3 David Gush	Tyro	Tuakau	578
4 Bernard Scott	Frisco Kid	Champs	550
5 David Thornley	Satellite 1000	Champs	351

Classic IC Duration

1 Bernard Scott	FAI Raider	Champs	797

Classic E Duration

1 Bernard Scott	Frisco Kid	Champs	900
2 Brian Harris	Humbug	Tuakau	844
3 Graham Main	Gigi	Champs	621
4 Wayne Cartwright	Nig Nog	Champs	242

Tomboy IC

1 Graham Main	Mills .75	Champs	651
2 Keith Trillo	Mills .75	Tuakau	476
3 Charles Warren	Mills .75	Tuakau	194
4 Rex Bain	Mills .75	Tuakau	82

Tomboy E

1 Keith Trillo	180.2S	Champs	1609
2 Dave Crook	180.2S	Champs	1069
3 Graham Main	180.2S	Champs	942
4 Bernard Scott	180.2S	Tuakau	770

Mr FRANCIS BIRTLES, portrayed below, WORN but UNDAUNTED after a long and PARTICULARLY challenging TRAINING session, wishes to thank the MANY NATIONALS FREE FLIGHTERS who have ENGAGED his services for the forthcoming contests, and REGRETS he will disappoint some prospective clients, BUT, owing to an OVERWHELMING response to his previous advertisement, further engagements of his services are NO LONGER possible at THIS time.

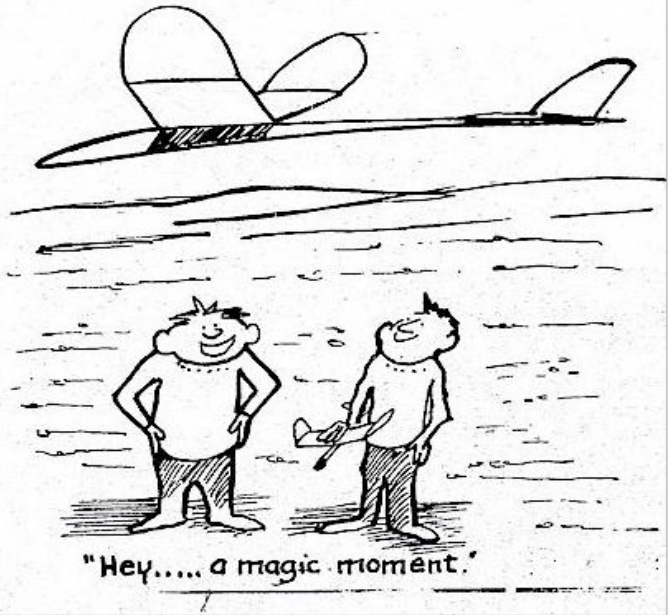
An ex member of the Wanganui Club dropped off some old (pioneer) r/c gear that nobody here wants, or can even identify with. The two metal boxes are HMV radio transmitters circa early 1950s that were ground earthed and were used in conjunction with an airborne relay and a rubber driven escapement. They once belonged to the late Doug Smaller who was a pioneer member of WAMC and flew large diesel powered (Taplin twin *et al)* models. Despite the corrosion on the boxes they are complete and I am sure could be made operational by someone with an electronics backgroud. Inside the boxes there are spare valves, relays, escapements and the control cable and button. All that is needed is a 6v battery.

The blue item is the next development after the HMV gear, viz. a Wright hand held Tx, produced by Les Wright of Wellington in the 1950s. It operates the same way as the HMV gear, needing an on board relay and escapement but is compact, portable and the button *in situ.*

Contact Dave Richardson if interested:

d.richardson@infogen.net.nz

Nationals bliss ....



Post-Nationals doldrums ....

All Comet-Crafted Ships FLY

FLYING Scale Model

HEATH BABY BULLET

Carefully modeled to look like the world-famous Heath Baby Bullet—this Comet-crafted FLYING Scale model will delight you with its *built-in flyability* and striking streamlines! Colored blue and orange. Look at that picture above! Wouldn't YOU like to fly it? You can build it easily and fly it like a falcon with our easy instructions and complete, full-value Comet Kit! What a bargain! You want it? Then get busy and get it now!

Complete List of Kit Contents:

Rib sheet, 1/64" x 1¾" x 3" printed balsa sheet for cowlings; sandpaper; gummed numeral sheet; 15" length ⅛" flat rubber; 3/32" x ⅜" x 12" balsa for landing gear struts and tailpiece; leading edge balsa 3/32" x 3/32" x 10"; balsa strips ⅛" x ½" x 12"; pair 1" dia. black celluloid wheels; 2 celluloid motor cylinders; propeller block ⅝" x ⅝" x 5"; 4 shredded bamboo; spinner block ⅜" x ⅜" x ⅜"; headrest ½" x ½" x 5/16"; head fairing block ⅝" x ½" x 1¼"; 2 engine fairings ⅜" x ¼" x 1⅜"; noseblock 1⅛" x ⅜" x 1⅜". Tube cement. Banana liquid. Waxed tissue. Orange tissue 10½" x 12". Blue tissue 4" x 10½". Package containing: propeller shaft, rear hook, 2 washers, bead, 6 pins. FULL-SIZE plan. Illustrated instructions. A VALUE OF VALUES! Get it!

You Get It ALL in Sturdy, Gloriously Colored Box

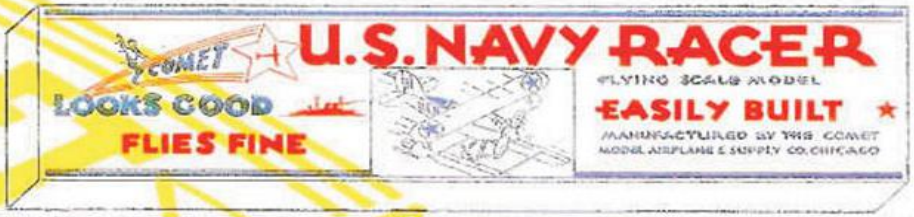
$1.00 POST PAID OR AT YOUR DEALER

"Thanks for Business-like Way You Treat Customers!" (G.R.)

This actual 2-color photograph shows Pursuit box and the high-quality materials inside.

Each Comet Kit Is Packed in Strong, Beautifully-Designed, Colored Box!

Each Comet Kit is *neatly*, scientifically packed inside of strong, durable, crisply-printed, handsomely-colored card-board BOXES! Comet NEVER uses awkward, bulky "mailing tubes" or cheap, flimsy "corrugated paper wrapped" packages! It costs us more to pack each kit the Comet-way—but it gives YOU more value for your money. An actual photograph of the built-up plane is printed on each box-top. Our Comet Kid picture on each box identifies it as a genuine Comet product. Always look for his picture, then buy with *confidence*.



Your U. S. Navy Racer kit is packed in this attractive 2-color box. All our kit-boxes look beautiful, like this sample picture.

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PHILIP LAWRENCE (Ohio)

Besides giving you quality, colored kit-boxes—finest materials, and unusually low kit and supply prices—Comet *leads* in giving you SERVICE! Every model builder "wants what he wants when he wants it!" Literally THOUSANDS of builders all over the world have told us that our service was PERFECT. We specialize on giving you what you want just as fast as is humanly possible. Ten minutes from the time your order is received, our efficient employees are filling your order. It goes out to the post-office WITHIN TWO HOURS! Where else can you secure this quick service without extra charge!

Comet Kits Are Inspected for Quality and Completeness!

Free Flight Notices

67th Waikato Free Flight Champs

Saturday April 16th 2016

9:00 am - 2:00 pm Piako Road

$5 Field Fee Liquid 1st Place prize for FF events

1. Open Combined	3 x 120	2. 1/2A	3 x 120
3. Kennedy Precision	3 x 120	4. P-30	3 x 120
5. HLG / CAT	6 x 60	6. Kiwi Power	5 x 120

7. RC Tomboy IC or Electric (2S, 180mA max)

Fly-offs at 2:30 CD : Bernard Scott scott.scott@xtra.co.nz

Free Flight contest days

Indoor flying at Morrinsville

Sunday May 15, 2016

Sunday October 9, 2016

Put them in your diary!

- Hangar Rat
- Push E
- HL Glider
- Peanut Scale
- Kit Scale
- Rubber Scale

Come and join us

Venue: Westpac Stadium Hall, 21 Ron Ladd Place, Morrinsville

Programme: 9.45am	Arrive and unpack ready for start time
10.00am	Hangar Rat, Push E and HL Glider plus Scale static judging until 12.30pm
12.30pm	Peanut Scale, Rubber Scale, Kit Scale
3.45pm	Prizegiving
3.55pm	Hall vacated

Fliers Entry: $20.00

Spectators welcome

Contact Stan Mauger 09 575 7971, stanm09c4@gmail.com for more information