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The Aeromodellers Association (Scotland) Ltd.  
trading as the

**SCOTTISH AEROMODELLERS ASSOCIATION**

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# **SAA Members Handbook**

## **SAA Model Display**





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## 1. Scope

The Scope of this document is to define and give SAA Guidance for Model Displays in Scotland.

Model Displays or events can be from the smallest club event with a few flyers to a large Display with many people. Scotland is a small nation and hence events and displays in Scotland tend not to be the huge displays as seen **South of the Border**, however there may be model displays (on rare occasions) which attract most of the Scottish modellers and while this may not reach many thousands it could be described as a medium to large gathering.

This document tends to cover large displays only applicable to Scotland at rare times and hence most organisers in Scotland will require to select the relevant Guidance from this Document and tailor requirements to these smaller events

This document is designed to assist all those involved in organising model displays in Scotland, including display pilots and anyone taking part.

To run a successful event requires planning and attention to detail without which a well-run event would not be possible

This document should provide prospective organisers guidance to prepare for and run such events smoothly and legally.

This document should be used in conjunction with the various parts of the SAA Members Handbook

## 2. Model Displays

The SAA Model Flying Display section of the Handbook has been prepared to give guidance for organisers, participants and pilots taking part in model displays as part of a demonstration or entertainment to be held in Scotland.

The information contained will assist the organisers in meeting their responsibility for the safety of spectators, nearby persons and property.

The SAA Article 16 Authorisation defines a model flying display as:

***“Any flying activity deliberately performed, by model aircraft, for the purpose of providing an exhibition or entertainment at an advertised event.”***

There is no intention to include competitive model flying events where spectators may attend in the knowledge that model aircraft will be taking part in contest flying.

General model flying, is covered in the SAA Members Handbook “Safety Code” and again has no part in model display flying.

Because of the range of model displays and events possible the SAA has graded these so that applications to the SAA to hold a model event / display type is more easily understood



- Grade 1 -- Event held where all models are less than 7.5 kg  
*Flown as per SAA Article 16 authorisation*
- Grade2 -- Event held where all models are less than 25 kg allowed to fly >400ft  
*Flown to article 16 rules at an approved site with a Permit from the SAA.  
A NOTAM may be required*
- Grade 3 -- Event held with some models greater than 25Kg allowed to fly >400ft  
*Flown to article 16 rule at a site with both SAA and LMA site permits  
A NOTAM may be required*
- Grade 4 -- Display held with models less than 25Kg MTOM > 400ft  
*Requires a SAA Display Permit and a NOTAM*
- Grade 5 -- Display held with large models greater than 25kg  
*Requires a LMA Display Permit, a SAA Permit and a NOTAM*
- Grade 6 -- Display held with large >25kg models and full size  
*Requires a LMA Display Permit, a SAA Permit and a NOTAM  
Full size requires to be displayed in accordance with CAP403*

Note: -

*The SAA Grade system has been kept in line with the BMFA Tier System, but the SAA requirement will only apply to events organised in Scotland by SAA members and clubs*

If an SAA flying display in Scotland will exceed 400ft, it must be authorised by an SAA Display Permit, obtainable from the SAA, plus other airspace users must be notified using a NOTAM

The SAA Display Permit may also authorise the operation of aircraft with a MTOM exceeding 7.5kg above 400ft as this will no longer be issued by the CAA.

*Note: - Pilots of aircraft greater than 25kg MTOM require Large Model Association authorisation as well as individual Operational Authorisations issued by the CAA for their aircraft.*

The SAA must see evidence of this before they are allowed to take part in an SAA authorised display

Non-UK residents requiring to fly at an SAA display need to meet all the following conditions:

- a) Hold temporary or full membership of the SAA
- b) Comply with the rules and practices of the SAA
- c) Meet the requirements in respect of pilot competence and also SAA standards
- d) Must comply with the registration requirements set out in the authorisation.



This may be achieved by displaying the operator I.D. of a UK 'host' operator, with their agreement and understanding of their legal obligations as a UAS operator of the aircraft.

## 2.1. Organising

The following positions are advised for running, arranging and organising a model event

### **EVENT ORGANISER,**

This one person should have responsibility for the event and making the following arrangements.

- (a) Site assessment
- (b) Risk assessment
- (c) Spectator control policy or,  
If a large function, the siting of the model flying area with respect to spectator enclosures, car parks etc.
- (d) Verification of flyers' competence. The SAA has an achievement scheme for R/C flyers which the organisers should consider. This is a guide for flyers proficiency wishing to take part in the display or event.  
*See SAA Achievement Scheme Handbook.*
- (e) Establish effective transmitter control for R/C flying,
- (f) Check Airworthiness and safety of model aircraft and equipment
- (g) Check validity of third-party insurance for individual flyers, the model flying club or site and the display organisers

### **FLYING DISPLAY DIRECTOR**

The Flying Display Director shall be responsible for safe conduct during the flying display, and assume overall responsibility for the planning, organisation and subsequent running of the event.

### **FLIGHTLINE DIRECTOR**

The Flightline Director shall assist in the planning of the flying, the briefing of pilots and take full control of the model flying area

### **FLIGHTLINE MARSHAL**

The Flightline Marshal is responsible to the Flightline Director and directly control the active model flying.



The Flightline Marshal must exercise authority over all flying matters as he is directly responsible for the flying safety of the display.

He must not hesitate to discipline pilots if necessary and it cannot be stressed too strongly that FLM is the final say on all matters on the airside of the flightline.

This places a great deal of responsibility on the Flightline Marshal and display organisers are urged to consider very carefully the quality of the person appointed to this task

## **A POLICE AND EMERGENCY SERVICES LIAISON OFFICER**

Will be responsible for all contact with Police and emergency services. The Liaison Officer will correspond with Police and local authorities as required to inform them of model flying etc. and to relay any special conditions requested to be advised to the organisers. This position would be well suited to a First Aider who would also be able to treat minor injuries if they occurred at the event

Note

*The Flying Display Director and Flightline Director's posts can be held by the same person.*

*The Flightline Marshal must be a separate post*

*The Emergency Services Liaison Officer should be a distinct post if possible*

## **2.2. SAA permits**

CAA delegated the issuing of model flying display permits to the BMFA, LMA and SAA under the terms of the respective Article 16 Authorisations.

*This may also include operating aircraft with an MTOM greater than 7.5Kg at heights above 400ft) at displays.*

Applications for SAA events in Scotland should now be made to the SAA

Application must include the following:

- Full details of the event – when/where/what type of event.
- Flying Display Director's details with evidence of competency,
- other key personnel (*for larger displays*)
- The Host Club or site where the event is to be held.
- Details of the site layout





(Including maps/diagrams showing the pilots box, active runways, pits area, crowd-line and any features in the immediate area that effect the overall safe running of the display such as roads, buildings, car parking or attractions.)

- Details of the pilots permitted to fly (*number, level of competency*).
- Types of aircraft to be flown, required permission, or not, for greater than 7.5Kg or 25Kg. MTOM models
- Request for special *features (toffee bombing/pyrotechnics/night flying or inclusion of full-sized manned aircraft displays)*.
- Requiring transmitter control or not.
- A risk assessment - guidance and templates available from the SAA
- Supporting documentation if require  
(*Such as any agreement if operating within an FRZ*).
- Applications for a permit should be submitted at least 4 weeks prior to the date of the Display.
- The SAA shall review and, if approved, an SAA Display Permit will be issued This will detail the agreed parameters. The SAA may visit selected Displays to audit compliance.
- Applications seeking approval for the display of aircraft >25Kg will also be subject to review and approval of the LMA.
- The process (including details of all Display Permits issued) will be audited annually by the CAA, who also reserve the right to carry out on-site inspections at selected displays.

## 2.3. Model types

Different model types need different areas for flying and this section defines these

### 2.3.1. Radio Controlled Models

- a. A minimum area for take-off and landing of 100 x 40 metres, with the 100metre direction substantially parallel to the wind direction, is required with a tarmac or mown grass surface.
- b. There should be no spectators, vehicles or obstructions within 150 metres of the take-off and landing boundaries at the upwind and downwind sides of this area. Pay specific attention to possibility of turbulence due to nearby tall buildings, trees, marquees, etc.
- c. The site must be positioned so that all flying can take place without overflying car parks and spectator areas.



- d. In General, **no** radio-controlled flying displays should take place within a Flight Restriction Zone of a Protected Aerodrome  
(This is possible with prior permission of the air traffic control officer of the airfield, or the airfield itself but should be avoided if possible)
- e. Clubs wishing to organise displays away from, other than their normal flying site, must not interfere with other clubs or groups near the display site.
- f. Enquiries should be made with the SAA, local club contacts and local model shops and if any club or group is flying within 2 miles of the display site, the display should seek agreement and co-operation.

### 2.3.2. Control line models

- a. The flying area shall be substantially flat. Because aircraft are tethered and fly in a circular path the minimum radius of the area required is the maximum control-line length to be used, plus 13 metres.
- b. A 3-metre diameter circle should be marked in the centre of the flying area and pilots should ensure that they do not leave this circle while flying.
- c. Under no circumstances should the boundary of the flying area be less than 50 metres from ANY overhead obstruction (cables or masts etc.)

## 2.4. Spectators and Parking

### a) Radio Control aircraft

- Spectators should be behind a stout rope or other barrier located parallel to the take-off and landing direction.
- They hence they should be behind the flying area
- In NO circumstances should take-off or landing be performed towards or over spectator or car park areas.
- Marshals should ensure that spectators are controlled and supervised.

### b) Control line aircraft

- Spectators should be behind stout rope barriers surrounding the flying area.
- Marshals should ensure that spectators are controlled and organised.



### 2.4.1. Planning and Conduct

The Event Organiser should preferably be an experienced flyer of the display model aircraft types, but must be thoroughly familiar with their operating characteristics

The organiser is responsible for the postponing or cancelling of all or part of the display in case of adverse circumstances likely to cause a hazard to safety. Also, to ensure that minimum nuisance is caused, and no unauthorised flying takes place.

#### a) Control Line Flying

- Model, control-lines, and handle shall be pull tested to 10 times the mass of the aircraft before each flight, and visually examined for damage.
- Safety wrist straps shall be tested in line with the SAA safety manual and shall be used at all times.
- All helpers in the control-line flying area shall wear safety helmets and should be familiar with the safety codes the SAA handbook.
- All control lines shall be made of steel.

#### (b) Radio Controlled Flying

- All flyers should be experience with their aircraft manoeuvres to be performed.
- All flyers should be SAA Silver or equivalent Certificate holders
- All pilot helpers should be familiar with SAA Safety Codes and Article 16 Authorisations.
- All display pilots should have a helper/caller with them when they are flying.
- All ground helpers should be familiar with the relevant SAA safety codes.
- The pilot must be a paid-up member of either the SAA, BMFA or LMA.
- An LMA pilot may only fly the type of model for which he holds an LMA authorisation.
- The Pilot must comply with SAA and LMA Article 16 Authorisations
- The pilot's helper/caller should ideally be an SAA silver or equivalent or an LMA Certificate holder.
- **It is recommended, especially for larger public shows but in general, that only aircraft using 2.4GHz radio equipment should be included in the display, and the number of operating transmitters should be kept to a minimum.**



- When planning it would be wise to determine if any hospitals, factories, military or public services in the vicinity use radio equipment devices likely to cause interference.
- Control of all operating transmitters is highly desirable but less of a problem if only 2.4Ghz is used
- All control functions of each aircraft shall be checked before each flight
  - when the radio is switched on and
  - with the engine at full throttle before take-off.
- All power-driven aircraft flown at displays should have throttle control.
- All transmitter and receiver batteries should be rechargeable battery packs and should be fully charged at the start of the display.
- No flying should take place if the surface wind speed exceeds 25 knots, or if the visibility is less than 500 metres.
- No turn should terminate with the aircraft on a heading towards the spectator enclosure.
- No aircraft may be flown within 30 metres of spectators
  - For models over 7.5 kg and all gas turbine powered models this distance should be 50 metres.
  - This may be reduced to 30 metres for take-off and landing
- The Flightline Marshal / Organiser should consider increasing separation distance for models of exceptional dimensions, weight or performance.
  - any models of this type should be noted in the application for a Display Permit.
  - Pilots must be positioned between the spectators and the flying models

***Note that the distance of 30 metres shown in the diagram must be a minimum of 50 metres for models over 7.5 kg and 75 metres for large models over 25Kg and gas turbine powered models.***

#### (a) Toffee Bombers

The Authorisation permits the dropping of materials from model aircraft subject to the condition that:

- The remote pilot must not cause or permit any article or animal to be dropped from an unmanned aircraft so as to endanger persons or property.
- Models dropping toffees should not weigh in excess of 7.5 kg.



- The toffee bomber should fly alone. All other models should remain on the ground during the toffee drop.
- Children wishing to take part should be in safe public enclosure
- The toffee bomber should make its drop from as high an altitude as is practical. It should then circle at height upwind and not fly over the area where the toffees have landed.
- If this is not possible without flying over car parks, houses, roads etc, toffee bombing should be cancelled.
- Children should be prevented from leaving the enclosure by Marshals until the toffees have been dropped and the model is away from the area.
- The field should then be cleared as soon as possible after the drop and children must be safely back in the spectator's enclosure before the pilot is permitted to bring the model back for its landing.

#### (d) Young Pilots

Organisers must be aware of the minimum age requirements as set out in our Authorisation. They should be 18 years if an operator but no minimum as a remote pilot

- However, when young pilot takes part in a display, it is very strongly advised that a suitable older person is tasked to stand with them as a safety pilot.
- This should be a person known to the organisers as being proficient.

#### (e) Smoke Systems

Some of the oils used in model aircraft smoke systems are known to be carcinogenic when burnt and all of them are irritants, even the purer types.

- Smoke should only be used when the wind is blowing away from the Pilots, Pits and spectators with no possibility of the smoke being blown over them.

#### (f) General

It is important that a written description of arrangements for the model flying programme be circulated in advance to all people involved in putting on the display.

An oral briefing on the day of the display should be used as a refresher of arrangements

## 2.5. Small Events

This Model Flying Display Handbook was written for larger type of display.



Smaller display or club fly-in often question the requirements.

### 2.5.1. Club Fly-in, Open Days, Small Displays

If organisers act in a reasonable manner, then they can solve the problem of smaller displays

- An organiser, you should read the Model Flying Display Handbook very carefully
  - Pick out the parts that apply to your event and apply them carefully.
- If it's a big event, then it is likely that it will all apply but if a smaller event, then a small subset should be sufficient.
- The Display Organiser must take overall control of the event and a Flightline Marshall must take responsibility for all the flying regardless of the size of the event.
  - However, it may be that the full range of personnel, that would be required at a larger display, are not required. Although most of the jobs are valid, they can be shared by fewer people.
- The requirement for pilots to hold an SAA Silver Certificate or equivalent is sensible for a large display but at a smaller event it may be appropriate to accept a lesser/alternative qualification
  - Conducting a flight test with the pilot prior to the event may help this decision and carefully monitor the flying during the event.
  - Another approach may be to ensure that an SAA Silver Pilot or equivalent is appointed as a helper to the pilot with the lesser qualification.
- Checking a pilot's insurance details and CAA Operator Registration is always required.
- This Model Flying Display Handbook gives you the guidance you need.
  - Try to operate within the spirit of the document.
  - Remember that, if there is an incident, actions will be judged on the basis of 'you, acting reasonably'.

## 3. Guidance and Advice for Organisers

You may be wondering how these fit-in with a smaller display or even your club fly-in.

- Whilst you may not need to apply all aspects of the guidance, a great deal of it will apply, particularly the legal and safety requirements.



- A common-sense approach is required, and any organising group should carefully consider the guidance contained within this document and decide how it should be applied.
- The individual posts referred to may be amalgamated where appropriate.
- Some of the wider aspects of the duties set out may not be required.
- Be familiar with all the concepts of organisation, so to prepare for problems that have not been foreseen.

### 3.1. Initial Planning

- The planning for a good large model flying event starts many months (sometimes years) before the date of the display.
- First you must decide why you are putting on the display and what is wanted to be achieved by it
  - Clubs may want to raise their profile, and/or be part of a membership recruitment drive
  - Commercial events may primarily be run for profit.
  - In either case, the basic considerations and legal responsibilities are the same.

### 3.2. Legal Requirements

When organising a model flying display there are a number of legal aspects that must be considered.

Everyone involved with the organisation should be familiar and fully understand the following:

- The terms of the Article 16 Authorisation(s).
- The display may be organised under the SAA's Article 16 Authorisation.
- Large model aircraft (greater than 25Kg) also require the Large Model Association (LMA's) Article 16 Authorisation.
- If full sized manned aircraft, are to be involved, familiarity with CAP 403. is required
- The SAA Members Handbook which contains essential information and guidance on compliance with its Article 16 Authorisation.



### 3.3. Roles for an event

A number of key roles have been identified for the successful and safe public model flying display. Below is an overview of each position

#### 3.3.1. Flying Display Director (FDD)

The person with ultimate responsibility for all organisation and running of the display.

The full legal responsibility rests with this role and it must not be undertaken lightly.

The post holder requires to have the following characteristics.

- Be an experienced model flyer with broad knowledge of all disciplines and if possible, have an SAA Silver or equivalent and if possible have track record as an FDD.
- Have experience relevant to the type and size of display.
- Have strong organisational skills.
- Have good communication skills, written and verbal.
- Have good leadership skills.
- Work well under pressure.
- Be able to make rapid but reasoned decisions.
- Have the ability to get the respect of the pilots and team.

A small club-based display can be less stringent, but even larger displays could be limited by the number of candidates available. Please remember that a volunteer may not always be best suited to carry out the task.

The Flying Display Director responsibilities are outlined below.

This list is not exhaustive, however the FDD should delegate tasks appropriately.

- Overall responsibility for all aspects of the flying display.
- Conduct the risk assessment.
- Appoint suitable team members roles.
- All paperwork relating to the CAA (NOTAMs and exemptions).
- All paperwork relating to SAA (Display Permit Application Form).
- Ensure suitable insurance is in place for the display.





- Liaise with any full-size aviation which is part of same event (or in close proximity).
- Pilots' introduction and briefing.
- Disciplinary measures.

These can be seen to be the main areas of responsibility, but the FDD will also require delegating to other members of the organisational team

### 3.3.2. Flightline Director (FLD)

A key role who needs makes it all “happen” on the day.

The characteristics of FDD apply also to this role, however, primarily it is “people skills” that is required as they are main contact for the pilots. A calm relaxed and professional approach is required to cultivate the same approach from the pilots

The FLD works closely with the Flying Display Director during the display and his responsibilities are shown below

- Setting out the flightline, display line and crowd-line.
- Safety checking airworthiness of model aircraft and equipment.
- Verification of the competence of all pilots.
- Verification of third-party public liability insurance of individual flyers.
- Liaising with flightline personnel.
- Liaising with pilots.
- Allocation of flying slots in line with the show requirements.
- Ensuring that the flying slots are in line with the published/ and desired order.
- Ensuring that pilots are ready for their flying slot
- Ensuring that back up pilots are ready in case of aborted slots.

### 3.3.3. Flightline Marshal (FLM)

Normally a Display has one or more Flightline Marshals depending on the size of the event

Their role can vary considerably but normally work with the FLD to get the smooth running of the flightline.



Their main function is to be on the flightline with active pilots watching and monitoring all aspects of the flying.

Safety is the main concern of the FLM and to advise pilots of safety aspects of their display flight and have the authority to order wayward pilots to land if necessary.

A FLM must have the authority to tell the FLD that any pilot causing difficulties cannot fly again in the display. The FLD should act on this advice and never overrule the FLM.

#### 3.3.4. Scrutineer

The FLD would normally appoint a scrutineer to work in the pits area checking models are airworthy.

This is a sensitive task because the legal responsibility for the safety of flight will reside with the pilot who must do pre-flight and airworthiness inspection of their own model.

Hence pilots are responsible for airworthiness, and scrutineering is just being done on a “spot check” basis. Note: - *The CAA have agreed to this process and practice*

Scrutineers should be respected model flyers with a range of building and displaying experience and be adequately briefed for the task.

Scrutineers need to be careful of their actions, they should be able to confirm airframe integrity to a suitable standard, without destructive tests on the aircraft.

*Some caution must be exercised as accusations of favouritism or victimisation have been known to arise.*

Fail safe checks should be conducted as part of the scrutineering process.

Not normally required but models can be “spot checked” for weight, where models look to be larger than the Grade class of the event, or there are models which are known to be close to the CAA 25 kg exemption limit.

Pilots who have large models over 25kg will have an exemption certificate from the LMA which can be checked for validity

#### 3.3.5. Flightline Helper (FLH)

The FLH(s) often are the interface between the pilots and the FLD and act as “runners” to ensure that pilots are given sufficient notice of impending flight slots; also FLH(s) can give the required information to the commentators as this is a feature of the display.

#### 3.3.6. Other personnel

It may be that additional persons are required on the flightline, but it should be considered whether they actually needed, so as to minimise those on the flightline. “Hangers on” who have no specific role are not needed on the flightline and just get in the way.



The aim should be to only have people who are actually involved with the display on the live side of the flightline as this is good from a safety point of view and gives perception of a tidy and well organised display area

### 3.3.7. Commentator

Commentary can form an important part of a model flying display.

A good commentary will keep the public informed on what is taking place out on the flightline, what is coming up next, and help to make the crowd feel like part of the proceedings.

Commentators are a high-profile component of the event and a good commentator can make a show.

The FDD should have a direct line of communication available to the commentator for the duration of the display.

Pilots should be encouraged to provide a comprehensive information sheet to the commentators which should include the following information about the model.

- Model size and weight,
- Power plant,
- Manufacturer or construction method,
- Age and any notable features or functions,
- Installed equipment,
- Handling characteristics,
- Any interesting background information relating to the chosen markings, colour scheme and, for scale models, the history of the subject aircraft.
- Information about the pilot and any high-profile helpers.
- A description of the display: this could be a comprehensive list of manoeuvres or a generic description of the type of flight.

Commentators should never goad pilots or incite them to carry out unplanned manoeuvres

*– although a little pre-arranged showmanship can add a sense of excitement for the audience.*

Commentators should never distract pilots with 'live interviews' whilst flying *other than with prior agreement as it may 'overload' some pilots increasing the risk of errors.*

Interviews with pilots after their flying slot can add to the show and do not present risks and should be considered as alternatives.

The risk assessment should reflect any potential risks from the commentary have been considered and mitigated.



### 3.4. Insurance

It is important that insurance is considered as part of the planning for any flying display, show or event.

We live in a society where litigation has been made commonplace; steps should be taken to protect all involved such a club, personnel and any spectators.

If the Show/display is a commercial entity, it requires to be insured with an appropriate commercial policy.

Events that are “club” based can be covered under the terms of the policy provided to SAA affiliated clubs; however, the cover is not automatic and there are certain requirements that must be fulfilled before cover is granted.

The SAA membership provides £25 million of cover as standard but policies from other providers can be accepted where the FDD is comfortable with the level of cover provided.

The SAA recommends that £10 million is regarded as the minimum level of cover. Visiting pilots from overseas can be covered by the SAA’s insurance cover by arrangement.

Where you are hiring in equipment such as portable toilets, generators, etc, you will usually be responsible for insurance cover against damage or theft.

### 3.5. Site Location

The location and nature of the display site should be given careful consideration,

- Often the specific location of the display will be predetermined by external factors, but where a display is being planned from scratch there is the opportunity to give some thought to the type and location of the site.
- The club’s “usual” site is often used for small events. Because those involved and in particular the FDD will be familiar with the nature and topography and the various modes of operation relative to differing wind directions it becomes easier to review. Of course, the addition of spectators or members of the public will require additional considerations and measures to be implemented.
- Where a site other than the club flying field is to be used, such as a showground or village fete, then the FDD must ensure that the site is suitable and that the model flying can safely integrate with any other activities taking place at the location during the display.
- The site must be visited by the FDD and the FLD along with any other relevant personnel from the organising team in advance of the planned event.



- Model flying displays often take place at full size aerodromes. The FDD must ensure that suitable channels of dialogue and ongoing communication are established with the airfield manager, air traffic control unit, and airfield users.
- When utilising full size airfields, the agreement between the owner/operator and the FDD must be comprehensive and clear and cover the detail of the display as well issues such as times of operation, entry and exit arrangements, takeover/handover criteria, litter and waste disposal, etc.
- The risk of FOD (foreign object debris) should not be ignored. On military airfields there is often a requirement stated within the agreement or licence document to ensure that the risks are minimized.
- Where a model flying display is planned at a location other than the usual club site it is important to research the location of any nearby model flying clubs or activity.
- This is particularly the case where the 35MHz band is to be employed (Note this is not advised by the SAA and all pilots should use 2.4Ghz if possible) however this protocol should still be adhered to even where only 2.4Ghz will be used.
- Where 35MHz channels will be used and there is a club operating at a distance of two miles or less, some form of frequency sharing/allocation agreement is compulsory in order to address the endangering provisions of the ANO. (Again, the SAA do not recommend the use of 35Mhz these types of events)
- However, irrespective of potential frequency clashes, any nearby clubs should be informed on a courtesy basis and involved where possible.
- When looking at the site in the initial planning stages, ensure that you take appropriate steps to ensure its overall suitability. Tools such as Google Earth can prove a huge benefit as well as reference to Ordnance Survey etc.

### 3.6. Pilot qualifications

There is an issue regarding the requirement for pilots to have SAA Silver Achievement or Not.

- This regularly receives much discussion when planning a model flying display and the Question is often asked:  
*“Do Pilots require SAA silver or Equivalent to fly at public model displays”*
- The simple answer is “**no**”, however, this short answer requires a degree of expanding upon in order that the FDD can make an informed decision. The SAA recommend that if a non-Silver pilot is allowed to fly then a Silver Qualified pilot should be as a helper and stand beside the pilot and supervise the flight
- At large public displays, and particularly where all pilots are not personally known to the FDD, the requirement for a SAA Silver Certificate or equivalent for all participating pilots should be considered as compulsory.
- There is more leeway at the smaller club-based event where all participating pilots are likely to be personally known to the FDD. In these circumstances the FDD may relax the requirements relating to pilot certification to either an SAA Bronze



Certificate or equivalent or in exceptional circumstances, no certificate but have a suitably Silver Pilot as a helper and supervisor of the flight

- The FDD could also take steps to assess the competency/suitability of a pilot by conducting a flight test in advance of the display.
- The FDD is legally accountable for the decisions that he makes in relation to the safe running of the display. When considering the competence of display pilots, all factors must be carefully considered as it must never be forgotten that should there be a serious accident or incident, it is the FDD who will be responsible for filing a report to the AAIB/CAA which would require justification of any decisions falling outside of the requirements set out in the Article 16 Authorisation/SAA Guidance. The SAA would also be required to justify why they had permitted the display.
- It is important that the rationale behind such decisions is recorded during the planning stage, and this should form part of the safety (or risk) management documentation for the event.
- The relaxing of pilot requirements should not generally be a “blanket” move but rather conducted on a case-by-case basis; where this process is implemented, the FDD should be mindful of the “political” implications and the potential for relaxed requirements to be seen as “mates’ privileges”
- Another scenario where there may be a relaxation of pilot certification requirements is where the models to be flown are considered as lower “risk”, for example where only lightweight, low inertia models (e.g., foamies) are to be displayed.
- When selecting pilots for any display there are a number of additional considerations which must be borne in mind. It should be remembered that not all model flyers make good display pilots; even the safest most experienced pilot can “go to pieces” under the pressure of display flying, even in front of a small crowd. Pilots must be chosen who are able to perform under pressure and to be organised and ready for their flying slot; not all pilots can work to timings.
- Clearly, the selection of pilots is easiest when they are known to the FDD or other team members. A judgement on the pilots’ strengths, weaknesses, and skills can be made and flying slots allocated as appropriate. It also pays to have a short list of pilots who are known to be completely reliable and are capable of filling flight slots at short notice.
- Where applications are received from “unknown” pilots, the selection process can be a little more difficult: try to find out as much as you can about the pilot; ask around to see if anyone has seen him fly and, where possible, have a chat with him in person. Also consider how the application form is filled in; this may give you clues as to the type of character that you are dealing with.
- Do bear in mind that whilst we would all like to see the top model flying “names” featuring on our pilots list, some thought should be given to “undiscovered talent”; the top pilots all had to start somewhere.



- In summary the FDD must be comfortable with any decision that he reaches on this matter as it is his legal responsibility, but the SAA also has a legal responsibility for oversight.
- **Note: All reference to the SAA Silver Certificate within this document can be read as BMFA B or LMA Certificate of Competence as appropriate.**

### 3.6.1. Pilots' helpers

- When a pilot is flying a model display, it is important that he has a helper or caller to assist him.
- The role of the helper can be fairly varied depending on the type of display and the requirements of the pilot; it is useful if the pilot and helper are a regular partnership as they will become conversant as to what information should be passed on and what is not required.
- At the most basic level the helper should inform the pilot of conflicting traffic in the display and circuit area and warn of any potential incursion into no-fly zones or dead airspace.
- However, the pilot's helper is a second set of eyes, and the role extends to encompass lookout, liaison, monitoring, timing, model dispatch and model recovery.
- It is important that all communications are clear and concise and particularly that clear directive terminology is used where instructions are required for de-confliction or collision avoidance e.g., go around, stay high, land long etc.
- Ensuring that any starting equipment is tidied away and safely stowed can be a very useful additional task for helpers in order to promote a safe and tidy pit and flightline area.

### 3.6.2. Display teams

Team displays can provide an interesting addition to the flying programme, but they can bring their own problems. It is important that any team presence booked into the display is a known quantity and that they have experience of flying together.

- When planning the display, ensure that sufficient additional time is built in to cater for the increased complexity in preparing and dispatching multiple aircraft and for their recovery after flight.
- Ensure that the "team leader" is identified and used as the primary point of contact at all times and ensure that team members are clear on procedures if one or more aircraft are lost during the display.



### 3.7. Transmitter Control

- With the advent of the 2.4GHz band, many of the larger UK shows have taken the step of limiting participating pilots to using only this frequency band.
- There is no doubt that the 2.4GHz band addresses a number of issues and concerns and on the face of it makes the whole process much easier and much safer. However, no system of radio control is entirely without the potential for problems and steps should still be taken to control all transmitters that will be used at the event.
- As a minimum, all transmitters should be “booked in” and basic checks for compliance should be carried out, where the transmitter marking is unclear or the transmitter is clearly a non-standard unit, the owner should be able to provide paperwork from the manufacturer or importer that demonstrates the unit’s compliance with UK legislation.
- In circumstances where such documentation is not available and there is significant doubt over the legality of the transmitter, then its use in the display should be refused. Initially this is the remit of the TX control team, but any dispute should be referred to the FDD whose decision is final.
- Once transmitters have been booked in and recorded, they should be identified with either a sticker or tie-on label. Make sure that anything that you use does not in any way interfere with the operation of the transmitter: tie on labels can flutter distractingly where there is any wind.
- Although the 2.4GHz band is proving to be very robust, some thought should still be given to the overall number of “live” transmitters in the vicinity of the display area. This can be addressed either by implementing a transmitter pound or through the pilots briefing; the aim should be to limit unnecessary transmission where possible.
- Where 35MHz is being used, provision must be made for some form of transmitter control and that frequency control measures must be implemented. The exact mechanics of how these requirements are met can vary depending on the size and type of event. The important point is that a suitably experienced person is appointed to be in charge of transmitter control and is entirely clear on what their duties involve.
- It is important that any booking in and control measures run smoothly and efficiently in order to promote the pilots’ confidence in the system.
- The level of checking of transmitters will vary depending on the type of event, but as a basic requirement checks for basic compliance and transmission on the marked frequency should be carried out.
- At larger events a dedicated transmitter control tent should be established. All transmitters should be impounded until such time that they are required for use, when they should be issued by a member of staff and recorded as being “in use”. Only in this way can safe frequency separation be maintained.
- At larger events some form of scanning or monitoring equipment should be employed; 35MHz scanners are readily available and a dongle device is





available to plug into a standard laptop computer to provide a basic 2.4GHz spectrum analyser.

- It is common practice for the FLD to delegate to the transmitter control staff the checking of pilots' insurance cover. For most pilots, the ability to show a valid membership card for one of the approved associations will suffice. If there are any doubts as to whether a pilot holds appropriate insurance, the matter should be referred to the FLD.

### 3.8. Models

The aircraft operated at model flying displays take many forms depending on the nature of the display.

- Whilst the legal responsibility for the safety of each flight rests with the pilot, the Flying Display Director has a responsibility to ensure that the pilots who will be taking part in the display are able to fly to the required standard and that the equipment that they will be using is of suitable specification and fit for purpose.
- **It is also a CAA requirement that any pilot operating a 'large model aircraft', or a jet turbine powered model aircraft of any mass, for the purpose of a 'model aircraft flying display', must be able to demonstrate sufficient recency of pilot competence by having flown, as a minimum, one complete display routine, within the preceding 30 days of the 'model aircraft flying display', on an aircraft which is reasonably representative of the aircraft to be flown within the display event.**
- A paper trail can be a useful starting point in this respect. Providing the pilots with a declaration to sign for each airframe that they intend to display and to confirm their pilot competency, may help them to focus on the airworthiness of their model and standard of their operating equipment.

#### 3.8.1. Models Below 7.5kg

Many events and model displays in Scotland will be restricted to aircraft below 7.5kg especially at Club level event. Under the SAA Article 16 Authorisation these events with little spectators should not need an SAA Display Permit Although the organisers should complete a risk assessment and follow the guidance contained with this document

Please contact the SAA for more help and information if required

#### 3.8.2. Models between 7.5kg and 25kg

Events in Scotland at sites which are under the SAA authorisation, with site permits to fly models less than 25kg above 400ft. again, should not require an SAA Display Permit provided the event is at their own site.



Organisers should complete a risk assessment and follow the guidance contained with this document

Please contact the SAA for more help and information if required

### 3.8.3. Large models above 25kg

Where over 25kg models are participating in the display, it is important to ensure that the pilots are in possession of the correct CAA Operational Authorisation.

- It can be useful to request copies of paperwork at the initial booking in stage prior to the event as the details can then be checked against the Large Model Association's on-line database of exemptions. Pilots must have the appropriate original documentation available for inspection by the FDD or his appointee at the event.
- It is worth bearing in mind that the operation of an over 25kg model without the Operational Authorisation in place is unlawful and can leave the pilot open to prosecution by the CAA: this has happened.
- Additionally, you should ensure that those booking in large models are competent at displaying them. Large aircraft can give rise to issues that are not present in smaller models, such as the considerably larger "footprint" on the display.
- Where exceptionally large models are booked in, consideration should be given to the overall ground and airborne presence of these aircraft. They could occupy more space in the pits and their flight path might cover significantly more area; these factors should be discussed with the pilot in the planning of the event.
- There is no doubt that these "super models" are a huge attraction to the spectating public, but they should only be included after considering all of the relevant factors.

### 3.8.4. Turbine models

The inclusion of turbine powered aircraft can greatly enhance a model flying display programme. Where aircraft utilising this power source are included; there are a number of additional considerations that must be made.

- From a ground operation and safety point of view it is often a good idea to provide a separate or remote start up area at a safe distance from the crowd-line; the risk of fire as a result of a "wet start" must never be overlooked.
- You should ensure that all operators of turbine aircraft carry a suitable fire extinguisher and that it is present during the start-up phase, it is also important that additional larger extinguishers are available on the flightline and pits area for



use in the event of a larger or spreading fire as a result of a crash or fuel spillage.

- In times of dry weather or when crops are within the over-flight area of the models, a fire vehicle would be a prudent addition to the flightline. This does not have to be a dedicated fire engine; a 4WD vehicle would be suitable if equipped with some good-sized fire extinguishers and several paddle type fire beaters.
- Operators of turbines should be fully conversant with the SAA/BMFA/JMA Code of Practice which details their operation and safety considerations.
- From a flying point of view, turbine powered aircraft are generally faster and have the potential to overfly a larger area than conventionally powered aircraft. These factors should be considered when planning the display.
- Consideration should also be given to the take-off and landing area (allowing for a safety factor) as turbines often have a higher wing loading which combined with small wheels (particularly on scale models) can lead to long ground runs.
- The length and surface of the available runway as well as any significant slope, also the overshoot and undershoot areas and in particular the distance to and the height of any obstructions should all be considered when establishing the flying programme.
- Pilots should be briefed to avoid high energy manoeuvres towards the crowd-line and also to conduct take-off and landing at a suitable distance (the measurements in our Article 16 Authorisation should be regarded as a minimum) as the lack of prop wash can lead to a loss of directional control at lower speeds.

### 3.8.5. Helicopters

Where you are planning to include helicopters in the display programme some thought should be given to their operation as there are differing requirements depending on the nature and size of models.

- Consideration should be given to pitting and start up arrangements and a separate area for helicopters is recommended. Also, the take-off location and surface should be evaluated based on the type of models included in the display; tarmac or very smooth surfaces can be problematic for scale helicopters due to potential resonance through the skids as the helicopter approaches lift off speed or spools down after touchdown; this phenomenon can be very rapid and very destructive.
- Where 3D displays are featured ensure suitable separation distances are maintained throughout the display
- The exact distances can be established based on the size of aircraft featured but particularly where “hard 3D” displays are featured it is important that high energy or very low manoeuvres are well away from the spectators due to the potential for airframe failure or destruction following a blade strike.



- If the display is to consist of multiple helicopters, then discuss with the pilots whether they stand together in the prescribed pilot's box or whether there is a preference for separation.
- The role of the pilot's assistant/spotter is particularly important in these circumstances.

### 3.8.6. Full Size Aircraft

Many model displays feature a full-size manned aircraft element or take place as part of a full-size aircraft display; where this is the case there are a number of additional considerations that must be addressed by the FDD or his appointee.

- It is vital that there is a clearly defined route of communication between any full-size manned element and the model flightline; this can either be by direct contact or through radio communication.
- It would be usual to appoint a dedicated contact from the model display team to act as the liaison with the full-size manned aircraft activity. Where a transceiver is employed to communicate direct to aircraft; the operator must hold the appropriate radio telephony (RT) licence.
- Where full size aircraft are in-bound to display, all model aircraft must be grounded with a sufficient time "buffer" in order to guarantee a safe separation; a ten-minute lead time would be usual, but the exact figure will depend on a number of factors such as the method of communication and the type of aircraft involved.
- Once the full-size manned aircraft display has finished, model flying must not recommence until the FDD has confirmed that it is safe to do so.

## 3.9. Risk assessment and Preparation

As already outlined, the preparation for a model display starts well in advance of the event itself. A paperwork trail is required and advisable on a number of levels and falls into two categories: documents that form legal requirements and documents that assist with the smooth running of the event.

These may be summarised as follows:

### 3.9.1. Legal

- **SAA Display Permit**

Under our article 16 Authorisation, an SAA Display Permit is required for all public model flying displays where it is intended to operate models (of any weight) at heights exceeding 400ft.



- **Risk Assessment.**

This will be required as a condition of obtaining an SAA Display Permit.

- **NOTAM Submission.**

NOTAMs (notices to airmen) are produced for short duration activity such as displays and are primarily to warn other air users of a temporary hazard which they must avoid; large model displays fall within this category. Full size aviators are required to check NOTAMs as part of the planning process for all flights. The contact details for the NOTAMs department are available “online” and the information can be submitted using a web based form or verbally over the telephone.

- **Large Model – Operational Authorisation Paperwork.**

If you are accepting models weighing over 25kg, then these will require a CAA Operational Authorisation in order to fly. It is useful to request a copy of this Operational Authorisation at an early stage as it is a legal document. Whilst the FDD has a duty to ensure that as far as possible the aircraft taking part in the display are legal and compliant, the final responsibility rests with the pilot.

### 3.9.2. Advisable

- **Pilot Application Forms.**

For the larger displays it is advisable to have a process whereby prospective pilots can “apply” to participate in the display. This gives the organising team the opportunity to refuse applications that do not fit the desired criteria. The initial application form should require basic details of pilots and their intended display models. Once a decision has been reached on each application, the applicant should be informed of the decision in a timely manner. Where an application is accepted a further form can be provided for more detailed information (particularly useful where a commentary is to be provided).

- **Slot Planning**

Once the desired number of pilots and aircraft are booked in, it is advisable to start planning a slotting order for the display. This can take the form of a timetable or a simple running order; it is much better to start the display with an idea of what will be flying when, rather than try to make it up as you go along. Whichever method is chosen, a degree of flexibility should be built into the programme.

- **Issue Passes and Information to Pilots.**

Where passes are required to access the venue, ensure that these are provided in order that pilots do not have a “hassled” start to the weekend. It is also useful to provide pilots with a “key facts” sheet which states the location and time for pilots’



briefings, the start and finish times for the flying display, and a contact telephone number for the flightline.

### 3.9.3. Briefing and Control

Model displays can run in a number of ways to suit the “ethos” of the event; where the display is a club-based activity supported predominantly by club members, there is a little leeway for a more relaxed approach to the day’s proceedings. Where the display is a larger event, a more professional approach should be the aim. Whatever the nature of the event, the prime consideration should be safety.

- The FDD and his team should lead by example and aim to be at the flightline well in advance of the arrival of the pilots.
- Some thought should be given to the layout of the pits and model parking area as a “static line” can form a significant part of the display; remember that the models will spend a matter of minutes in the air, and several hours assembled on the ground. Encourage pilots and helpers to stand with their models and to engage with spectators; this is especially important immediately after a display slot.

### 3.9.4. Pilot Briefing

The flying day should begin with the display briefing. A briefing template is shown at the [Annex](#). It should be stressed that pilots will not be permitted to fly unless they have received a briefing. Exceptionally, this may be conducted on an individual basis for those who could not attend the main briefing.

- The pilots briefing is a hugely important part of any display and can set the tone for the whole event. Ensure that you sufficiently publicise the time and location of the briefing (use the key facts sheet) and make attendance at the briefing compulsory for all pilots and helpers.
- In circumstances where a pilot is unable to attend the official briefing then he should not be permitted to fly until he has received a personal briefing from the FDD or his appointee.
- Some show organisers issue a briefing sheet to all pilots, but generally briefings should be in a verbal format. Use a briefing guide to ensure no major points are forgotten.
- Briefings should start with an introduction of the FDD, and his team and it is useful to outline what the main aims of the display are. Be sure to thank participating pilots at an early stage, remember without the pilots you have no display.

### 3.9.5. Weather

Clearly, the weather is one of the most significant factors in the success or otherwise of a model flying display; frustratingly it is an element over which we have no control. We



can, however, give some thought to the subject and put some contingencies in place for when the conditions fail to meet our “sunshine and gentle breeze” expectations.

The weather conditions affect what we do on two separate fronts, of course the primary considerations relate to the conditions for the duration of the actual display, again the overriding consideration is compliance with Article 16.

- **Wind.**

- The most common consideration in the UK is wind strength and it is important to monitor the conditions throughout the display, should significant-wind-speeds be experienced then consideration must be given to limiting the type of aircraft that can fly and ultimately to scrubbing the display altogether if deemed appropriate. Also, it is not just the strength of the wind that needs to be considered but also the strength of any gusting, and most important of all the direction in relation to the display line, clearly a wind that is blowing directly along the display line is of less concern than where there is a significant element pushing aircraft towards the crowd-line.
- It should also be borne in mind that some aircraft types are limited in directional stability and control authority and any crosswind element can create a significant hazard during take-off and landing, where this is the case steps should be taken to ensure an increased crowd separation distance during these phases of flight. Other types such as WW1 aircraft can be assisted by permitting operation with a cross runway element where space and separation permit, it is important that sufficient helpers are available to retrieve aircraft at the end of flight slots, as many of these aircraft will be unable to effectively taxi where a significant wind is present.
- Flying may continue during light drizzle but where any significant rainfall is experienced flying should cease on safety grounds until it has passed, this is primarily to protect the equipment used and the integrity of the R/F link with the aircraft, experience has shown that 2.4GHz radio equipment in particular is likely to suffer a significantly reduced performance where excessive moisture is present.
- Any conditions leading to significantly reduced visibility should be grounds for ceasing operation, this includes any mist or fog and also where a low cloud base is present, any indication that cloud base is falling below 400ft should be evaluated by the FDD in order that a decision can be taken on the continuation or otherwise of the display, it may be entirely appropriate to continue with a reduced programme and carefully selected aircraft until conditions improve permitting a return to the full intended programme.
- If the forecast looks in any way suspect, it is important to have a contingency plan in mind for the running of the event but if conditions are very poor it may be a case of making it up as you go and just drawing from suitable pilots and aircraft that are willing and available to you.



- The other aspect of the weather that may have bearing on your event is ground conditions, it is important to consider the implications of wet weather prior to your event and their bearing on access and exit arrangements and in particular access for the emergency services should it be required.

### 3.9.6. Running the Show

The aim should be to run a smooth relaxed event. Pilots should be given reasonable notice before each flying slot.

- It is useful if the FDD stands back and takes in an overview of the proceedings rather than becoming directly involved in one specific area; in this way he is more likely to spot problems at an early stage. However, this will depend on the size of the display and the number of team members available.
- When decisions are required at short notice, it is important that the FDD takes a firm and proactive stance; “dithering” will not endear him to the rest of the organising team or the pilots. Try to establish the final slotting order four or five slots in advance so pilots can be well prepared and also so that you can move a slot forward should you have a failed start or unserviceable aircraft at short notice.
- A calm and professional approach should be cultivated at all times, there is no place for panicking, shouting or rudeness on the flightline; remember it is not just the models that are on display.

### 3.9.7. Incidents and accidents

The FDD should be fully conversant with the SAA Members Handbook with regard to what constitutes an incident or an accident and what is legally reportable to the AAIB, the CAA and also to the SAA.

- Following an incident, the FDD will be required to make a number of potentially difficult decisions depending on the nature and seriousness of the incident.
- It is important that all involved remain calm in order that the correct processes can be implemented effectively.
- Any press presence following a serious incident must be carefully managed and one person must be appointed by the FDD as the official point of contact. Think very carefully about what is said to the press. The term “no comment” can give the impression that there may be something to hide. It is very difficult to prevent reporters talking to the public following an incident but making an “official” available can help to ensure the incident is correctly reported.
- Where a serious incident has occurred resulting in substantial injury or fire, then the first action is to contact the emergency services. The FDD must ensure that information relating to the site location is readily available and that suitable personnel are dispatched to key locations in order to guide the emergency services to the correct location within the site.





- The decision on whether to continue with the display will depend on a number of factors such as the seriousness of the incident and the exact location within the site. The initial decision must be taken by the FDD, but in circumstances where a Police presence is required, the appointed Police Incident Officer will make this decision.
- The FDD should suspend flying activity until it is safe to resume, and this has been agreed with the Incident Officer.
- It can be helpful for the commentator to have a plan to implement in case of a major accident. This could include a script or guiding notes to be used to encourage calm amongst spectators and participants. Where the decision is taken to suspend flying activity, an appropriate announcement must be made; this may also incorporate a call for witnesses of the incident, notably those with photographs or video evidence which may help with accident reporting, insurance claims, and any legal investigation.
- A serious incident Checklist is included in [checklist](#)
- A Commentators Incident Announcement Briefing is at [Announcement](#)

### 3.9.8. Discipline

Occasionally, disciplinary action will be required in relation to the conduct of those participating in the model flying display; this can be for a number of reasons, from conduct whilst flying to general behaviour.

- The first action in the event of unsafe or inappropriate flying conduct should be to ensure that the offending pilot does not fly again until the matter has been investigated. Extreme or repeat offenders should be removed from the display schedule.

### 3.9.9. Night flying

The operation of model aircraft at night is a recognised aspect of model aircraft activity and provided pilots can maintain compliance with the relevant provisions of the ANO, then it is a lawful activity. The official CAA definition of “night” is 30 minutes after sunset to 30 minutes before sunrise.

- There are a number of additional safety considerations with the running of a night display. Perhaps the most significant of these is crowd separation distances. Whilst the CAA have not at this time specified any separation distance for night displays, they have however, indicated that increased distances should be applied between the display line and the crowd-line, the exact distance used is currently at the discretion of the FDD and should be chosen to reflect the intended activity and aircraft.
- From a display pilot’s point of view, there are a number of additional challenges with displaying an aircraft at night and pilot selection for such events must be



carefully considered. It is recommended that only pilots with known night flying experience are permitted to take part.

- Consideration should be given to the facilities provided for pilots at a night display and a well illuminated preparation area should be provided. It is, however, important that any lighting towards the live side, and particularly the pilots' box, is carefully controlled so that pilots do not have their night vision compromised at any time during their flight.
- It can be useful to provide low level illumination of crowd barriers in order that they are easily identified by spectators without being intrusive to pilots and flightline personnel.
- Lastly, it is important that robust failsafe procedures are implemented to cover the additional safety considerations associated with night flying. Any aircraft that loses its identification lighting must be "ditched" immediately to prevent intrusion into dead airspace (the spectator area). This action must be carried out immediately at the instruction of the FDD or FLM and this requirement should be covered in the pilots' briefing.

#### 3.9.10. Flying times

Flying times shall be notified to pilots and the public

#### 3.9.11. Special Effects

Displays containing special effects must be given additional consideration and planning to ensure that these elements are conducted safely.

- Where large pyrotechnic displays are planned, these should be under the care of suitably qualified experts. Access to the detonation areas must be strictly controlled.
- You should ensure that suitable fire-fighting equipment is in place and that medical support is at an appropriate level with staff briefed on the substances and equipment in use.
- If pyrotechnics are attached to aircraft, then additional thought needs to be given to preventing the spread of fire should a model crash with live stores on board.
- There is no doubt that the addition of special effects can greatly increase the "wow factor" of a model flying display; however, it is equally evident that many additional considerations and measures need to be implemented in order to arrive at a safe outcome. Some venues will not readily lend themselves to these additions.
- Where a pyrotechnic element is included in the display, it is advisable to make an announcement prior to the commencement of the slot; this is particularly the case where loud bangs or large amounts of smoke are expected.



### 3.9.12. Additional requirements

Where members of the public are invited into any event, there are a number of considerations that must be made for their safety and wellbeing outside of the basic “display” requirements.

Matters such as: -

- Access and exit requirements
- Internal and external traffic management
- First aid
- Catering
- Other entertainment/activities
- Lost children provision
- Poor weather contingencies
- Toilets
- All of these factors will require consideration based on the expected number of visitors.
- Where larger numbers of visitors are expected, it can be a useful step to appoint a dedicated person on the organising team to look after all non-aviation aspects of the event.

### 3.9.13. Any Debrief

After the display (but preferably within a month or so) the FDD should organise a get together of the organising team to debrief the event; this is particularly useful if the display is an annual event.

- Be sure to keep notes on what worked and what didn't and ways in which the display and visitor experience could be enhanced.
- Feedback from the pilots is also an important aspect of the meeting as it is important that pilots feel they have made a valued contribution to the event.



### 3.9.14. Any Press Publicity

There are two aspects of press interaction that potentially have a bearing on our model flying displays, firstly the model magazine press has the potential to bring a significant positive benefit to our model flying display, both for this year and of course for future events that we may be planning to run.

- Secondly the wider press will have a significant influence on the reporting of any serious incident that may occur at the event.
- Aim to cultivate a good working relationship with the modelling press and consider them in your planning for the event. Members of the press should be readily identifiable, so issue them with passes and ensure flightline officials are briefed on the areas to which the press should be granted access.
- Photographers will appreciate the freedom to move around the pits area and flightline. Establish their familiarity with these environments and, if there is any doubt about whether safety might be compromised, ensure they are offered the necessary guidance. Remember, not only do quality photographs of interesting models sell modelling magazines; they also help to promote model flying events.
- Consider using local media to promote your event. Local newspapers and radio stations can be great allies in getting people through the gate.
- You may need to deal with the press following a newsworthy incident or accident. This can be a difficult situation to manage and as described earlier in this handbook, it is useful to appoint one person as the press point of contact.
- It is practically impossible to prevent press photographers from taking pictures that either invade privacy or could portray model flying activities in a negative light. The Police have some powers to limit access by members of the press if their presence could hinder an investigation or if they would have to trespass in order to take photographs.

### 3.9.15. Summary

Putting on a model flying display is not difficult or complicated; however, it does require a degree of practical organisational skill and more importantly, a whole load of motivation and enthusiasm.

- Successful displays come about from good planning and careful consideration of all the factors that affect the outcome of the event. As always, the devil is in the detail.
- The SAA is here to help you. Should you require assistance or advice regarding the planning or organisation of your display, then contact the office to chat through the process and any concerns that you have.



## 4. ANNEXES

### 4.1. Checklists

The SAA checklists and forms are designed to help organisers. Rather than include any forms in this document there are standalone forms which can be downloaded from the SAA website

#### 4.1.1. Display

A checklist designed to aid organising a display or event

available for download at:-

<https://www.saaweb.uk/documents.html>

[SAA Display Checklist.docx](#) and pdf

#### 4.1.2. Pilots Briefing

A template for pilots briefing which can be used by organiser

available for download at: -

<https://www.saaweb.uk/documents.html>

[SAA Pilot Briefing.docx](#) and pdf

#### 4.1.3. Serious Incident management

A template for serious incident management to help organisers

available for download at: -

<https://www.saaweb.uk/documents.html>

[SAA Serious Incident management.docx](#) and pdf

#### 4.1.4. Serious incident Announcements

A list of Announcements required at a display if a serious incident occurs

available for download at: -



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<https://www.saaweb.uk/documents.html>

[SAA Incident Communications.docx](#) and pdf

#### 4.1.5. Debrief

A display debriefing template for use by organisers

available for download at: -

<https://www.saaweb.uk/documents.html>

[SAA Debriefing Template.docx](#) and pdf

#### 4.1.6. Contacts

available for download at: -

<https://www.saaweb.uk/documents.html>

[SAA Contacts Numbers.docx](#) and pdf

#### 4.1.7. NOTAMS

Instructions for submitting a NOTAM

available for download at: -

<https://www.saaweb.uk/documents.html>

[SAA Submitting a NOTAM.docx](#) and pdf