



**SOUTH AFRICAN POWER FLYING ASSOCIATION**

## **PYLON RACING**

# **RULES AND REGULATIONS**



Edition 2014\_2

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## 1. General

- 1.1 **Event Organizer** - The Event Organizer remains the person responsible for all matters related to the legal and regulatory compliance, safety and risk to participants, officials and members of the public be they spectators or otherwise. Application for an Event must be made in terms of AIC 19.1, and the Special Air Event Manual of Procedures, and submitted to RAASA 90 days before the Event.
- 1.2 **Safety Officer** – The person appointed to oversee airside safety at a special air event, and promote the safe conduct of airside and aerial activities.
- 1.3 **Competition Director/Flight Director** – The responsible person appointed to observe, manage and co-ordinate all airside officials and participants through feedback from the Safety Officer, ATC, EMS, Fire, Marshalls, Security etc.
- 1.4 Pylon racing is an air race event on a set route as demarcated by pylons.
- 1.5 In essence, it is a race against the clock and not against each other. The competitor who completes the course in the shortest time will be declared the winner. Naturally the shortest time equates to the fastest speed.
- 1.6 The events will be held in VFR conditions.
- 1.7 The events are held under the auspices of the 'THE SOUTH AFRICAN POWER FLYING ASSOCIATION'.
- 1.8 Should the competition director want to include flat or aerobatic displays or any other aviation activities, the 'Special Air Event' application must include these activities, and the rules and procedures pertaining to these activities must also be followed.

## 2. Aircraft

### 2.1 Licenses, certificates and airworthiness

All participating aircraft must be legally flown in terms of the Civil Aviation Regulations, i.e. it must be a registered, licensed aircraft with all legal documentation in place, as per SACAA or RAASA requirements. In short, all aircraft should be able to pass a ramp inspection test on the day of the competition. All the necessary documentation should be readily available.

### 2.2 Instruments

All aircraft must have the necessary instrumentation to operate the aircraft safely and legally in a VFR environment.

### 2.3 Radio's

VHF radio communication is an essential requirement. All aircraft must have a fully functioning radio able to maintain two-way communication with ATNS services, on the designated race frequency. In case of radio failure occurring during a race, the radio failure procedure must be followed.

## 2.4 Modifications.

Modifications to aircraft are allowed, on the condition that it's done legally and not affecting the airworthiness of the aircraft. As an example, the addition of wheelspats are legal, installing a different propeller other than what it's certified for, is not. Neither is illegal modification of the flaps allowed.

## 3. Classes

The class shall be as described in the FAI SPORTING CODE - SECTION 2 Chapter 3, but may be further separated depending on the entries. These classes will be clearly indicated on the official entry form. Any one aircraft may be entered in more than one class, where possible and applicable.

The different classes may be defined by speed (low, medium ,high), engine size or type, type (tailwheel, biplane, etc), age (vintage), manufacturer or model.

## 4. Pilots

### 4.1 Pilot eligibility

All participating pilots have to comply with the following minimum requirements in order to be eligible for participation:

3.1.1 Total hours – a minimum of 200 hours total flying time as PIC, as per his/her pilot's logbook.

3.1.2. Race experience - the pilot has to prove to the race committee that he/she has previous experience in low-level flying around pylons. This experience can be accumulated by participation in previous pylon races, or having flown at least 4 practice rounds at the competition course (as verified by a member of the race committee). The above are the absolute minimum requirements. The organizers and race committee will do their utmost to assist newcomers in obtaining the required experience. It is advisable for any newcomer to obtain the assistance of a race committee member or an experienced race participant, for his/her initial practice rounds. No entry will be accepted without concrete proof of said experience.

### 4.2 Pilot licensing

All pilots must hold a valid class and type pilot's license for each aircraft he will participate in. These licenses must be produced on request of the competition director. Any pilot who cannot produce the license on request, will not be allowed to enter or be disqualified.

### 4.3 Passengers

No passengers or co-pilots are allowed during a race.

## 5. Entries

### 5.1 Official entries

Entries have to be on the official entry forms and duly signed by the participant. A pilot may enter different classes on a single entry form, if entry fees are paid for each entry/class. Only fully paid-for entries will be accepted. The amount, method of payment and cut-off time will be published by the competition director and be indicated on the entry form. If payments of entry fee(s) occur after the designated cut-off time, the entry will be cancelled and the fee(s) returned to the applicant. Before a participant will be allowed to compete, he/she must ensure the organizers have the following in their possession:

- a. Entry form, fully completed
- b. Entry fee(s) paid, with proof of payment available on request

#### c. **DECLARATION TO BE SIGNED BY EVERY PARTICIPANT**

- i. I understand that should I, at the time of the event in which I am taking part, be suffering from any condition/disability (whether permanent or temporary) which is likely to prejudicially affect my control of my aircraft, I may not take part in the event concerned. I further understand that it remains my responsibility not to participate in any event where a condition or disability suffered by me, may in any way affect my or any other persons safety.
- ii. I declare that any aircraft entered by me will comply with all regulations and specifications pertaining to the event concerned. I accept subject to my rights, of protest, that action will be taken against me as the entrant in accordance with the provisions of the regulations if my aircraft is found not to comply with the relevant regulations and specifications.
- iii. I declare that I am aware of the Rules, Regulations, Conditions and Format of the event and that I agree to abide by all Rules, Regulations, Conditions and Format as laid down.
- iv. I hereby agree to entirely indemnify and hold free of any liability, the South African Power Flying Association, the promoter, organizer, owner of the property, government, provincial or municipal body, officials, assistants, agents, servants, members or representatives concerned in the organisation, running and control of the event, whether caused before during or after any competition or practice run, against any claim whatsoever arising even though same may be contributed to or caused by the wilful act, neglect or default on the part of any official, agent, servant or representative of the South African Power Flying Association, promoter, organizer, guarantor, sponsor, owner of the property or any government, provincial or municipal body.
- v. I further declare that I am fully aware of the risks, dangers and perils attendant on participation in the event, which I hereby assume.
- vi. I also indemnify and agree to hold free of any liability any fellow competitor, sponsor or the donors of any prizes or any other person against any and all claims and damages arising out of the participation in the event whether caused by ascent, flight, descent or ground movement by the participant or whether caused by the participant's actions or the acts, or omissions or proceedings of any persons assembling or assembled to witness or be present at such ascent, flight, descent or ground movement.

## 5.2 Late entries

Entries received after the published cut-off time will be cancelled, except if the competition director prescribes otherwise.

## 6. Location

### 6.1 Venue location

The venue location will be such that it will provide officials and observers with a complete view of the course, in such a way that participants can be observed at all times. The spectator area will be clearly demarcated and be a safe distance away from the course.

### 6.2 Facilities

The organizers will provide sufficient facilities i.e. food and beverage, ablution etc in order to provide an efficient service to all participants, officials and observers.

## 7. Course

### 7.1 Course layout

The main course is an oval-shape course, as defined by 3 pylons on each outer side of the course. See addendum A. The total distance of the course is 3.0 nautical miles, as measured in a straight line from pylon to pylon.

Other shorter courses for the slower classes may be laid out in a similar way, on the inside of the 3 NM course, with the provision that these pylons will not present a safety hazard for the main course participants.

### 7.2 Pylon

Each pylon will be constructed of a material which is highly visible from a long distance, preferably with fluorescent (day-glow) contrasting colours. The top of the pylon will be minimum 44 feet and maximum 70 feet when measured from ground level. The top 20 feet of the pylon will have a minimum diameter of 3 foot, and a maximum of 6 foot. No stays or anchor material will be attached or encroach upon the top 20 feet of the pylon. All anchor material should preferably be made easily visible. On top of the pylon will be a free-swinging flag of not less than 6 foot in height, preferably in contrasting (checkered) colors.

### 7.3 Flying the course

The course is flown in an anti-clockwise direction, at low level, enabling the pilot sitting in the left-hand seat to view the pylons to his left. All pylon turns are made to the left. The pilot must have a clear unobstructed view of the pylons at all times. It is the pilot's responsibility to ensure that there are no possible view obstructions or hindrances, which

may occur during the race (e.g. loose items obscuring view after or in a steep turn). Proper planning of cockpit and equipment setup is of vital importance, to guarantee flying the course safely.

## 8. Equipment

### 8.1 Scoring equipment

The organizer will provide at least one computer and printer for the scorers to fulfill their function, in a fenced-off (private) location where no participating pilot or spectator is allowed.

### 8.2 Timing equipment

8.2.1 GPS logger. Timing will be done by means of a GPS logger in each aircraft. SAPFA will provide sufficient GPS-loggers so that each participant will have a logger in his/her plane at least 15 minutes before take-off. The organizer may decide to use timing officials with hand-held stopwatches, as means of back-up. The official time will however, always be the logger time. It is the responsibility of each pilot to see that his/her logger is operating normally, before entering the race course.

8.2.1 GPS logger failure. In case of logger failure of whatever reason and the scorers are unable to provide an accurate time, the participant may be given the opportunity to have another attempt. This decision rests entirely with the Competition Director. Under no circumstances will a failed logger time be substituted with a manual (hand-held) time.

## 9. Officials

### 9.1 Competition officials

9.1.1 Competition Director The competition director will oversee the planning and execution of all aspects of the event. He/she will be readily available to assist any official during the event, at any given time, either in person or via radio/phone.

9.1.2 Safety Officer and safety report The safety officer must be an impartial party with no financial or commercial interest in the event. He/she should also be suitable qualified or experienced, having either participated in or organized a similar type of event. A Safety Officer's report shall be compiled and presented to SAPFA and RAASA, within 14 days after the event. The report is not intended as an exhaustive breakdown of the event or a comprehensive safety review, but as a means of highlighting any safety deficiencies, concerns or areas that could be improved. Failure to submit this report could lead to rejection of future application.

### 9.1.3 Race committee

Each race will have a race Committee consisting of sufficient members to implement all measures in order for the event to be run safely and smoothly. The competition director, safety officer and scoring officer are essential members, however, it is advisable to have a committee member for each designated function/activity.

#### 9.1.4 Chief Judge

SAPFA shall appoint a Chief Judge for each event. The chief judge will deal with all protests and may call for input from the scoring officer, safety officer, competition director, competitor. The decision of the Chief Judge is final and not subject to appeal.

#### 9.1.5 Race Secretary shall be responsible for,

- Checking the validity of all entries,
- Checking or causing to be checked the competitor's licences,
- Maintaining the official Notice Board,
- Sending all necessary documentation to officials before, during and after competition,
- Advising the Competition Director of any changes to entries or entry forms,
- Assisting the Competition Director with any admin if necessary.

### 10. Briefing

#### 10.1 Pre-Race briefings

##### 10.1.1. Time of briefing

Prior to the start of each event the competition director and /or the safety officer shall carry out a safety briefing of all participants. The time of the briefing shall be published beforehand and it is essential for each competitor to attend the briefing in person. No competitor will be allowed to participate in the event in case he/she failed to attend the briefing, for whatever reason.

##### 10.1.2 Contents of briefing

- a. Attendance check
- b. Program of events, starting and take-off list(s)
- c. Current and Forecast weather and procedure if weather deteriorates below event minima.
- d. Runway(s) taxiways, spectator, aircraft parking and movement areas
- e. Circuit patten, holding areas, holding heights and aircraft movements
- f. Traffic control procedures, radio frequencies and departure procedures
- g. Procedure for cancellation of the event, or change in program
- h. Emergency procedures
- i. Procedure for aborting the race
- j. Communication failure procedure



- k. Rules, minimum heights, flight line and separation which may apply
- l. Ground handling and taxi procedures, refueling
- m. Procedure in the event of movements of non-participating aircraft (arrival, taxi, departure)
- n. Contact telephone number of the Competition Director and safety officer
- o. Alternate airfield(s) and bail out areas if applicable

## 10.2 Competition debriefings

After the completion of the event, a debriefing will occur, (within 7 days of the event), either at the event itself or via email, providing all participants with any necessary information and to obtain feedback from the competitors. The Safety Officer and Competition Director will submit the Post Event Report within 14 days of the event to RAASA and SAPFA.

## 11. Practice

### 11.1 Official Practice

Official practice times may be published by the Competition Director. During these times only paid-up participants may use the course to practice, under an appropriate flight information service or ATC control as determined prior to the event and according to a practice schedule, as published by the competition director.

The Organizer may set aside some time for 'Official Practice' on the day, with the consent of the Competition Director and Safety Officer.

Any participating aircraft which does a practice run upon arrival at the event airfield before landing, on the day of the event, will be disqualified.

## 12. Flying rules

### 12.1 Safety first rule

Safety is of the utmost importance and takes precedence over any other rule or procedure. Any participant can be disqualified at any given time, in case of breach of this safety first rule. No dangerous, reckless, irresponsible or rule-breaking flying will be tolerated and any infringement on this rule will lead to immediate disqualification. The Competition director and safety officer will organize the event with the emphasis on safety in such a way that all flying will be done safely if the rules are observed. The safety officer has the prerogative to cancel the event in case of breach of safety.

### 12.2 Horizontal separation

The organisers will, as far as is possible, only schedule aircraft of a similar speed on the course at any one time. Aircraft will enter the course with minimum separation of 10 seconds.

### 12.3 Vertical separation

Minimum safe altitude shall be adhered to at all times, even if multiple participants are racing simultaneously. All aircraft should be able to maintain the same ideal racing altitude when multiple aircraft are racing simultaneously. At no time shall horizontal separation be compromised to such an extent that vertical separation becomes a factor.

### 12.4 Altitude

Maximum race altitude is 500 foot AGL. Minimum race altitude is the top of the pylons. The entire aircraft shall never be lower than the top of the pylon, at any of the pylon turns, as indicated in the annexure. Altitude will be monitored by means of the GPS loggers and judge observers. A breach of these limits will lead to penalties or disqualification.

## 13. Air Space

### 13.1 Airspace requirements

The Organizer must complete Special Air Event Application (SAE) form in terms of the Special Air Event (SAE) Manual of Procedure (MOP) and forward this to RAASA, 90 days before the event. RAASA will notify CAMU and request a Notam for the Flexible Use of Airspace (FUA) for the duration of the event. The period of the application must include any practice days prior to the event.

Where controlled airspace is required by the organizers, this application shall be submitted to RAASA no less than 150 days prior to the event, the airspace shall be classified Class D through the AIRAC cycle, once ATNS has confirmed its availability to provide air traffic control.

### 13.2 Flight information service or Air traffic control

The organisers must provide the appropriate flight information service in order to advise the competitors entering the course, arriving, departure and display aircraft. Where controlled airspace is required, the ATC service shall be provided by ATNS.

## 14 Results

### 14.1 Publication of results (format, time, means)

Results will be posted on a notice board immediately after the logger (timing) results are known. Results may be posted in any viable format or display, we recommend that total course time and maximum speed obtained are posted, as well as whether the competitor is red-flagged. Red-flagging means that there may have been an infringement of the rules and the results will only be finalized once the race committee has applied penalties, where applicable.

## 14.2 Violations, Penalties and Fines

It is the responsibility of the race committee to rule on violations of the rules, and impose any penalties and/or fines. In case a competitor feels unfairly treated by the race committee verdict, he/she may proceed to lodge a protest.

## 14.3 Violations of rules

Violation of any rule will have consequences. Any violation of the safety first rule may lead to immediate disqualification. Any violation of ATC instructions or CAA rules and regulation will impose serious penalties and/or a total ban from racing events.

## 14.4 Penalties and disqualification

If an aircraft cuts inside a pylon, this will lead to disqualification of that result, since the aircraft has flown less than the course distance. The participant may be given the opportunity to have another attempt. This decision rests entirely with the Competition Director.

Exceeding maximum and minimum altitude may incur time penalties, and may cause disqualification.

## 14.5 Fines

The race committee may decide to impose a fine on a competitor, by means of a financial amount or a ban from future events.

## 15. Protests

### 15.1 Protest procedure

A competitor may lodge a protest against his/her own result, including time penalties, fines and disqualification. The protest must be submitted in writing and handed to the scorers within 30 minutes from the time the competitor's result is posted on the notice board. All protests will be screened by a member of the race Committee, and passed on to the Chief Judge for deliberation. The final results will be posted once all protests have been signed off by the Chief Judge.

### 15.2 Protest against own time

Pilots may protest against the accuracy of their times or against any other penalties incurred. Timing will be accurate but logger malfunction (most often due to pilot/operator's misuse) may occur, in which case the pilot has no need to protest. The organizers will do their utmost to give a "no track data" competitor another opportunity to race, however, it cannot be guaranteed. Each competitor therefore has to ensure the normal operation of the logger before commencing the race, since a "re-run" may be allowed only if circumstances and conditions allow for it.

## 16. Race cancellation

### 16.1 Notice of cancellation

Events may be cancelled at any time, due to safety infringement, inclement weather, accidents or incidents, etc. In case an event is cancelled before race day, all competitors will be notified by the organizers as soon as practical. If racing is cancelled on race day, a briefing by the competition director will be held as soon as possible.

### 16.2 Cancellation refunds

Entry fees received will be refunded in case the event is cancelled more than 2 days before race day. The entry fees are non-refundable if cancellation occurs within 2 days of race day or on race day.

## 17. Local and Special rules

Each event will have its own local and specific rules as approved by the Race Committee. These local rules are limited to starting lists, fees and administrative procedures. These will be published by the organizers in advance, as well as being clearly stated during the pre-race briefing.

## 18. Prizes and Prize money

Prizes and prize money will, where applicable, be presented to the winners on race day.

### 18.1 Prizes

Prizes for each event will be assigned by the Competition Director.

### 18.2 Trophies

All floating trophies will remain the property of SAPFA, although winners will retain it for the time between events. It is the responsibility of the last winner of a trophy, to ensure the trophy is at the race venue on race day. Failure to bring the trophy along, may lead to a ban of one or more races.

## 19. Emergency Procedures

### 19.1 Disaster Management Plan

Each event shall have a detailed and accurate disaster management and evacuation plan in place, as signed and approved by the appropriate disaster management services in the area, or as contracted.

## 19.2 Emergency information

The following organizations, persons and /or services shall be notified of the intended event prior to the event taking place and the necessary permissions or approvals obtained that may be required in terms of applicable legislation.

- a. Local authority i.e. Municipality of local government
- b. Ambulance Service
- c. Fire Brigade Service
- d. SAPS
- e. Traffic or Metro Police
- f. Nearest hospital able and willing to cope with a major disaster

The following contact details will be posted at the event venue, and as such be published as part of the Disaster Management Plan:

- a. Nearest ATC (ATNS service)
- b. Ambulance Service
- c. Fire Brigade service
- d. Police
- e. Traffic or Metro Police
- f. Nearest hospitals able and willing to cope with a major disaster

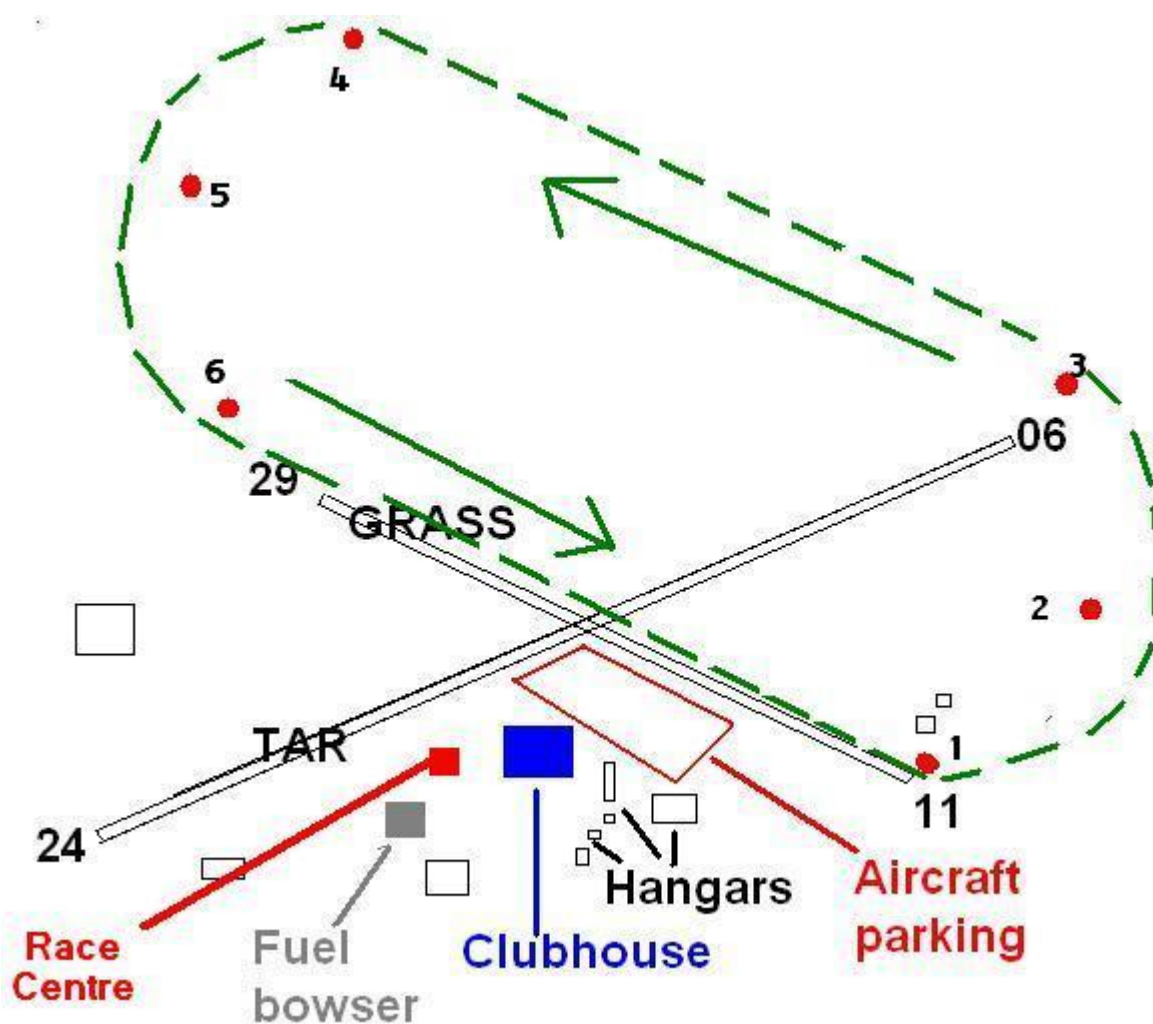
## 20. General information

Any information deemed necessary.

## 21. Annexures

- A. Diagram of Parys course layout
- B. Diagram of pylon
- C. Diagram of pylon turn altitude errors

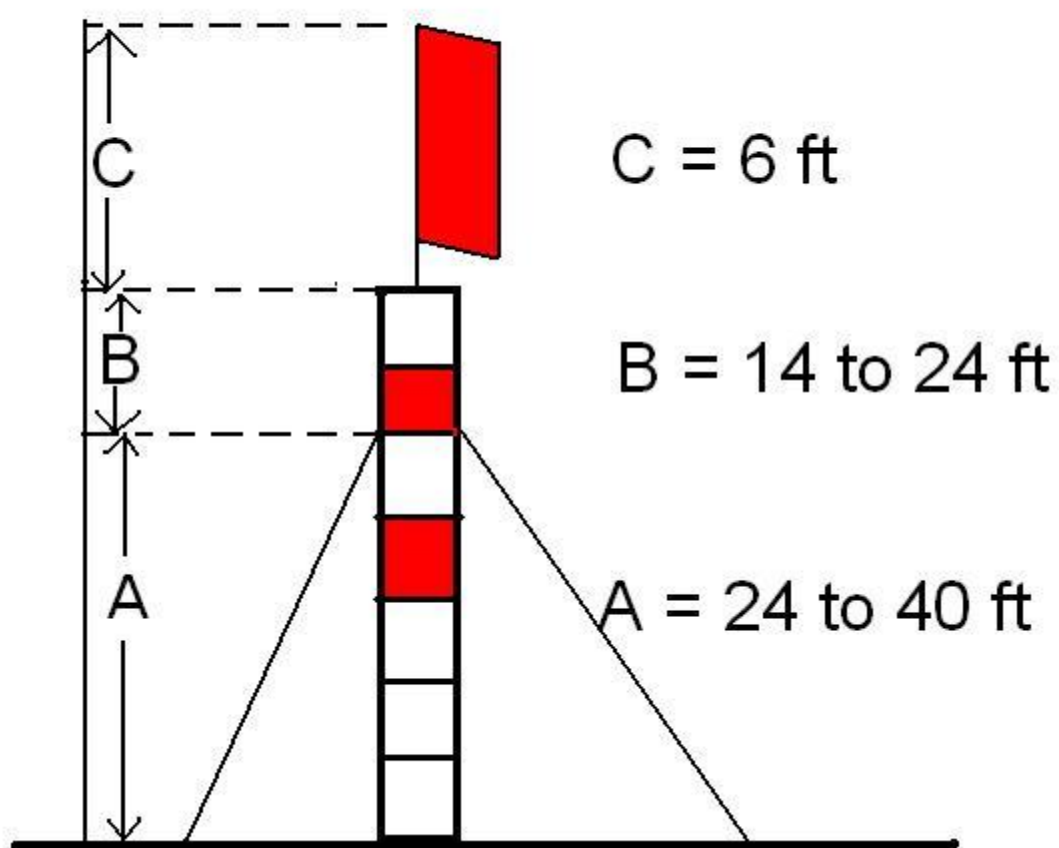
A. Diagram of Parys course layout



1. Cameron's Corner
2. Koppiedraai
3. Glider's Gulch
4. Bluegum Bend
5. Airport View
6. Spark Air corner

Course is along the grass runway 29 / 11.

B. Diagram of pylon



C. Diagram of pylon turn altitude errors

