

CONTROL OF POLLUTION ACT 1974

PART III-NOISE

POLLUTION CONTROL AND LOCAL GOVERNMENT (NORTHERN IRELAND) ORDER 1978

# **Code of Practice on Noise from Model Aircraft 1982**

DEPARTMENT OF THE ENVIRONMENT  
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This code of practice from pages 1 to 10 was approved, and approval was given for its issue, by the

Control of Noise (Code of Practice on Noise from Model Aircraft) Order 1981 (SI 1981 No. 1830) made under section 71 of the Control of Pollution Act 1974 by the Secretary of State for the Environment (in respect of England), the Secretary of State for Wales (in respect of Wales), and the Secretary of State for Scotland (in respect of Scotland). (In Northern Ireland this code of practice from pages 1 to 10 was approved, and approval was given for its issue by the Control of Noise (Code of Practice on Noise from Model Aircraft) Order (Northern Ireland) 1982.) This code of practice came into operation on 1 February 1982 in England, Wales and Scotland (and on 1 July 1982 in Northern Ireland).

Section 71 of the Control of Pollution Act 1974 empowers the Secretary of State to prepare and approve and issue such codes of practice as in his opinion are suitable for the purpose of giving guidance on appropriate methods for minimising noise. Section 72 of the Control of Pollution Act 1974 provides that regard shall be had to any relevant provision of a code of practice approved under section 71 of the Act in construing references to 'best practicable means' in Part III (Noise) of the Act.

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## Introduction

- 1.1 The sport of flying model aircraft provides enjoyment for many. It can also create noise, some of it unavoidable, which is no part of that enjoyment and may annoy or disturb others. The purpose of this code of practice is to describe how such annoyance or disturbance may be minimised so that the sport may be pursued in a reasonable and considerate manner and coexist peacefully with other pursuits.
- 1.2 The code of practice does not in itself create offences or have the force of law, but it is intended to be of assistance to local authorities and magistrates courts\* in the exercise of their powers and functions under the provisions described in the following paragraph, and in reaching informal agreement with model-flying clubs on methods of noise control. The code of practice cannot however override any restrictions or requirements imposed under those provisions.

## Legal controls over model-flying

- 2.1 The sport of model-flying is subject to various legal controls which should be carefully observed at all times.
  - a. Article 46 of the Air Navigation Order 1980 requires that a person shall not wilfully or negligently cause or permit an aircraft to endanger any person or property; apart from that article the Order applies only to aircraft weighing more than 5.00 kilogrammes (11.023lb) which have not been exempted from the Order by the Civil Aviation Authority. Such exemptions are normally made subject to conditions, in the interests of safety, and these should also be carefully observed.
  - b. Use of a site for model-flying may in some circumstances require specific planning permission. In granting a planning consent a local authority may impose conditions, designed to reduce the risk of disturbance by noise, and any such conditions should be observed at all times.
  - c. Local authorities may make byelaws, subject to approval by the Secretary of State for the Home Department, prohibiting or restricting model-flying on certain municipally owned land or on land subject to certain provisions of the National Parks and Access to the Countryside Act 1949 and the Countryside Act 1968. Similar provisions apply in Northern Ireland. In Scotland, byelaw-making powers relating to the regulation of local authority parks exist under the Public Parks (Scotland) Act 1878 and the Burgh Police (Scotland) Act 1892 together with corresponding provisions in local Acts.
  - d. Under sections 58 and 59 of the Control of Pollution Act 1974 local authorities or magistrates' courts may restrict or prohibit model-flying at a particular site if the noise caused by the activity amounts to a statutory nuisance. In Northern Ireland, similar action may be taken by local authorities and magistrates' courts under articles 38 and 39 of the Pollution Control and Local Government (Northern Ireland) Order 1978.

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\*In the application of this code of practice in Scotland, references to a magistrates court should be construed as references to the sheriff.

## Method of use of this code of practice

- 3.1. This code of practice contains guidelines which, if followed, should ensure that undue disturbance is avoided in most circumstances. Its terms are not intended as hard-and-fast rules to be applied to every site; local circumstances differ, and more stringent or less stringent controls may be appropriate in individual cases or on the same site over the years.
- a. Where a site has been used for some years without causing complaint, there will normally be no need to require the pattern of use to be modified, unless external circumstances or the character of use alters significantly and disturbance is caused as a result.
  - b. Where complaints have been received about existing sites, the code is intended to guide local authorities, model-flyers and others on the ways in which intensity and manner of use may be adapted to allow the use to continue, if possible, without causing further disturbance.
  - c. Where the use of a new site is contemplated, the code may be used to determine, before use starts, what constraints may be necessary to avoid a nuisance. In both this case and that of an existing site which has caused complaints, it is recommended that the model-flyers, the local authority and the near neighbours of the site should discuss, in the light of this code, any limits which might be necessary to prevent undue disturbance being caused by noise. Since clubs can often exert very effective control over the type and manner of operation of model aircraft on a site, it is recommended that, wherever possible, those wishing to operate model aircraft should join or form a club to arrange their activities responsibly. Such clubs should be given every encouragement to concentrate their activities on the most suitable sites.

## Definitions

- 4.1. In this code the following definitions apply:
- a. **The Act.** The Control of Pollution Act 1974 in respect of England, Wales and Scotland. The Pollution Control and Local Government (Northern Ireland) Order 1978 in respect of Northern Ireland. Words and expressions which are defined in the Act have the same meaning in this code unless otherwise defined in a particular context.
  - b. **Model aircraft.** There are many types of model aircraft, and several of these are either silent or powered by rubber or electric motors, noise from which is insignificant. This code is not concerned with them and in it the expression *model aircraft* means only a flying machine which, owing to its size, is not capable of carrying a human being and which, being powered by an internal combustion engine, can give rise to a significant noise.
  - c. **Noise measurement** and **dB(A)** refer to sound measured by means of equipment complying with BS5969:1981 (Type 1) (*Specification for sound-level meters*), set to the A-frequency weighting and the S-time weighting, with the noise meter set to 'slow' response. Details of the appropriate method of measurement are given in the Appendix.
  - d. **Noise-sensitive premises.** Any premises, including surrounding gardens etc, used as a dwelling, hospital, or similar institution, school (in school hours in term time or at other times when in use), or place of worship (during recognised times and days of worship) or used for

any other purposes likely to be affected by an increase in sound level.

- e. **Flying site.** Any premises used for the flying of model aircraft.
- f. **Point of launch.** The position of the operator, in the case of controlled models, or the point at which the model is released for flight in the case of free-flight models.
- g. **Free-flight model.** A model whose flight path is predetermined but which is not under the direct control of any person during its flight.
- h. **Controlled model.** A model whose flight path is under the direct control of the operator at all times.
- i. **Muffler.** A device which when fitted to a model aircraft engine has the effect of significantly reducing the noise emitted.

## General

- 5.1. It is not the concern of the code to go in detail into the various types of powered model aircraft. They may however be divided broadly into 2 types:
  - a. *Limited engine-run*, where the motor runs for a short period (seldom more than 10 seconds) to raise the model into the air, the rest of the flight being silent as the model glides down. These models are normally of the free-flight type.
  - b. *Continuous engine-run*, where the motor may run for the duration of the flight and the model is controlled. The method of control may be by flying the model on lines (*control-line aircraft*) in which case quite small premises such as small recreation grounds and playing fields will allow adequate space. Alternatively, the control may be by radio and those models (*radio-controlled aircraft*) range over a greater area and are commonly flown from larger recreations grounds, parks and similar public spaces as well as airfields and private premises. They can, however, be operated from quite small areas.
- 5.2. Model aircraft with continuous engine-run are in general more likely to give rise to disturbance than types with limited engine-run because the motor runs for longer periods.

## Operating guidelines

### Reducing noise emission

- 6.1. The most effective and fundamental way of avoiding disturbance is to cut down the noise at source. Like other internal combustion engines, those in model aircraft create a certain amount of unavoidable noise. It is possible however to reduce unnecessary noise by use of a muffler; the motors used are all basically the same and may normally be fitted with a muffler without undue reduction of operating power.
- 6.2. It is recommended that:
  - a. Model aircraft should be fitted with a muffler, wherever this is practicable, except in the case of competitive flying as described in c.i and ii below.
  - b. Except for competitive flying as described in c.i and ii below, no model should be operated which gives a noise measurement at 7 metres of more than 82 dB(A).
  - c. The exceptions referred to in sub-paragraphs a and b are cases where either
    - i. the operator is taking part in national or international competitions; or
    - ii. the operator holds a current competition licence or permit issued by the Society of Model Aeronautical Engineers, the Scottish Aeromodellers Association or any other UK body recognised by the Federation Aeronautique Internationale, and is practising for competitive purposes at times and on sites approved by the Society of Model Aeronautical Engineers or the Scottish Aeromodellers Association where distance, natural or other barriers or a high ambient noise level make a noise nuisance highly unlikely.
- 6.3. Where substantial disturbance is caused by operating unmuffled model aircraft at any site, unmuffled flying should not be permitted to continue. Provided that intolerable disturbance would not be caused, muffled flying could be allowed to continue from the site at least for an experimental period to see whether it could continue, having regard to the nature of its surroundings, without causing a nuisance.

### Reducing reception of noise around noise-sensitive premises

- 7.1. Because of the technical limitations on controlling noise emitted from individual model aircraft, additional precautions may be necessary to limit the model-flying noise heard by neighbours. The following factors are relevant:
  - a. separation distance;
  - b. times of operation;
  - c. numbers of model aircraft in operation simultaneously;
  - d. barriers between flying site and noise-sensitive premises.



It is recommended that the combination of these factors appropriate to a site should be agreed between the local authority and those representing the model-flyers. Not all sites will need requirements or restrictions under all these heads. Wherever possible, local practical tests should be made by the local authority and the model-flyers in order to determine reasonable limits for the overall noise from a site, these then being translated into limits on emission from each model, the numbers of models flown at one time, and the minimum distance from noise-sensitive premises.

- 7.2. If circumstances change, it may be appropriate to review and amend the terms of the agreement, for example where the emission levels of models decrease markedly, or where a new or different club assumes responsibility for model-flying from a site.

## Separation distance

- 7.3. Even when muffled, a model aircraft may still sound noisy, and should not be flown too close to noise-sensitive premises. The minimum distance from such premises at which a model aircraft should be flown depends on the exact nature of the premises and the surroundings.
- a. Where no direct supervision (*eg* by clubs) of flying is possible, it is recommended that the following should apply:
    - i. the point of launch of control-line and model aircraft with limited engine-run should not normally be closer to any noise-sensitive premises than 300 metres;
    - ii. the point of launch of radio-controlled models with continuous engine-run (which range over a greater area) should not normally be nearer to any noise-sensitive premises than 500 metres;
    - iii. models should not be flown closer to any noise-sensitive premises than 200 metres.
  - b. Where more detailed supervision and control may be exerted (*eg* by clubs) and other factors (*eg* noise emission levels) can be varied to compensate if necessary, separation distances may be more flexible and be related to the time of day and type of surroundings. However, model aircraft should only very exceptionally be allowed to fly closer to any noise-sensitive premises than 200 metres.

## Times of operation

- 7.4. The hours of flying have an important bearing on the likelihood of disturbance; the type of model is less important since it is the existence of the noise rather than its intensity, or degree of continuity, which causes disturbance, if the hours of operation are unreasonable. Generally the points of launch and closest approach of model aircraft should not be as near to noise-sensitive premises as suggested in paragraph 7.3 at the times of day and days in the week when people consider that they have a particular right to peace and quiet in and around their homes; special problems may arise at weekends when noise from model-flying may conflict with other quieter pastimes.
- 7.5. The times of day and days of the week when any model-flying noise is unacceptable will differ between areas and are a matter for local determination. In general however it is recommended that where detailed control of numbers and separation distances is not possible, or is inadequate to avoid substantial disturbance at the more sensitive times, flying should not be allowed outside the hours of 9am and 7pm on weekdays and 10am to 7pm on Sundays and Bank Holidays. Longer hours may be possible in the evening if control can be exercised, *eg* by a club or site owner, and disturbance would not be caused.

- 7.6. If more than one site is available within reasonable distance, annoyance suffered by any individual may be minimised by alternating use between the sites; eg using one on Saturday and the other on Sunday. It should be borne in mind that some sites may be available to model-flyers only at times when other users having priority do not require the land (eg industrial premises or airfields) and this may in itself curtail the available time for flying. To be reasonably fair, limits on flying time may in such cases need to be more flexible, if this is possible without causing disturbance.

### **Numbers of model aircraft in operation simultaneously**

- 7.7. Two model aircraft each emitting the same level of noise may if flown together produce an overall noise level up to 3 dB(A) above that of the individual aircraft. The disturbance caused may be greater than is apparent from this simple change, owing to increased variations in sound level. If a particular type of model cannot reasonably avoid being near the limit recommended in paragraph 6.2.b, it should be operated by itself unless the site is well protected, or remote, or its surroundings are insensitive to noise. Where the site is not so situated, more than one noisy model should be flown only if the distance from noise-sensitive premises can be increased.

### **Barriers between flying site and noise-sensitive premises**

- 7.8. Topographical features such as hills can afford protection against sound, as can large buildings. Where it is possible, and on balance likely to lessen disturbance, flying sites should be chosen to take advantage of these, and less stringent minimum distances may then be practicable without risking undue disturbance. It should be noted however that belts of trees, unless dense and wide, have little attenuating effect on noise.

### **Model aircraft noise in other noise-sensitive areas**

- 8.1. People may be disturbed by noise from model aircraft in the countryside as well as indoors or in their own gardens, and the peace and quiet of rural areas should be respected. In addition there may be some urban open spaces, such as ornamental parks or children's play areas, where model-flying would be inappropriate and should not take place at all. Nature and wildlife reserves, country parks or other countryside areas where people go to relax in quiet and peaceful surroundings, should also be avoided by model-flyers. Preferably, model-flying in country areas should be confined to specified locations where suitable provisions have been or can be made with the agreement of local farmers or landowners, and where the risk of disturbance is relatively slight. Noisy pursuits will usually be out of place in National Parks. Model-flyers should therefore seek the agreement of the National Park Authority before operating from any site in a National Park, however remote it may be.
- 8.2. Most animals, whether wild or domesticated, are probably not unduly worried by model aircraft noise: it can however be distressing to some at sensitive times, for example to mares when in foal, sheep at lambing time or birds in the nesting season. It is recommended that model-flying clubs or representatives should discuss with the owners of surrounding land, or local wildlife preservation bodies, any times and places where animals are likely to be unusually sensitive and would benefit from a temporary suspension or reduction of model-flying activity.

### **Major model-flying events**

- 9.1. From time to time major model-flying events are held, which are of interest to large numbers of

participants and spectators. It is likely that such an event will mean a temporary intensification of use of a site. In considering the desirable scale and frequency of such events at any site the organisers and the local authority will be able to use the provisions of paragraphs 6 to 8 of this code of practice as a guide, but it should be borne in mind that higher levels of noise resulting from occasional short intensifications of use may be more acceptable than the same levels of noise would be if they arose regularly and frequently. If the site is well chosen, serious disturbances need not be caused.

- 9.2. The organisers should ensure that unnecessary noise is kept to the minimum where disturbance is possible, and should limit ground-running of engines, which can add appreciably to the overall noise level.
- 9.3. The organisers of any projected major model-flying event should notify the local authority in advance of their intention to hold the event; they should also be expected to publicise it locally well in advance, giving a clear indication of the date, time and expected duration of the event.

## Appendix

(Paragraph 4.1.c)

### Method of measurement of noise emitted by a model aircraft\*

The model, working at maximum r.p.m. should be held between 1 and 2 metres off the ground in a bracket or by one person standing upwind of the model. The microphone of the noise meter should, where necessary, be fitted with a windshield. It should be positioned downwind of the model, 7 metres away from it (measured horizontally), and 1.2 metres vertically from the ground. The wind speed should not be over 3 metres per second (Force 2). Measurements should be taken in the open air and away from reflecting surfaces such as buildings.

The noise level emitted, for the purposes of this code, shall be the maximum value of four readings:

- i. model pointing directly at the meter;
- ii. model pointing directly away from meter;
- iii. model pointing 90° to the left of meter;
- iv. model pointing 90° to right of meter.

The noise meter shall be in accordance with BS5969:1981 (Type 1) (*Specification for sound-level meters*), set to the A-frequency weighting and to the S-time weighting. The meter should be calibrated prior to use.

\*Some local authorities may be willing to assist model flying clubs with noise measurements in order to establish the noise levels of aircraft being flown by club members.

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