TASK 1 – PURE NAVIGATION

- *Unlimited fuel*
- *Briefing: 14.00 Saturday 20 August 2005*
- *Takeoff window 07:00 – 08.30 Sunday 21 August*
- *Flight Duration 1 ½ hours*
- *Task window closes at 12am*

Objective

To fly to the greatest number of declared turnpoints within the time window and return to the deck.

Description

Pilots must declare the list of turn points in the order that they will fly them. Each point may only be visited once.

Pilots will hand their declaration to their team leader to give to the designated admin marshal at the take off deck, **before** takeoff.

Pilot then executes a precision take off.

Pilot then flies through the official **start time gate G3** where his/her task time starts. Please note no-fly zones in gate information sheet.

Pilot then flies the sequence of declared turn points and returns to the airfield flying through the official **finish time gate G2** where his/her task time ends [1 ½ hours are allowed for the flight between start and end gates.]

Pilot then lands at his/her designated landing deck.

Scoring

Ntp = Number of turn points correctly flown

Etp = Number of errors (discrepancies between points declared and points flown)

Et = Excess flight time (number of seconds exceeding 1 ½ hours between start and end gates).

TO = Standard precision take-off score:

250 points for a clean take off at the first attempt
170 for the second
90 for the third
zero for the fourth or more

Qt = 100 * (Ntp – Etp) – Et (minimum score is zero)

Q = Qt + TO

P = 1000 * Q / Qmax

Penalties

Landing out scores 0.

Landing outside of the designated deck but within airfield boundary: 20%

Flying no-fly zones: 50%

TASK 1 – PURE NAVIGATION

Turn Points Declaration Sheet
Sequence of points to be flown

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Pilot: _____

Number: _____ **Class (circle appropriate):** **PF1** **PL1** **PL2**

Signature:

TASK 2 – PRECISION TAKE-OFF AND LANDING

- *This task is as task C1 in the PPG local regulations*
- *Unlimited fuel*
- *Briefing: 13:00*
- *Task start: 18:00 21/08/05*

PRECISION TAKE-OFF AND LANDING

Objective

To make a clean take off at the first attempt in the deck, and subsequently land as near as possible to a point.

Description

The pilot is permitted four takeoff attempts, climbs to 500ft overhead the target, cuts the engine before passing through a gate and tries to make a first touch as near as possible to the centre of a target consisting of a series of concentric circles.

Special rules, takeoff

Takeoff in current championship order. Pilots should NOT start to take off until they are sure a marshal is watching, knows who they are and has given the signal to start. Penalty for "delaying" takeoff (more than 20 min on the deck or the seventh in order below pilot's position has taken off) 20% takeoff score.

The pilot scores 250 points for a clean take off at the first attempt, 170 for the second, 90 for the third, zero for the fourth.

Special rules, circuit

The circuit to be flown to the targets will be detailed at briefing. The gate is overhead the landing target whilst flying into wind.

Penalties

1 Minute MINIMUM engine off time before landing. (Penalty 20% landing score).

Special rules, Landing

The first touch of the ground or the football by the pilot's foot is the point from which the pilot's score will be derived.

Contestants will be awarded a zero task score for:

- The pilot or any part of the aircraft touching the ground outside the deck while undertaking the task.

Contestants will be awarded a zero *landing* score for:

- Engine not stopped before the gate.
- Gate not passed correctly.
- Falling over as a result of the landing.

Scoring

Pilot score = $Bto + \left(250 \times \frac{Dp}{Dmin}\right)$

Bto = Pilot's takeoff score.
Dmin= 15 - the closest distance to the target achieved by any pilot.
Dp = 15 - the pilot's distance to the target (>15 m = zero landing score

TASK 3 – ECONOMY, NAVIGATION WITH BONUS

Tuesday, 22/08/05

- *This task is as task C1 in the PPG local regulations*
- *limited fuel **6** L for PL1 and PF1, **12** L for PL2*
- *Briefing: 13:30 21/08*
- *Take-off window: 8:00 – 9:00*
- *Task closes: 12:00*

Objective

Take off and fly as many turn-points as possible with a limited amount of fuel. A bonus score will be given for returning to the airfield after visiting more than 3 turn-points.

Description

Take off within the window allowed and leave the airfield through any of the three official gates (G1, G2, G3).

Pilot will then fly a course collecting as many turn-point as he/she can. Each turn point can only be visited once

After collecting at least **three** turn-points, the pilot may fly back to the airfield and cross any of the official gates in any direction. This will award him/her a bonus score. In order to obtain a new bonus score, the pilot must fly at least another **three** turn-points and cross one of the official gates.

Upon returning to the airfield for landing the pilot must cross any of the official gates and land within the PPG airfield boundaries.

Special rules

- Should pilots need to cross the classic classes runway between the hours of **8:00** and **9:30**, this must be done at an altitude exceeding 300 m AGL. This will be treated like a no-fly zone.

Penalties

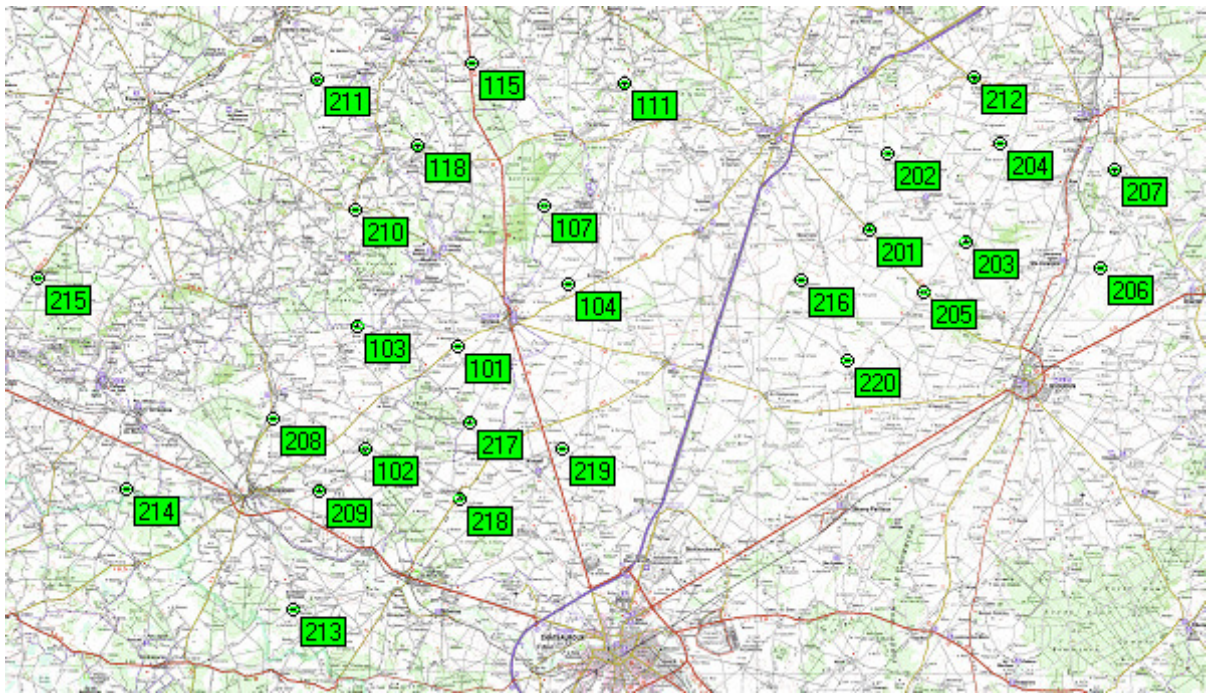
- Infringement of any no fly zones result in 100% penalty.
- Exceeding the window time, 100% penalty.
- Landing out, 100%

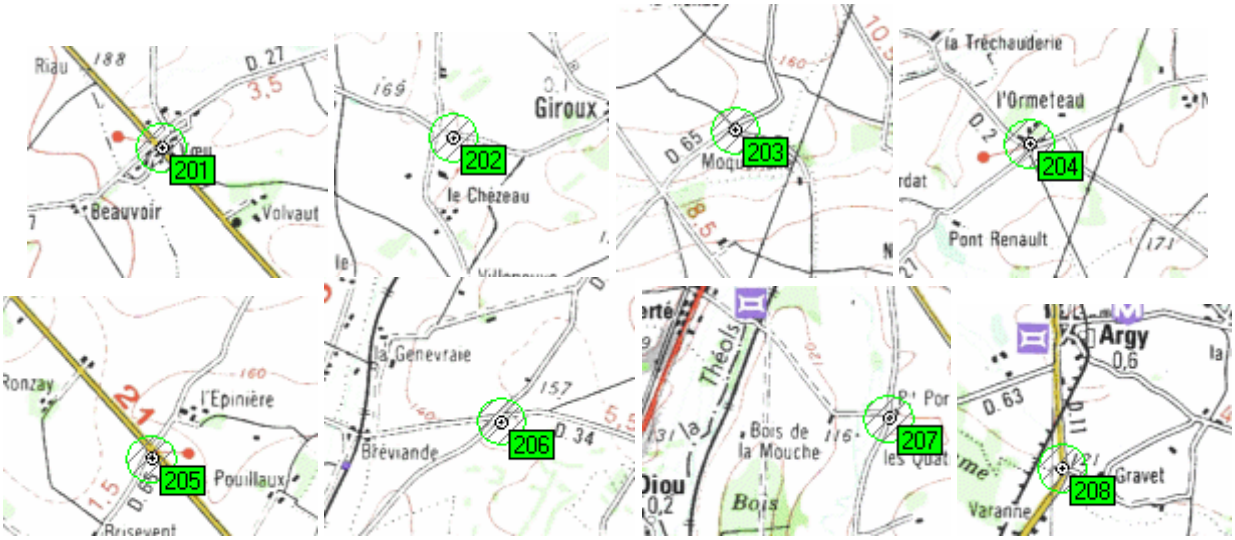
Scoring

Ntp	=	Number of turn-points correctly visited
NtpMax	=	Maximum number of turn-points correctly visited by any pilot
Qtp	**=**	**1000 * Ntp / NtpMax**
Nb	=	Number of bonuses collected. Each bonus awards a 10% increase in the TP score (1 bonus, 10%, 2 bonus 20%...)
Q	**=**	**(1 + Nb * 0.1) * Qtp**
P	**=**	**1000 * Q / Qmax**

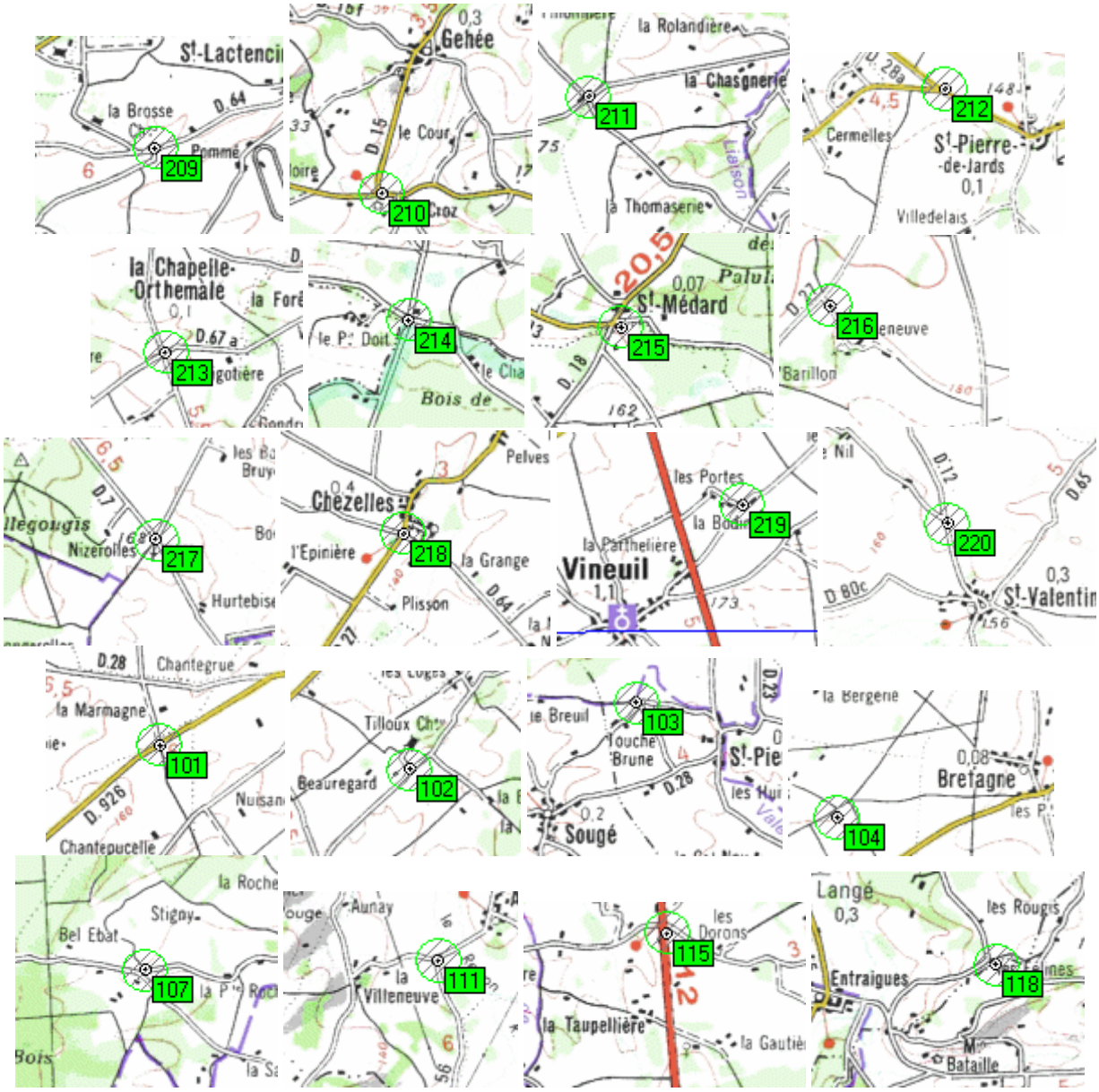
TASK 3 – ECONOMY, NAVIGATION WITH BONUS

Turnpoint list





Grange Dieu (Levroux), France, 20 - 27 August



TASK 4 – NAVIGATION WITH CONSTANT SPEED LEGS

Sunday, 21/08/05

- *Unlimited fuel*
- *Briefing:* (15.00pm)
- *Takeoff window opens 07.00am (22/08/2005)*
- *Takeoff window closes 08.00am*
- Task closes 12:00 noon

Objective

Pilots execute a **standard** precision take off and then leave the airfield through the designated official gate.

Then fly a course along a specified sequence of turn points, at a constant speed along each leg. Return to the deck or land at a specified out-landing.

Description

The **team leaders** hand in the supplied declaration contracts to the admin marshals for **each** of their pilots at the specified takeoff decks. (Declarations are accumulated times in seconds)

The pilot executes his precision take off and flies through the **specified** official gate.

Then the pilot flies the course at his/hers chosen constant speed along each leg.

(the chosen speed may be different between legs)

During which the pilot passes through **500m** wide hidden time gates.

Pilots then returns to the specified landing deck.

TP-1	→	***TP-2***	→	***TP-3***	→	***TP-4***	→	***TP-5***
Time @ start = 0	Nav Hidden time gates	Declared ETA	Nav Hidden time gates	Declared ETA	Nav Hidden time gates	Declared ETA	Nav Hidden time gates	Declared ETA

Special rules and penalties

Circling in the timed corridors, 50% penalty.

Not flying through the official gate, 20% penalty.

Landing outside the specified deck **or** outlanding, 20%.

Scoring

Each hidden time gate scores **180** points

There will be a time estimation @ each gate based on the **individual** pilots declarations. Each second of error in the actual crossing time subtracts 1 point.

GS = Gate score = 180 – Error in seconds (+/- 5 secs)

TO = Standard precision Take off

Q = Sum of GS + TO

P = 1000 * Q / Qmax

TASK 4 – NAVIGATION WITH CONSTANT SPEED LEGS

Pilots declaration sheet

Of Times of arrival (ETAs) in seconds.
Starting from TP-1 *(ETA for TP-1 is zero)*

TP-1	*TP-2 (222)*	*TP-3 (205)*	*TP-4 (201)*	*TP-5*
Time @ start = 0	Declared ETA	Declared ETA	Declared ETA	Declared ETA

Pilot: _____

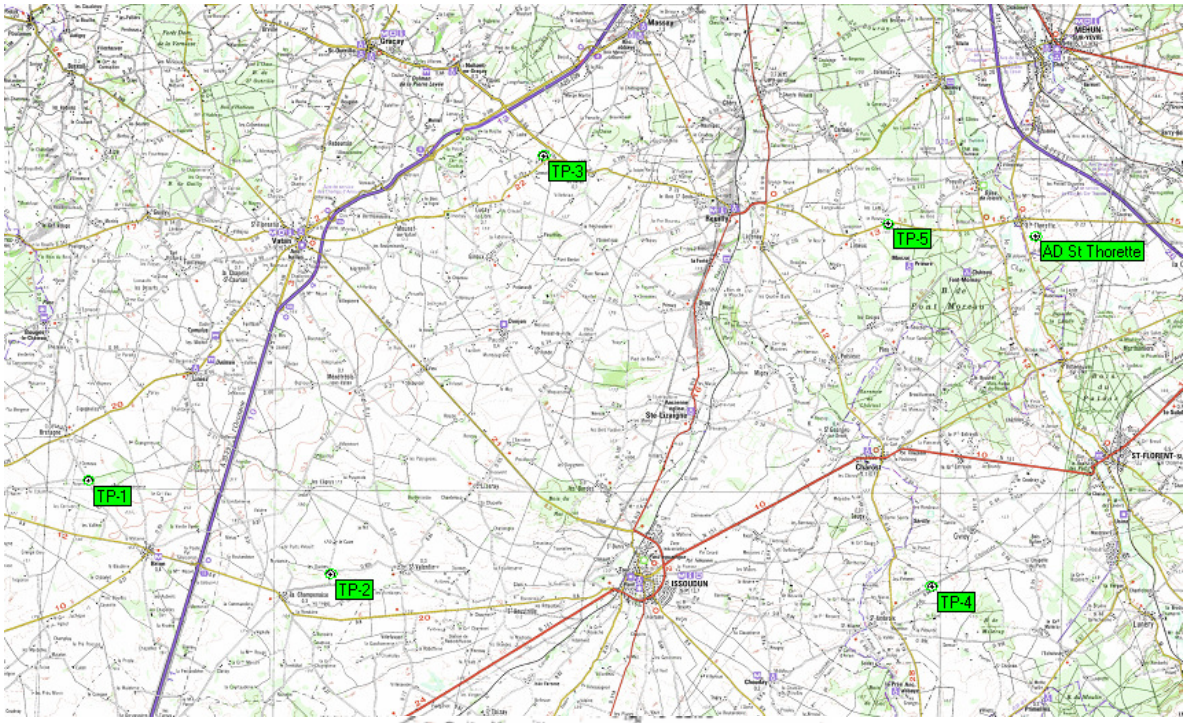
Number: _____ **Team:** _____ **Class** (circle appropriate): **PF1** **PL1** **PL2**

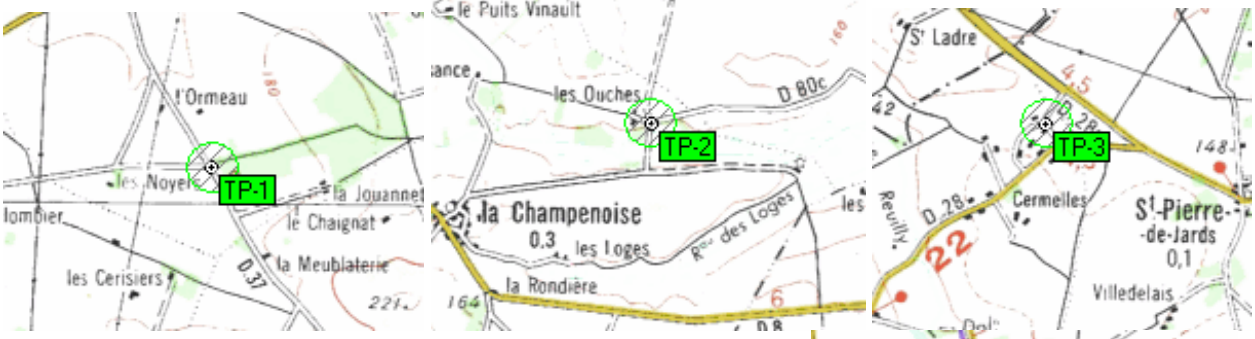
Signature:

TASK 4 – NAVIGATION WITH CONSTANT SPEED LEGS

Sunday, 21/08/05 **[CANCELLED]**

Turnpoint list

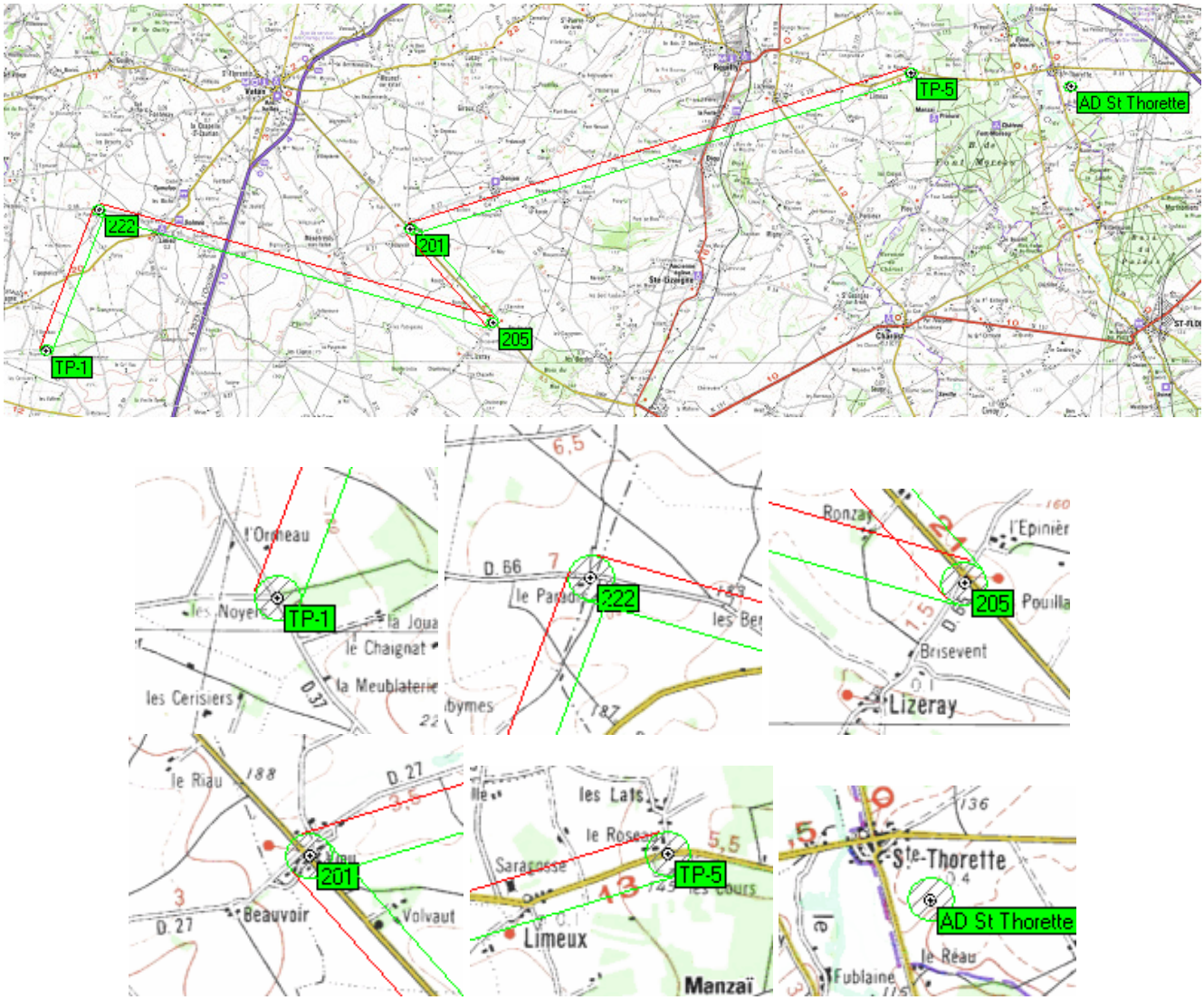




TASK 4 – NAVIGATION WITH CONSTANT SPEED LEGS

Tuesday, 23/08/05

Turnpoint list

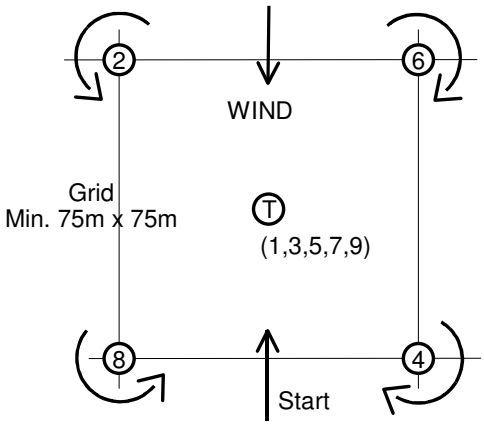


TASK 5a - PRECISION CIRCUIT IN THE SHORTEST TIME (Clover leaf slalom)

- *This task is as task 3.C7 in the local regulations. This task for PF1 & PL1*
- *Unlimited fuel*
- *Takeoff starts ???*
- *Start order: Reverse current championship position*

Objective

To strike a number of targets laid out in a given order in the shortest possible time and return to the deck.



Description

4 pylons 2m in height are laid out at the corners of a 75M square. A fifth target is set at the centre of the square.

The pilot enters the course into wind and strikes the target T (strike 1). At this point the clock starts. The pilot flies around pylon 2 and returns to kick the stick T (strike 3), he then flies around pylon 4 and returns to kick the stick T (strike 5). This continues until all four pylons have been rounded. The clock stops when target T is kicked for the last time (strike 9).

Special rules

- A valid strike on the target T is one where the pilot or any part of the PPG or PL1 has been clearly observed to touch it. With PL2's The target T is replaced with a 4m X 4m mat and the PL2 must do a touch & go across the mat.
- To count as a strike, the pilot's body must be clearly seen to round each pylon and pylons 2 & 8 must be rounded in an ANTI CLOCKWISE direction and pylons 4 & 6 must be rounded in a CLOCKWISE direction.
- A strike on target 1 starts the clock, a strike on target 9 stops the clock.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Failure to strike the first or last target or round at least one pylon or touch the ground at any point between them: score zero.
- The grid may be opened up to max. 100M at the briefing if the meteorological conditions dictate.

Scoring

NQ = The number of targets struck by the pilot

Sp = The pilot's elapsed time in seconds between striking target 1 and target 9

$$Q = \frac{NQ^3}{Sp} \qquad P = \left(500 \times \frac{Q}{Qmax}\right)$$

Start order

Reverse championship order.

TASK 5b - PRECISION CIRCUIT IN THE SHORTEST TIME (The worm hole)

- *This task for PL2*
- *Unlimited fuel*
- *Takeoff starts ???*
- *Start order: Reverse current championship position*

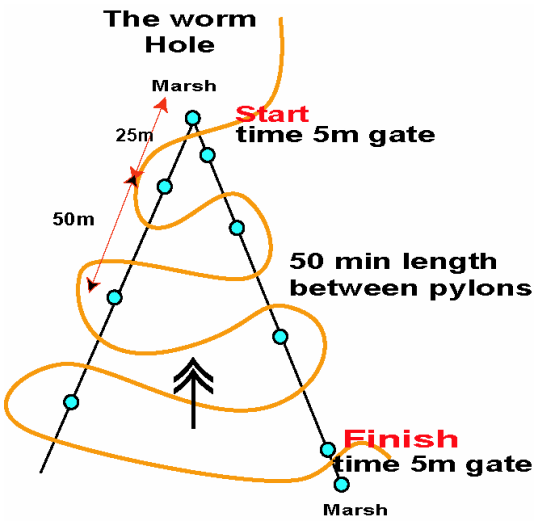
Objective

To round a number of targets laid out in a given order in the shortest possible time and return to the deck.

Description

A number of pylons are placed along two converging lines according to the drawing.

The pilot takes off and flies through the start gate where the clock starts. Then (s)he flies round pylons on alternate sides. Finally (s)he crosses the finish gate where clock the stops.



Special rules

- The pilot's body or trike must be clearly seen to round each pylon.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Touching the ground at any point between start and finish gate: score zero.
- The grid may be opened up to max. 100M at the briefing if the meteorological conditions dictate.

Scoring

NQ = The number of pylons correctly rounded by the pilot

Sp = The pilot's elapsed time in seconds between start and finish gates

$$Q = \frac{NQ^3}{Sp} \qquad P = \left(500 \times \frac{Q}{Qmax}\right)$$

Start order

Reverse championship order.

TASK 6 - SPEED TRIANGLE AND OUT AND NO RETURN ("Gone with the wind")

- *Limited fuel, 6 litres except for PL2, 12 litres.*
- *Takeoff window opens: to be decided.*
- *Takeoff window closes: TO window +2 hours)*
- *Task closes at 21:00*

Objective

With limited fuel, to fly around a circuit in the shortest possible time, and then, with the pilot's remaining fuel, fly in a given direction as far as possible.

Description

Fuel quantity allowed: 6 litres.

Part 1: Speed. The pilot takes off and flies through the designated time gate (G1) where his time is noted. The pilot flies to points 103, 107, and back to G1.

Part 2: Distance. The pilot then flies in any direction to a point of pilot choice, and lands.

Penalties

- Land out before completing part 1: Score zero.
- The speed triangle must be completed in order to get any score in the second part. Should a pilot miss some point in the triangle, he will be scored the second part **only** if the point was missed by going round on the outside.

Scoring

T = The pilot's time,
Tmin = The best time (Part 1)
D = The pilot's distance from designated time gate to the outlanding place.
Dmax = The greatest distance (Part 2)

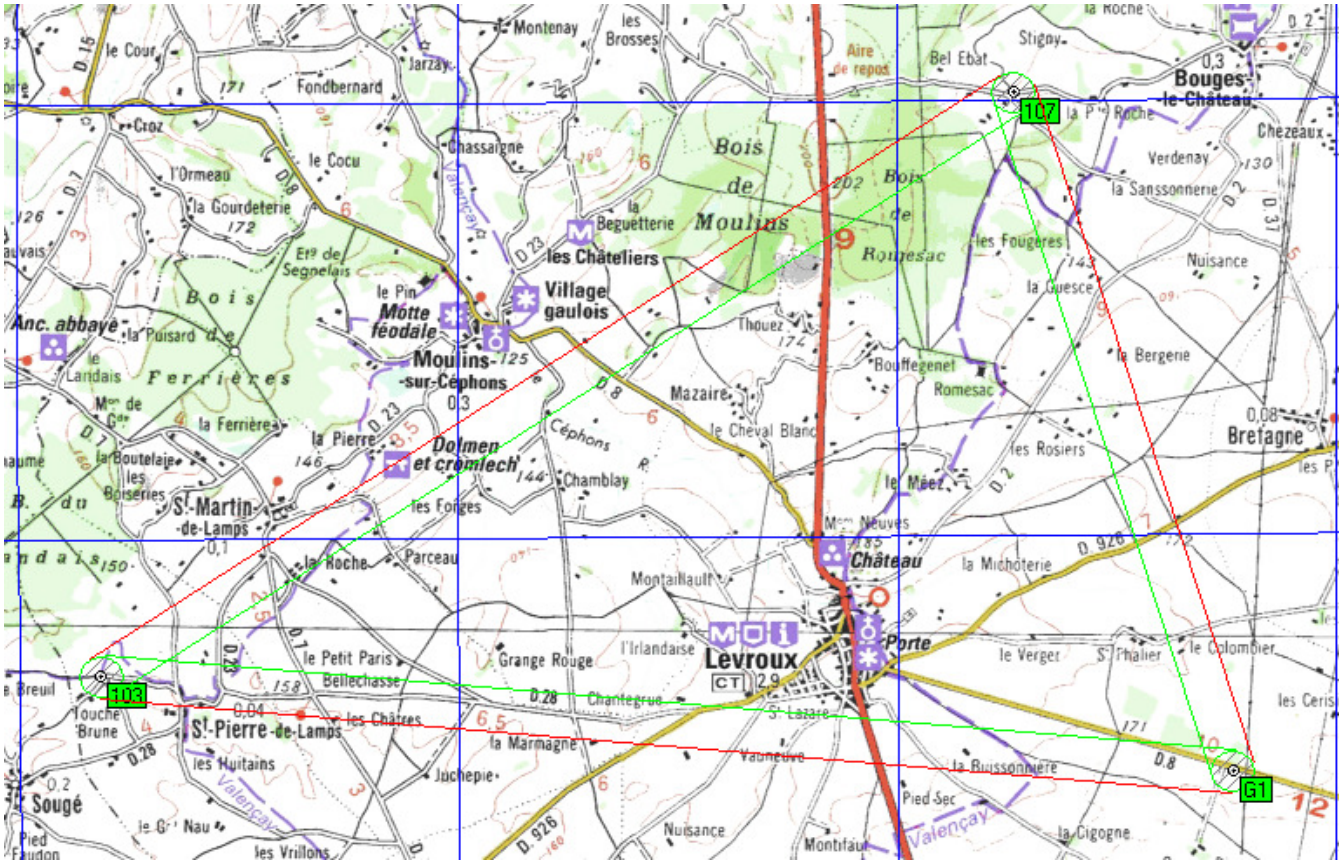
$$\text{Pilot score} = \left(500 \times \frac{\text{Tmin}}{\text{T}}\right) + \left(500 \times \frac{\text{D}}{\text{Dmax}}\right)$$

Special notes – Air space

Please make sure that your pilots have fully read and understood the air charts relating to the areas they are likely to fly. Any reported air space infringement will score zero on the economy part of the task.

TASK 6 - SPEED TRIANGLE AND OUT AND NO RETURN ("Gone with the wind")

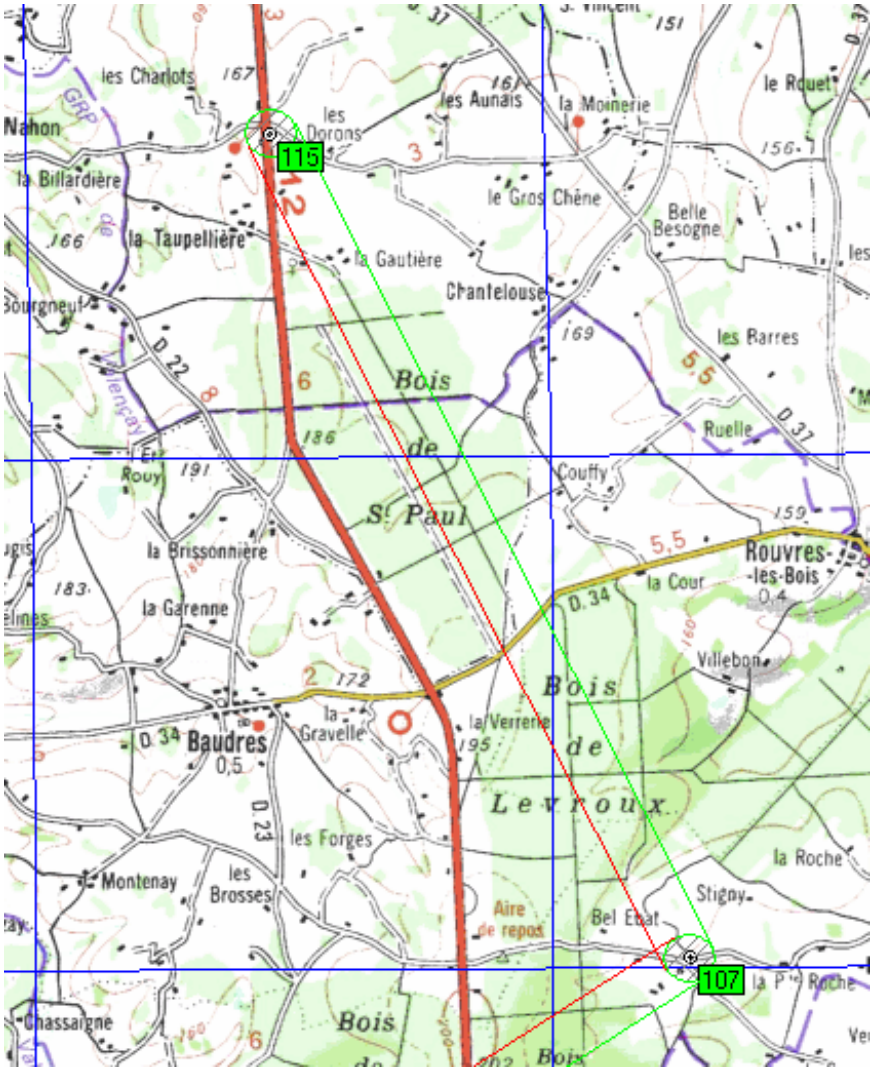
Point list



TASK 6 - SPEED TRIANGLE AND OUT AND NO RETURN ("Gone with the wind")

Last minute change

Due to strong wind, for safety reasons, the last leg in the speed course is the following (economy distances will be measured from point 115)



TASK 7 – SLOW / FAST SPEED

- *This task is as task 3.C3 in the PPG local regulations*
- *Unlimited fuel*
- *Task start: 7:00*
- *Takeoff order: Reverse current championship order*

Objective

To fly a course as slow as possible and then the same course as fast as possible.

Description

A straight course between 250m and 500m long and 25m wide is laid out with gates at each end.

The pilot makes a timed pass along the first course as **slow** as possible, returns to the start, and makes a second timed pass in the same direction along the same course as **fast** as possible.

Special rules

For each leg, the clock starts the moment the pilot passes the gate and stops the moment he passes the second gate.

If the pilot or any part of his PPG touches the ground during the first leg: Vp1 = zero and Ep = zero.

If the pilot or any part of his PPG touches the ground during the second leg: Vp2 = zero and Ep = zero.

If the pilot zigzags or if the body of the pilot overflies a side of the course or exceeds 2m above ground: Score zero.

Operation

Pilots launch in reverse championship order from their designated decks.

Pilots must then fly to their respective waiting areas to start the course.

If a marshal raises a red flag when a pilot is approaching the 1st gate (slow), (s)he should not enter the gate. Pilots should wait until they can see that that part of the course is clear before entering.

When the course is finished the pilot should fly to the designated gate to start the following navigation task.

Scoring

Vmax = The highest speed achieved in the fast leg Vp1 = The speed of the pilot in the fast leg Vmin = The lowest speed achieved in slow leg Vp2 = The speed of the pilot in the slow leg Ep = The difference between the pilot's slowest and fastest speeds Emax = The maximum difference between slowest and fastest speeds	$P = \left(125 \times \frac{Vp_1}{Vmax}\right) + \left(125 \times \frac{Vmin}{Vp_2}\right) + \left(250 \times \frac{Ep}{EMax}\right)$

TASK 8 – NAVIGATION WITH UNKNOWN LEGS

- *Unlimited fuel*
- *Task start: After previous task is completed*
- *Takeoff order: Same order as previous task*

Objective

To navigate along defined tracks trying to find pictures which define new legs.

Description

Pilots leave the airfield trough gate G2.

They will then fly to S1 and follow the **given line** along which they will find a ground feature (P1) from a given picture. From the moment they find the picture they will fly a new straight line heading towards the **given point** S2.

They will then fly to S2 and follow the given line along which they will find a ground feature (P2) from a given picture. From the moment they find the picture they will fly a new straight line heading towards the **given point** S3.

They will then fly to S3 and follow the given line along which they will find a ground feature (P3) from a given picture. From the moment they find the picture they will fly a new straight line heading towards the **given point** F.

Pilots will then return to the airfield entering trough gate G1.

From S1 to F there will be a number of hidden gates, both in the given lines and the unknown legs.

Gates in the correct course S1-P1-S2-P2-S3-P3-F will score positive points.

Gates on the given lines beyond the pictures will score negative points.

Scoring

Ng+ = Number of positive gates crossed

Ng– = Number of negative gates crossed

Ng = Ng+ minus Ng–

Ngmax = Maximum value for Ng among pilots

P = 1000 * Ng / Ngmax

Penalties

Not leaving or entering the airfield through the designated gates: 20%

TASK 8 – NAVIGATION WITH UNKNOWN LEGS – PF1

TASK 8 – NAVIGATION WITH UNKNOWN LEGS – PL1 & PL2

TASK 9– PURE ECONOMY

26/08/05

- *This task is as task 3.B1 in the PPG local regulations*
- *Fuelling ?*
- *PPG & PL1, 2 litres fuel (1 bottle), PL2; 6 litres fuel (1 green can).*
- *Briefing: ?*
- *Takeoff window opens ?*
- *Takeoff window closes ?*
- *Task closes ?*

Objective

Take-off with a measured quantity of fuel and stay airborne for as long as possible and return to the deck.

Special rules

- Free take-off within the time window.
- Departure from view of the marshals or egress from the permitted flight area will incur penalties.
- Permitted flight area will be briefed before the task.
- Land outside the airfield boundary: Score zero. Land inside the airfield boundary but outside the deck: 20% penalty.

Scoring

Tp = The pilot's time,

Tmax = The longest time taken to complete the task

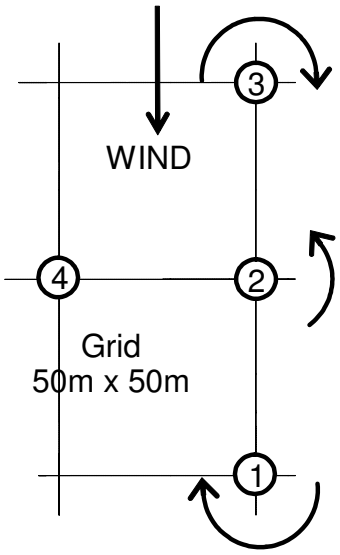
$$P = 1000 \times \frac{Tp}{Tmax}$$

TASK 10 - PRECISION CIRCUIT IN THE SHORTEST TIME ('Japanese Slalom')

- *This task is as task 3.C8 in the local regulations. This task for PPG & PL1 & PL2*
- *Unlimited fuel*
- *Briefing: ?*
- *Takeoff starts ?*
- *Start order: Reverse current championship position*

Objective

To strike a number of targets laid out in a given order in the shortest possible time and return to the deck.



Description

4 pylons 2m in height are laid out on a 50m x 50m grid.

The pilot enters the course into wind and strikes target 1. At this point the clock starts. The pilot then strikes targets 2 and 3. He then returns to fly clockwise around target 1 (strike 4), anticlockwise around target 2 (strike 5) and clockwise around target 3 (strike 6). He then returns to strike target 1 (strike 7), target 4 (strike 8) and target 3 (strike 9). The clock stops when target 3 (strike 9) is kicked.

Special rules

- A valid strike on a target is one where the pilot or any part of the PPG has been clearly observed to touch it
- When targets are acting as pylons, to count as a strike, the pilot's body must be clearly seen to round it, pylons 1 & 3 must be rounded in a CLOCKWISE direction and pylon 2 must be rounded in an ANTI CLOCKWISE direction.
- A strike on target 1 starts the clock, a strike on target 9 stops the clock.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Failure to strike the first or last target or touch the ground at any point between them: score zero.

Scoring

NQ = The number of targets struck by the pilot

Sp = The pilot's elapsed time in seconds between striking target 1 and target 9

$$Q = \frac{NQ^3}{Sp} \qquad P = \left(500 \times \frac{Q}{Qmax}\right)$$

Start order

Free takeoff from the deck. Pilots to wait downwind of the course.

The next pilot number in the course will be displayed on the ground.

After finishing the course fly back to the deck and land.

A red flag will be used by marshals should there be congestion. Pilots must return to waiting area again until the course is clear.