

# ***Flying*** ***INformation***



NEWSLETTER OF THE NORTHAMPTON MODEL AERO CLUB • FOUNDED 1932 • AFFILIATED TO THE BMFA

## Chairman's Chatter

Well, the Newsletter expected last November didn't arrive, so I have had to change my chat. I will keep it short and try not to muddle the words although the able Mr Secretary and his assistant will without doubt edit the text and put me straight [*we have - Ed*].

Last year is gone and so what is done is done. We have had some memorable times, trips, competitions and Friday evening talks, and seen the re issue of the NMAC website. 2005 also saw the establishment of regular training days, and several of us now have A's and B's to prove it. And some of us don't! The membership has increased, and we have some very keen new folks. We also have more Juniors now than at any time in recent years.

My thoughts move now to 2006 and we have all had a "flying start" at the social on Jan 7<sup>th</sup>. For those that are not aware it is a special year in that a contingent from the Marburg Club is planning to visit us in the Summer, 2006. The following year, 2007 will be twenty five years since the first twinning visit with Marburg, and our German friends wish to host a visit from us to mark the occasion. Hence, they have suggested a visit to us this coming year.

This is a Club event and in my view the Club membership should be involved in all of the activities that are organised. Our German friends have requested a visit to a full size air display, and we have given them a list to choose from. The remainder of the time around the date that they choose will be organised so that as many NMAC Club members as possible can take part. A working party will be appointed, to take the initiative for this visit, and this might include a co-opted member or two, to spread the work load. The Club will of course stand any entrance fees required for the Germans, but Club members will pay for themselves. The working

party will be seeking the opinions of the membership about what visits or activities should be included. Those that have already been suggested include a beer tasting, a brewery visit, a canal boat trip (with onboard bar), and a brewery visit. Or two.

Finally, last year's committee team having been re-elected. We have in mind to organise a serious indoor event in 2006, using Moulton Community Centre. We will be trying to get as many visitors as possible, but the event will not be viable without a strong contingent from NMAC. So, dust off your indoor models and watch this space!

**Mike Brisland, Chairman**



**(Don't try this yourselves...)**

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# Flying Proms concert

13<sup>th</sup> August 2005

This year, the Saturday of the concert was, well, wet. Cheryl and I arrived and pitched a line on the grass to enable the other hardy souls to find us, so that we would all be together. I walked up and down but could see no-one I recognised.

This might have been due to the black bin liners the stewards were handing out on the way in. Recognising familiar faces when the attached bodies are wrapped in plastic, sheltered behind umbrellas and hunched down to keep out of the rain is not straightforward.

As the concert was about to begin, I did a final recce and found Brian Baker, Denis Pitcher and their wives and guest. So, we moved over to join them.



At the interval, I did another recce and found the rest of the party, a long way forward. Here were Robin Patterson, Lawrence Bateman, Mike Edgecombe and their respective partners and guests. Too late to team up, so we all stayed put.

Anyway, the evening was the usual memorable experience, and the rain did eventually stop. This allowed the two Edwardian aircraft (Avro Triplane and Bristol Boxkite) to take to the air. The Hawker Hind was well worth seeing close up.



For anyone who has not been to one of these concerts, and who likes to watch spectacular close up flying and enjoy good music at the same time, make sure you get some tickets in 2006.



Next year, can we have the Eastbourne Weekend on a different one to the Flying Proms?

Phil Coupe

## Eastbourne 2005

Slope soaring 12<sup>th</sup> to 15<sup>th</sup> August

A surprisingly few people attended the weekend near Pevensey. We (Gill and me) arrived Thursday night and Brian Hammon and John Fairs came midday-ish Friday. Dave Shields arrived in time for the evening meal.

Friday we went to the Long Man site, a huge bowl stretching into the distance which, when the wind is in the prevailing direction, is absolutely fabulous for sloping. Friday the wind was at 90 degrees, so I flew over one of the lesser slopes. The two later arrivals sat and watched the Airborne air display from Butts Brow, a commanding view I was assured.

Friday night was the traditional Ruby. Brian and John were in good spirits (or is that outside good spirits) by the time we eat a most acceptable curry. Brian's of course contained hardly any garlic: must have come out of the non-garlic side of the pot.



Saturday dawned fairly breezy and we repaired to the Long Man where the wind was quite strong. John, Brian and Dave turned up later looking like the Six Million Dollar men (We have the technology, we can rebuild them!). It seemed that the two bottles before and two litres during were supplemented by several bottles after the Ruby.

Saturday afternoon brought a near gale force wind and was great fun, so windy that anything vaguely "floater" was out of the question. Some locals turned up with some nice models, especially interesting was a ducted fan (electric) Kyosho scalish model. On a flat field he reckoned he got four minutes flying, but on a slope with the wind the duration was much extended and it looked fabulous in the air. A great flying day. Saturday night was Chinese for the Hotel dwellers, again supplemented by a quantity of antipodean nectar, I believe.

Sunday the weather had swung round again, so we Gill and me) tried the Long Man for a while, then cycled into Eastbourne to watch the last day of the Airborne display. Brian, John and Dave went to Firle Peak, a site the locals use for the awkward wind direction and had a good flying session. Of course the evening was part of the enjoyment but by now the strain was telling and John was struggling to stay awake, so I think the Thresher shares took a knock on Sunday night.

Monday we rounded off the great weekend at Butts Brow, the wind was reasonable and we flew what was left of some of the planes. It would appear that I was responsible at some time in the past for the partial destruction of John's Middle Phase, something I was reminded of at regular intervals; anyway it now matches my Middle Phase.

I strongly recommend the sloping weekends to anyone who enjoys flying, eating and drinking.

**Richard Sear**

## 2005 Annual Social

The annual social evening passed off reasonably well. You can't please 'em all but most folks seemed to be smiling. Here are a few pictures, taken with no attempt to pose, or arrange people.



This year, some competitions were not completed, because of the weather and also for lack of attendance. This will not be tolerated in 2006.

Overall Champ	Dave Shield
Broken Prop Award	Dave Joyner

This year, a new prize was awarded, for the most outstanding modelling project. The decision was for Roy Bricknell with his Mustang P51. (see web site for more on this)

Some people actually danced, including significant parts of the Brisland Tribe.

This is Your Life was, as ever, prepared and presented by our resident Master of Ceremonies, Roger Brown.



This is your Life, Michael Brisland



Dave Joyner, wearing the Broken Prop



John Hayman, one of several new solo flyers

And of course, the quiz was prepared by John and Carolyn Fairs, and must have been pitched about right for the limited knowledge of the teams, for there were nowt between 'em.

If anyone has comments to make, suggestions to give or advice to impart, keep it to yourselves!

**Phil Coupe**

# Flying rules & etiquette

## Glider frequencies

A request has been made that a few frequency channels should be devoted to gliders. This is so that no-one is standing, waiting for a glider to come off a thermal. Your committee has decided not to implement this, preferring to leave it to the common sense of members. So, and this applies to us all, whether gliding or motoring, please do not hog a channel unreasonably.

If you are about to commence a long flight, please tell anyone that you know uses the same channel and reach an amicable arrangement.

## Pegs

A reminder that pegs should bear your name (first name or initial and surname) and channel number. No two sided pegs with different channel numbers on each side. Printed labels are in the process of being made available in the New Year.

## Channel Pennants

Please, everyone, get your self a channel pennant for each channel you use. If you have pennants that are similar to the Club standard you can use them. They must stand out from the aerial and be easy to read.

## Incidents

Please, please, if anyone is involved in a flying incident that affects a member of the public, make a note of the circumstances and report the matter to the committee as soon as possible.

## A reminder

Please, all, remove your own peg at the end of each flight, to allow others to use the frequency.

Under no circumstances should anyone remove another member's peg without their express permission, unless they have actually gone home.

That's all for now. Enjoy your flying.

**Dave Joyner, Chief Safety Officer (and winner of the Broken Prop Award!)**

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## Marburg at NMAC 06

As Mike has said, we offered a list of full size events to the Germans. They were: Fairford, Duxford, Old Warden, Cosford & Farnborough. The Marburg party will be here from 11<sup>th</sup> to 18<sup>th</sup> June, and intend to visit Old Warden and London for some site seeing.

**Brian Hammon**

# A contribution to safety

– use of the MultiScanner and Pegboard

## Introduction

At the Buscotts Lodge Flying Field, the ordinary pegboard screwed to the wall of the pavilion will shortly be removed and the Multiscanner & Pegboard (M&P) will henceforth be used for the mandatory pegging on protocol. The main and most significant advantage of the M&P over a normal pegboard is that not only can one see a peg on a particular channel number but also whether it is illuminated. This indicates that the transmitter is actually switched on and transmitting at the frequency corresponding to that channel number (assuming that the kit is set up for proper operation).

Further, seeing a channel illuminated without a peg indicates that an errant club member has not pegged on, or just possibly the presence of an off-site transmitter of some sort. This is not to be confused with the illumination of one or more channels without their pegs when holding transmitters within a metre or so of the M&P. This effect occurs because of the generation of harmonics due to swamping, especially when set to the more sensitive FAR Mode.

There are also capabilities to monitor transmitter frequencies for correct tuning and to seek out sources of off-site interference. However, an understanding of the full use of the five modes of operation, NEAR, FAR, PAUSE, STEP and MEMORY, which are available, is not necessary for routine operation. Full specifications and instructions on the use of all the modes NEAR, FAR, PAUSE, STEP and MEMORY can be found within the red ring binder, located in the pavilion.

It is now mandatory for members to acquaint themselves with the setup instructions and the basic operating instructions for routine use, given below. Even if some members fight shy of powering up the kit or there is a malfunction, it will still have to be placed outside the pavilion on the shelf provided and used as a passive pegboard, functioning as the ordinary pegboard would have, prior to its removal.

Use of this kit is a definite step forward in terms of practicality and safety but it in no way reduces individual responsibility for behaving properly when on the flying field. The correct channel pennants should be displayed on transmitters and pegs should be labelled with surname and channel number. Members should remove their own pegs at the end of a flight, especially if it is known that there are others present who fly on the same channel. Members should never remove another's peg without their express permission, even if that member is chatting and looks as though he has

finished flying for a while; the only exception to this rule occurs when it has been established that the member has actually gone home. Every member should be responsible for their own safe behaviour and fliers should routinely look out for each other, being prepared to point out, or have pointed out, any shortcomings with good grace.

### Setup instructions

1. Rotate the shelf on the wall of the pavilion to the horizontal position, securely locking the two hinges
2. Place the M&P on the shelf within the wooden guides and open up lid
3. Plug the green 2.5 mm plug on the white cable into the socket on the Pegboard
4. Plug the yellow 2.5 mm plug on the white cable into the socket on the right rear of the Multiscanner
5. Plug the DIN plug (from the Pegboard) into the socket on the top of the Multiscanner
6. Angle the Multiscanner upwards on the hinged platform (lifted by the red string) in its compartment
7. Plug the BNC aerial plug into the BNC socket on the right side of the Multiscanner
8. Plug the gold 3.5 mm male jack for the speaker (if required) into the socket on the left side of the Multiscanner
9. Plug the orange 2.1 mm plug on the power supply cable into the orange 2.1 mm socket on the white cable
10. Plug the 2.1 mm plug, at the other end of the power supply cable, into the 2.1 mm socket in the pavilion wall, to access the 12 volt power supply \*\*\*

\*\*\* **Normally the 12 volt supply from the pavilion wall should be used.** Only if this fails, or if the M&P is to be deployed remotely, should the 12 volt, 7000mAh gel cell (kept in the left of the case) be used. This should always be disconnected after use as the battery protection device will cause the gel cell to discharge if it is left connected. Another alternative is to use one of the four numbered 8.4 volt 2000mAh NiCds (kept in the pavilion) with its own white cable.

### **Basic operating instructions for routine use**

1. Switch on by moving the slide switch (labelled POWER) on the Multiscanner to the right from INT to EXT

2. The Multiscanner will always switch on in the NEAR Mode (range 0 to 25 metres)
3. Switch to the FAR Mode (range 50 to 1000 metres) by pressing the black button (labelled MODE) once
4. It is usually not necessary to extend fully the aerial on the side of the Multiscanner
5. Switch off by moving the slide switch to INT or to return to the NEAR Mode again

### **Advanced operating instructions**

1. The modes of operation of the M&P can be selected by successive presses of the black button where each depression moves to the next lower mode in the sequence from NEAR to FAR to PAUSE to STEP
2. The PAUSE Mode will scan and pause for 5 seconds on each active channel, with an audible note sounded if the speaker is connected. This mode is mainly for transmitter frequency deviation checking, where three green LEDs illuminated on the Multiscanner indicates correct tuning for the respective channel
3. The STEP Mode is used for checking off-site interference and uses the audio output to indicate transmitters operating at extreme range. Each channel has to be stepped through in sequence by repeatedly pressing the black button to complete a full scan. The weakest signal that can be heard is approximately 10% of that required to indicate on the FAR Mode. Frequency deviation measurement is valid in this mode also
4. The MEMORY Mode is entered by holding the black button depressed when the slide switch is moved to EXT and is used for detecting interference, switching alternately either to the NEAR or FAR Mode, indicated by the slow flashing of the respective LED. Frequency deviation measurement is not valid in this mode
5. To exit the STEP Mode and the MEMORY Mode, the slide switch must be moved to INT then moved to EXT again. If it is wished to return to the NEAR Mode and the sequence of modes FAR, PAUSE and STEP

◆ **Mike Ottway, Flying Field Officer**

# Use of the frequency checker MK II

- another contribution to safety

The Frequency Checker is stored in the front right hand side of the M&P case.

1. DO NOT CHECK THE TRANSMITTER WITHOUT PEGGING ON FIRST
2. On pressing the red button on the side of the Unit, with no Tx or Rx crystal present, the counter will display a '2' as the first left hand digit in the LCD display. This will update to a reading of frequency in use
3. Switch on the Tx and hold its aerial to within about 2 inches of the unit
4. Press the red button, note the reading and compare with the chart
5. Gently plug the Rx crystal (single or dual conversion types) into the socket on the left hand side of the unit
6. Press the red button, note the reading and compare with the chart. (Please note that Tx crystals cannot be checked by plugging into the socket)

Mike Ottway, Flying Field Officer

## Committee changes

At the Annual General Meeting on 2<sup>nd</sup> December, the incumbent team were returned unopposed.

Chairman	Mike Brisland
Treasurer	Robin Patterson
Secretary	Phil Coupe
Field Officer	Mike Ottway
Membership Secretary	Bryan Groves
Chief Safety Officer	Dave Joyner
Competition Director	Dave Shield
Marburg Co-ordinator	Brian Hammon

Two small changes were made to the Constitution. See your renewal letter for details, and paste the amendment sheet into your booklet.

## NMAC 75<sup>th</sup> Anniversary

It is not too early for us to be thinking about this. If anyone has some ideas about what we could do to celebrate this in 2007, please contact the committee.

Phil Coupe, Secretary

## The Silent Treatment

A man and his wife were having some problems at home and were giving each other the silent treatment. Suddenly, the man realized that the next day, he would need his wife to wake him at 5:00 AM for an early business flight. Not wanting to be the first to break the silence (and LOSE), he wrote on a piece of paper, "Please wake me at 5:00 AM." He left it where he knew she would find it.

The next morning, the man woke up, only to discover it was 9:00 and he had missed his flight. Furious, he was about to go and see why his wife hadn't wakened him, when he noticed a piece of paper by the bed. The paper said, "It is 5:00 AM. Wake up."

## 4-stroke Petrol Conversion

Having played with converting glow engines to diesel and finding how easy it is, and how good they are, what else can I fiddle with to produce something to differ from the 'norm'. I just happen to have a couple of old OS 40 FS four stroke engines which have nowhere to go right now so why not try and convert one of these to run on petrol with spark ignition.

Firstly, working out the 'sums' with petrol being cheaper than glow fuel, I should find a running cost saving after the preliminary expense of the conversion. Ah yes! I should see a return on investment after about 4000 flying hours – not much of an incentive did I hear someone say! What the heck! In the true blue spirit of things pointless and 'just for the hell of it' I thought I would have a go. So I break an engine, - well I've got another one! And I might learn a few lessons in the process. What will I need? Well every good petrol engine needs the following shopping list

- 1) A Spark Plug
- 2) A high tension coil
- 3) A timing mechanism (points?)
- 4) A black box of electronics to convert the timing mark to a spark

## 5) The Engine

Starting with the Spark Plug, there is a very convenient size, which is exactly the same thread as a standard glow plug, and will screw into the glow plug hole with no modification. This is the ME8 manufactured by NGK, it is a 1/4"x32 size (32 threads per inch) and costs about £18 – not a cheap start!



Anybody spot the ruler is left handed?

Once this is screwed into the cylinder head we are on our way



The remainder of the 'electronic' was a CDI system that I just happened to acquire cheaply (mainly because it is older technology). This is a Capacitor Discharge Ignition as used in most cars, motorbikes and large aero petrol engines for that matter. The main electronics composed a high voltage generator with a thyristor trigger system to discharge the capacitor through the coil at the right time as determined by a 'Hall effect' sensor mounted so as to detect TDC on the crankshaft. This system is more sophisticated than the basic circuit as used in the old Sparkies and includes automatic advance circuitry to adjust the spark timing as the engine speed changes. The integration of this component is simply reduced to working out a way of detecting TDC of the engine as a timing mark for the spark ignition. I found that the 'hall effect' devices are very reliable in other applications and

when used with small round neodim magnets, the firing angle of the spark can be accurately set.

I used a polythene clamp which is tightened round the front of the crankcase just behind the 'prop washer'. Onto this I screwed a bracket to retain the hall effect device (see photo) – primitive but works



A small hole is drilled into the edge of the prop washer to take the small magnet, which is epoxy-ed in place. Some thought is needed as to the location of the hole in the prop washer as the magnet and hall effect device must line up together when the engine is at TDC. This is not super critical however as the polythene clamp can be rotated for correct alignment prior to being locked in place. Once this task is completed then there is no further modification needed other than assembling all the components, the coil



and the CDI and battery. The photo shows the fully converted engine ready to be mounted in an engine test stand



My ignition system required a 4.8 Volt battery, the consumption is about 360 mA when running at 10,000 rpm, so a standard receiver pack was used.

Testing was performed in the back garden, the ideal place to annoy the neighbours (sorry Les). Fitted with a 10x7 Graupner prop and the 4 oz fuel tank filled with a 30:1 mix petrol /2stroke oil, I attached the battery and started flicking (I still haven't got the hang of electric starters!). Eventually I was rewarded by a couple of burps which told me the spark system was at least attempting to ignite the fuel. A few more flicks and the engine burst into life running very roughly with lots of smoke blowing out of the exhaust. I think this was the after-run oil I used to preserve the engine during storage, and had forgotten to drain out!

The first adjustment I soon realised that was needed, was to lean out the mixture, I rotated the needle valve turning the needle inwards until the engine was running smoothly at a fast idle. On subsequent checking, the needle was only open about ¼ turn, much less than the 2 ½ turns for methanol fuel. This was when I realised how economical petrol can be, I ran the first 4 oz at full throttle and measured 9200 rpm. 20 minutes later the tank ran dry! This sounds as though the run ran smoothly – it didn't. I was constantly adjusting the mixture needle to achieve maximum revs and found that whenever I altered the throttle setting, I needed to adjust the mixture to make the engine run smoothly. More work needed in the Carb department! The trouble is, a Walbro carb is twice as big as the OS40FS engine so the marrying of these two isn't going to happen! I think a finer taper on the needle will even out the needle sensitivity (and it is sensitive! One click either way from optimal drops the rpm dramatically!)

After about a total of 1 hour running I opened up the back, side and top to see if there were any signs of wear, lack of oil etc, and surprisingly everything was coated in oil and no signs of wear (big end in particular), not yet anyway – still have a serviceable engine. The next phase is to install the whole caboodle in a 'floater' to get some air time and see if the wear rate is acceptable.

Concluding for now (more? Groan!!) This experiment has taught me one thing, this ensemble would not make your 3D or pattern ship, the addition of all the ancillary bits more than doubles the weight of the engine installation. Great for the next Radio Queen, on tickover (which is all that is needed for one of these) I should manage at least an hour in the air with a 4 oz tank! – taught me two things, it's a #£\* expensive 40 size engine, 3 things – do not use exhaust pressure for a petrol fuel tank!!

**Dave Shield**

Dave, what are neodim magnets ??

## Culled from the Call Centre

These are actual Call Centre Conversations.

### Travel Centre

Customer: "I've been ringing 0700 2300 for two days and can't get through to enquiries, can you help?"

Operator: "Where did you get that number from, sir?"

Customer: "It was on the door to the Travel Centre"

Operator: "Sir, they are our opening hours"

### Sam sung Electronics

Caller: "Can you give me the telephone number for Jack?"

Operator: "I'm sorry, sir, I don't understand who you are talking about".

Caller: "On page 1, section 5, of the user guide it clearly states that I need to unplug the fax machine from the AC wall socket and telephone Jack before cleaning. Now, can you give me the number for Jack?"

Operator: "I think you mean the telephone point on the wall".

### RAC Motoring Services

Caller: "Does your European Breakdown Policy cover me when I am traveling in Australia?"

Operator: "Doesn't the product give you a clue?"

Caller (enquiring about legal requirements while traveling in France):

"If I register my car in France, do I have to change the steering wheel to the other side of the car?"

## And finally

It's your Newsletter. No articles, no Newsletter!

**Phil Coupe**