



Technical & General Meeting
Berlin, 18-19 March 2017

EASA RMT 0230

Regulation of Unmanned Aircraft

Model Flyers Perspective

Dave Phipps

Technical Officer for UA



Background to RMT 0230

- Problems giving rise to need for new regulations caused by ‘paranoia’ surrounding ‘recreational users of multi-rotor camera platforms’ operating unlawfully and lack of enforcement of existing regulations
- manufacturers building in too much performance and capability into their ‘drones’ - encourages unlawful operation (BVLOS) in inappropriate locations
- Lobbying groups and sensationalised media coverage leading to an exaggerated perception of risk and a ‘Knee jerk’ reaction from politicians
- Few concerns have arisen from established forms of ‘model flying’ (or from members of model flying organisations flying ‘camera drones’ lawfully)



Background to RMT 0230



- EASA's regulatory process began in August 2015 with the Publication of A-NPA2015/10 – “Introduction of a regulatory framework for the operation of drones”. (3,400 comments submitted)
- EASA Technical Opinion published December 2015 - “Introduction of a regulatory framework for the operation of drones”.
‘the intention is to develop rules that will not affect model aircraft flying’
- EASA ‘Prototype Rules’ for ‘Unmanned Aircraft Operations’ published August 2016 – not well received by several stakeholders



Feedback on the Prototype Rules



- EASA surprised by the large number of responses received from the model flying community and also the strength of feeling
- Not all responses were polite
- The European NAA's met with EASA in October 2016 and were also very negative
- EASA argued that the Prototype Rules were only ever intended to generate feedback to help them develop the actual rules
- However - initially EASA were only open to negotiation on Article 15

Europe Air Sports/FAI input



- EAS raised concerns with EASA at the EAS Conference in April 2016
A direct meeting was offered and EAS added to the stakeholders list
- EAS/FAI met with EASA on 21st June to explain model flying and argue for clear derogation from 'drones'
- EAS/FAI made efforts to raise awareness of the issue within the model flying community and encouraged model flyers to respond to provide 'feedback' to EASA
- EAS/FAI registered concern about the Prototype Rules on behalf of model flyers and met with EASA again on 23rd September
- Input to Geofencing Task Force
- Input to Collision Task Force
- Input to impact assessment



Article 15



- EAS/FAI Submitted suggestions to re-word Article 15:

Article 15

Model Aircraft

For recreational operations of UA, such as leisure flights, air displays, sport or competition activities, conducted in the frame of associations or clubs, the following provisions shall apply:

1. The competent authority shall issue operational authorisations to associations or clubs for the operations which would otherwise require an authorisation according to Subpart B of Annex I to this Regulation. For associations or clubs in operation before the entry into force of this Regulation, these operational authorisations shall be issued within 3 years of the entry into force of this regulation.
2. An operational authorisation can be issued without the need to conduct the operational risk assessment referred to in UAS.SPEC.60.
3. Operational authorisations issued under this Article shall define the conditions, limitations and deviations from the requirements of Annex I and Annex II to this Regulation, based on the safety records of model flying performed under national systems before this Regulation enters into force and existing best practices in other Member States.

EASA Stakeholders Workshop – 24th October 2016



- EASA stated publicly that they *'needed to do more to address the needs of the model flying community'*
- They announced the formation of an 'Expert Group'
- Geo-fencing and Collision Task Force reports published:

https://www.easa.europa.eu/system/files/dfu/GTF%20-%20Report_Issue2.pdf

https://www.easa.europa.eu/system/files/dfu/TF%20Drone%20Collision_Report%20for%20Publication%20%28005%29.pdf





Expert Group

- Only considered Open and Specific Category Operations (Principally VLOS and below 120m unless subject to an authorisation)
- 9 days of meetings since November 2016
- additional 'webex' (with limited participants) to discuss model flying specifically
- EG may be recalled to consider feedback on the NPA
- EG may be recalled to consider Certified Category operations



Open Category – as proposed in Prototype Rules



EAS/FAI view:

Difficult to envisage model flying within this Category:

Product requirements required functionality not found in model aircraft:

- Geofencing
- Active systems for height limitation
- Proposals only really considered aircraft sold as a 'system'

Aircraft required to carry a CE marking depicting a 'multi-rotor drone'



Open Category - as proposed in draft NPA



Model flying now possible within A3 of the Open Category

- <25 Kg MTOM
- Height limited to 120m
- Evidence of competence (online training & test)
- Minimum age of 16 unless supervised
- No additional CE technical requirements
- Registration required for operator and aircraft
- E-identification and Geofencing subject to 'operating zone'



However - difficult to reconcile EASA safety objectives with overflying uninvolved persons in A1!



Compromise Proposal for Open Category



Categ	Class	Mass	Distance from people	Height	Pilot Compet	Age	Main Tech req (CE mark)	Registr	E-Identif geofencing
A1 Fly over people	Home built	<250 g	Fly over uninvolved people (not over assemblies of persons)	<50m	Leaflet	//	//	NO if without camera >5MP or audio sens	NO
	C0						Toy regulation or no sharp edges		
	C1	<80J or 900 g		<50m	Leaflet	14/sup	Kinetic energy, no sharp edges, selectable height limit	Only operator	If required by the zone of ops
				<120m *	Leaflet + Online training with a test				
A2 Fly close to people	C2	900g-4kg	intentionally in proximity but at a safe distance from uninvolved persons (in AMC >20m or 50m)	<120m *	Leaflet + Certificate of competence (Theory). Exam in approved centre	16/sup	Mechanical strength, loss link management, selectable height limit	Operator and UA	yes
A3 Fly far from people	C3	<25 kg	in area where pilot reasonably expects that no uninv person will be in the visual range	<120m *	Leaflet + Online training with a test	16/sup	loss link management, selectable height limit	Operator and UA	If required by the zone of ops
	Home built						//		

* Or 50m higher than an obstacle on request of the owner of object

Specific Category - as proposed in Prototype Rules



EAS/FAI view:

- EASA had made some efforts to accommodate model flying with Article 15
- However, model aircraft were still subject to disproportionate, inappropriate and unnecessary market regulations and product specifications
- EAS/FAI proposal for Article 15 accepted by the first meeting of the Expert Group



Specific Category - as proposed in draft NPA



- EASA has further refined Article 15 (now Article 16)

UAS operations conducted in the framework of model clubs and associations

For UAS operations conducted under the auspices of model clubs or associations the following provisions apply:

1. the competent authority may issue operational authorisations without further demonstration of compliance, on the basis of established procedures, organisation and management system of the model clubs and associations;
2. operational authorisations granted under this Article shall define the conditions, limitations and deviations* from the requirements of Annex I and Annex II to this Regulation;

(*Deviations can include registration requirements!)



Specific Category - as proposed in draft NPA



- EASA has also defined responsibilities for model clubs and associations in SUBPART B – UAS.SPEC15

UAS.SPEC.15 Responsibilities of model clubs and associations

Model clubs and associations holding an operational authorisation as defined in Article 16 of this regulation shall:

- a). make available to their registered members, appropriate procedures to comply with the conditions and limitations defined in the operational authorisation issued by the competent authority;
- b). ensure that all members have the minimum competence required to operate the UAS safely according to the procedures defined in a);
- c). in case of operations or flights exceeding the conditions and limitations defined in the operational authorisation take actions, and, if necessary, inform the competent authority;
- d). provide, upon request of the competent authority, required documentation for oversight and monitoring purposes.

Model flying within the draft NPA



- New recognition of Model Clubs/Associations in the Recital:
 - (9) Taking into account the good safety record achieved, dedicated provisions for recreational flight activities conducted in the framework of model clubs and associations should be also provided, in order to ensure a level playing field for all UAS operators.
- Model flying now possible within the Open Category (A3) with restrictions
- Model flying possible under Article 16 (was 15) for Model Club/Association members with an authorisation issued by the 'Competent Authority' with flexibility to determine details and deviations from the requirements at National level (such as registration requirements).
- Model flying also possible under Article 14 in 'Zones' defined by the Member State with an exemption from 'Open' requirements, without a 'Specific' authorisation and/or with extension of operational limitations (such as max height).
- With so much control now at MS level, it would not be a 'big leap' to BR Annex II!



What next?

- Expert Group to provide feedback on draft NPA by 24 March
- NPA due for publication at the end of April 2017 with 3 month feedback
- EASA still to gain competence for UA under 150Kg
- Expert Group may be recalled to review feedback on the NPA
- Expert Group may be recalled to consider Certified Category operations
- EASA team want me to 'sell' the NPA 'positively' to the model flying community
- Anticipated that the Regulation will come into force in 2021





Comments/Conclusions

- Now several possible routes for member states to facilitate model flying
- Permitting overflying of uninvolved persons is madness!
- SERA used as an excuse to preclude some activities (Indoor operation), but not accepted as an argument to preclude model flying!
- Largely unenforceable
- Other 'Agencies' still to review NPA
- Will mainly affect those who already operate responsibly and lawfully
- Some Member States already rushing to implement new regulations for UA
- Not all Member States want the same regulations for model flying!
- Draft NPA does more to address the needs of model flying than the Prototype Rules (but would BR Annex II still be a better option?)
- Has the use of 'recreational' drones has peaked?



Comments/Conclusions

- It can be a difficult task to make one size fit all!



- Thanks for listening

