

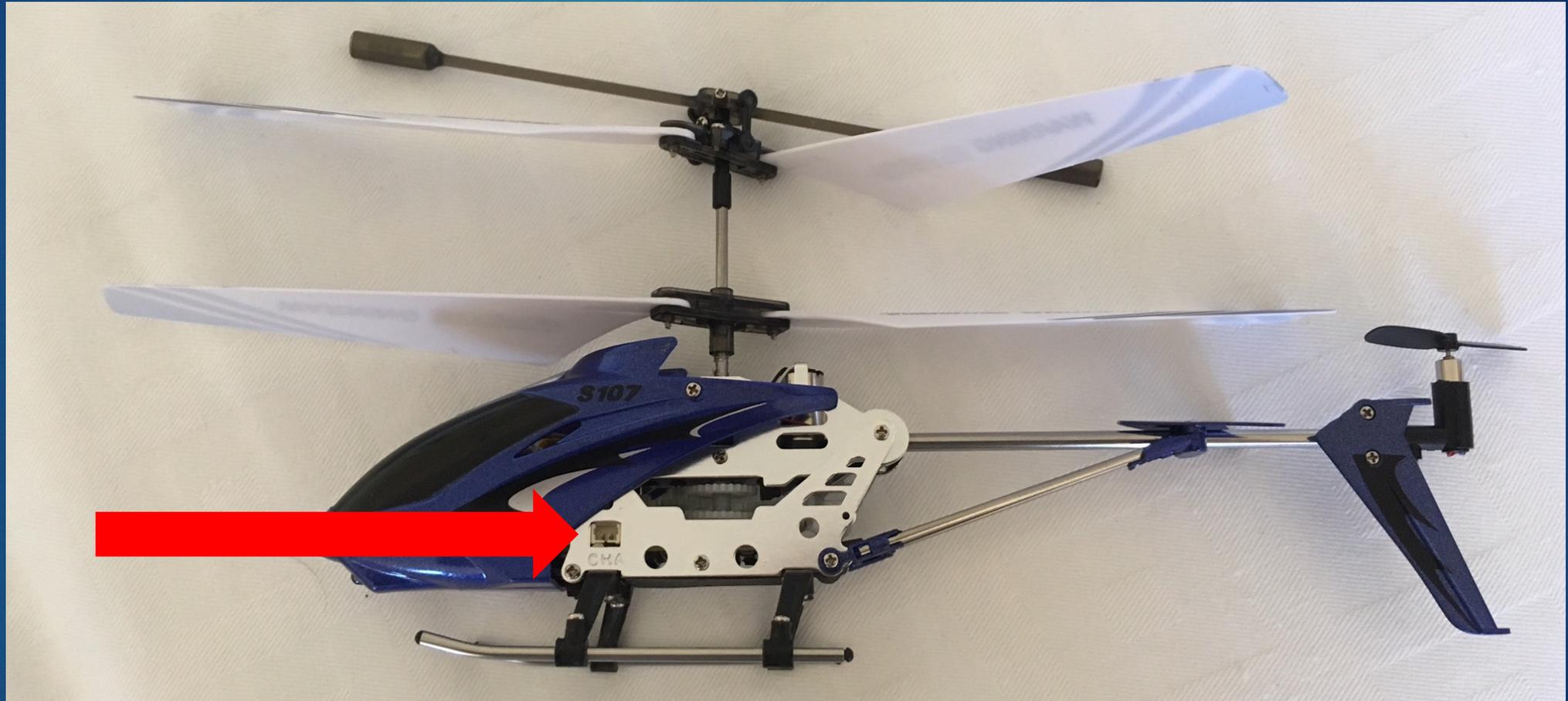
Learn to fly the S107G radio controlled helicopter!



Geoff Leach
Chief Pilot
DGO Fly by Night Helis Ltd



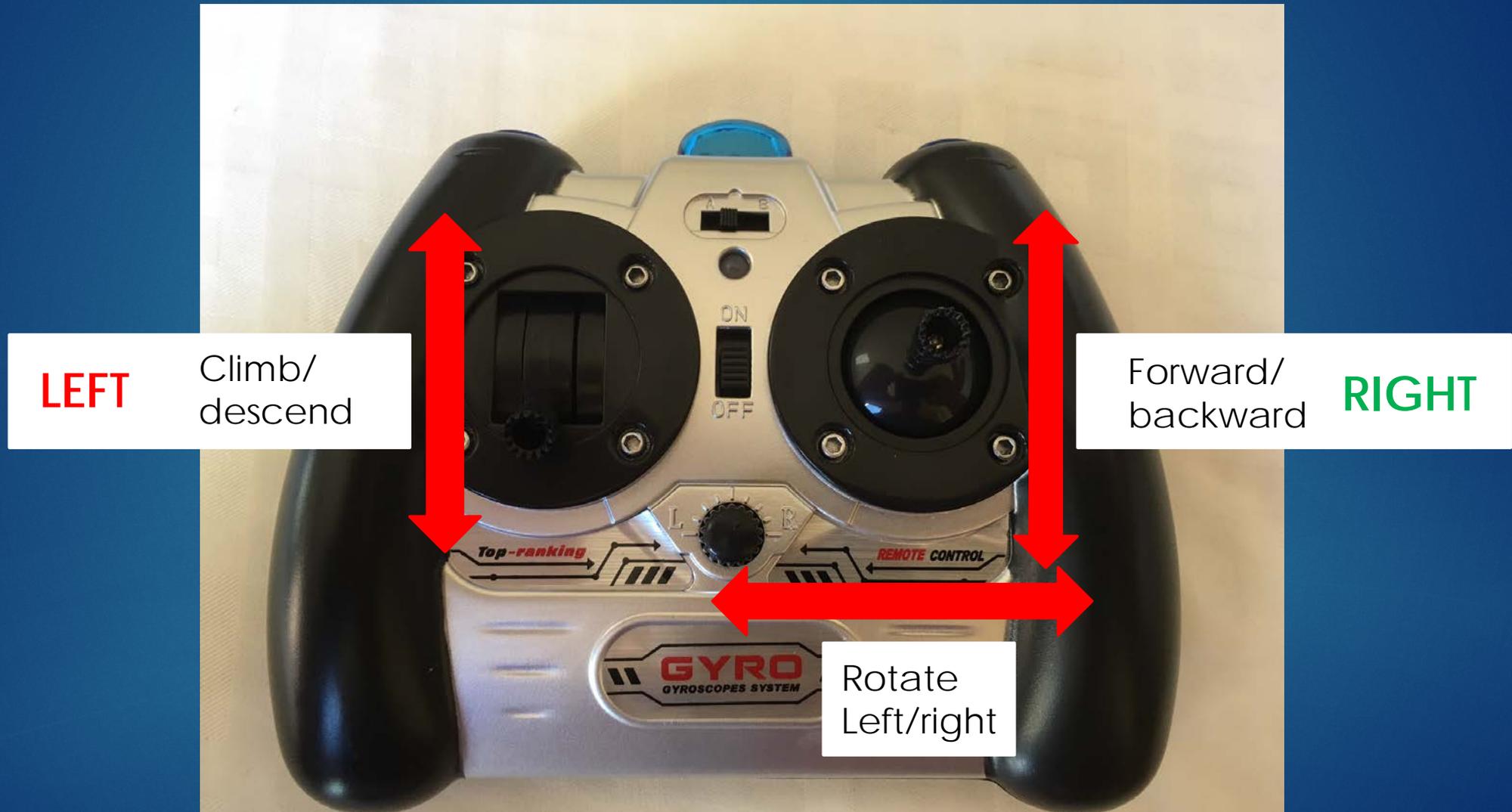
Electrical input – left side



On/off switch – right side



Controller



Your examination.....

1. To make the helicopter go up or down we use:
A) the left lever B)the right lever C) both levers
2. To make the helicopter go forward or backward we use:
A) the left lever B)the right lever C) both levers
3. To rotate the helicopter we move the:
A) left lever up/down B) right lever up/down C) right lever left/right
4. The on/off switch of the helicopter on the:
A) left side B) right side C) top

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Congratulations,
you're qualified!!

So we have an
urgent job for
you.....

This is to certify that

DGIS ATTENDEE

has passed the DGO fly by night examination

in

Flying the S107S radio controlled helicopter

on 4 September 2019

and is qualified until

on 30 September 2021



Geoff Leach

Geoff Leach
Director

The Dangerous Goods Office Ltd



Where ICAO is going.....

Competency-based training and assessment.

Training and assessment that are characterized by a performance orientation, emphasis on standards of performance and their measurement, and the development of training to the specified performance standards.

Competency. A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

Why we're going there.....

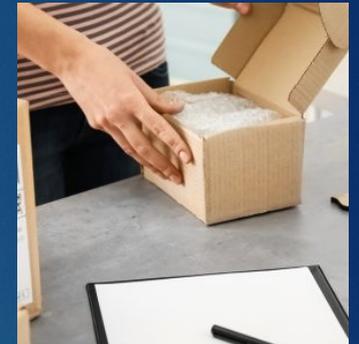
Pilots were first, i.e. demonstrate you can:

- take-off
- climb
- cruise
- descend
- approach
- land



And dangerous goods hasn't escaped.....

- State employees responsible for dangerous goods
- Shippers
- Freight Forwarders
- Operators
- Designated Postal Operators



The components of a competency framework

1 - *Competency unit*. A discrete function consisting of a number of competency elements

For shippers:

- Classifying dangerous goods
- Preparing dangerous goods shipment



The components of a competency framework

1 - *Competency unit*. A discrete function consisting of a number of competency elements

For shippers:

- Classifying dangerous goods
- **Preparing dangerous goods shipment**



The components of a competency framework

2 - *Competency element*. An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

For “**Preparing dangerous goods shipment**”:

- Assess packing options including quantity limitations
- Apply packing requirements
- Apply marks and labels
- Determine if overpack can be used
- Prepare documentation



The components of a competency framework

2 - *Competency element*. An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

For “**Preparing dangerous goods shipment**”:

- Assess packing options including quantity limitations
- **Apply packing requirements**
- Apply marks and labels
- Determine if overpack can be used
- Prepare documentation



The components of a competency framework

3 - *Performance criteria*. Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

For “**Apply packing requirements**”:

- Consider constraints of Packing Instructions
- Select packaging materials (absorbent, cushioning etc)
- Assemble package

There's a lot of good...

- Identifies exactly what employees need to be able to do
- Time isn't wasted on irrelevant areas
- Performance criteria indicates exactly what we need to achieve both from training and assessment
- Employees can show they can implement what has been learned
- Importance of "continuous assessment" is recognised

And some not so good...

- Companies need dangerous goods expertise to know what staff need to know
- They may attempt to complete the Training Needs Analysis without knowledge and not do a good job....
- No underpinning knowledge proposed by ICAO
- No guidance is given on who should/ how to assess
- Who assesses the assessors?
- What do you do for those who don't have any specific responsibilities to carry out e.g. check in staff, flight crew, cabin crew

But fear not....., does
very much really change?



Table 3-1. Generic dangerous goods task list

1	Classifying dangerous goods		
	1.1	Evaluate substance or article against classification criteria	
		1.1.1	Determine if it is dangerous goods
		1.1.2	Determine if it is forbidden under any circumstances
	1.2	Determine dangerous goods description	
		1.2.1	Determine class or division
		1.2.2	Determine packing group
		1.2.3	Determine proper shipping name and UN number
		1.2.4	Determine if it is forbidden unless approval or exemption is granted
	1.3	Review special provisions	
		1.3.1	Assess if special provision(s) is applicable
1.3.2		Apply special provision(s)	
2	Preparing dangerous goods shipment		
	2.1	Assess packing options including quantity limitations	
		2.1.1	Consider limitations (de minimis quantities, excepted quantities, limited quantities, passenger aircraft, cargo aircraft only, special provisions, dangerous goods in the mail)
		2.1.2	Consider State and operator variations
		2.1.3	Determine if all-packed-in-one can be used
		2.1.4	Select how dangerous goods will be shipped based on limitations and variations

2.2	Apply packing requirements	
	2.2.1	Consider constraints of packing instructions
	2.2.2	Select appropriate packaging materials (absorbent, cushioning, etc.)
	2.2.3	Assemble package
	2.2.4	Comply with the packaging test report when UN specification packaging is required
2.3	Apply marks and labels	
	2.3.1	Determine applicable marks
	2.3.2	Apply marks
	2.3.3	Determine applicable labels
	2.3.4	Apply labels
2.4	Assess use of overpack	
	2.4.1	Determine if overpack can be used
	2.4.2	Apply marks if necessary
	2.4.3	Apply labels if necessary
2.5	Prepare documentation	
	2.5.1	Complete the dangerous goods transport document
	2.5.2	Complete other transport documents (e.g. air waybill)
	2.5.3	Include other required documentation (approvals/exemptions, etc.)
	2.5.4	Retain copies of documents as required

Training courses –
the top 5 areas of
interest.....

1. Session Objectives and Summaries

“If you don't know where you're going, how do you know what route to take?”



1. Session Objectives and Summaries

Why do we need session objectives and summaries?

- To show where we are going and where we've been
- To increase confidence of students
- To increase student participation (they can decide if objectives have been met)
- Helps keep instructors on track!!

2. Talking v asking

- “Ullage is the amount of space you leave at the top of a container when filling it with liquid”

Is there a better way?

- Who can tell me what we mean by “ullage”? or
- Can you tell me what we call the amount of space you leave at the top of a container when filling it with liquid?



2. Talking v asking

Why should we be asking questions?

- To test understanding
- Stops students “switching off”
- To prove to themselves they’re progressing

But be careful.....

3. Why are we here?

Dangerous goods can be carried safely by air transport providing certain principles are adopted. These principles have been used in developing these Technical Instructions and are set out below; they are intended to facilitate transport while giving a level of safety such that dangerous goods can be carried without placing an aircraft or its occupants at risk, providing all the requirements are fulfilled. They try to ensure that should an incident occur it cannot lead to an accident.





Photo by Jörg Tegen



4. Reading v teaching



Dangerous Goods Regulations

5.0.1.5.4 The intended function of each package must not be impaired by the overpack.

5.0.1.6 Salvage Packaging

△ OPERATOR VARIATIONS: AA-04, EI-03, EY-06, JX-04, KQ-06, KZ-08, ME-05, MH-03, MP-02, OM-07, OU-08, SV-06, UA-07, UX-09

5.0.1.6.1 Damaged, defective, leaking or non-conforming packages, or dangerous goods that have spilled or leaked may be transported in salvage packagings (see SALVAGE PACKAGING in Appendix A) meeting the requirements of 5.0.1.6.2 and Subsection 6.7. These salvage packagings may be used provided that appropriate measures are taken to prevent excessive movement of the damaged or leaking packages within the salvage packaging and that when the salvage packaging contains liquids, sufficient absorbent material is added to eliminate the presence of free liquid. The shipper must also ensure that all applicable requirements of these Regulations are met. Prior approval from the appropriate national authority must be obtained to ship salvage packagings.

5.0.1.6.2 Salvage packagings must be single packagings of a material resistant to any chemical or other action of the leaking or spilled dangerous goods. Not more than one damaged, defective or leaking package of dangerous goods may be packed in any one of such single packagings.

5.0.1.6.3 Damaged, defective or leaking packages of dangerous goods of Classes 1, 2 and 7 and Division 6.2 (other than Clinical waste and Medical waste falling under UN 3291) must not be transported in salvage packagings.

5.0.1.6.4 Damaged, defective or leaking packages of self-reactive substances of Division 4.1 or substances of Division 5.2 must not be transported in metal salvage packagings meeting Packing Group I requirements.

5.0.1.7 Portable Tanks

STATE VARIATION: ITG-07

With the approval of the appropriate authority of the State of origin, certain dangerous goods may also be carried on cargo aircraft in portable tanks.

5.0.1.8 Carriage of Oxygen with Live Animals

provision for the medium danger (Packing Group II) category.

5.0.1.10 Additional Requirements for the Air Mode

The transport of dangerous goods by air is subject to requirements additional to those of other modes of transport (e.g. quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, specific packing instruction requirements).

5.0.1.11 Carriage of Flames

With the approval of the appropriate authority of the State of Origin, or transit (where applicable), of Destination and of the Operator, lamps fuelled by UN 1223 — Kerosene or UN 3295 — Hydrocarbons, liquid, n.o.s., carried by a passenger to transport a symbolic flame (e.g. Olympic flame, Peace flame) may be carried in accordance with the provisions of Special Provision A224.

5.0.2 General Packing Requirements

STATE VARIATION: JPG-24

OPERATOR VARIATION: FX-02

5.0.2.1 Packing Groups

5.0.2.1.1 For packing purposes, Packing Group numbers I, II or III are assigned to dangerous goods in Classes 3, 4, 5, 6, 8 and 9 according to the relative degree of danger presented by the article or substance.

- Packing Group I — Substances presenting high danger.
- Packing Group II — Substances presenting medium danger.
- Packing Group III — Substances presenting low danger.

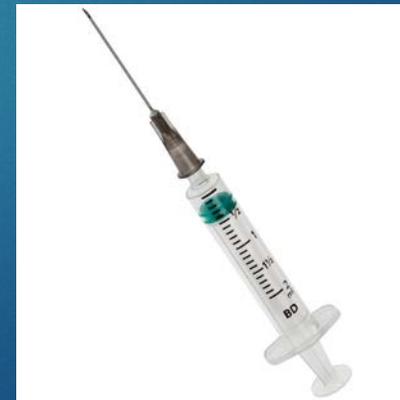
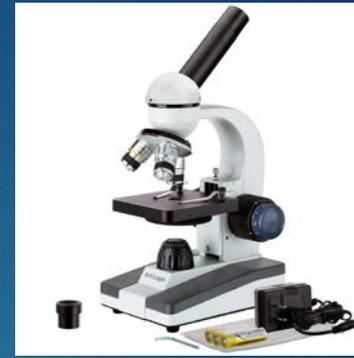
5.0.2.1.2 Some substances in Class 9 and liquids in Division 5.1 have been assigned to packing groups by experience rather than through the application of any technical criteria and these are shown in the List of Dangerous Goods in Subsection 4.2. The packing group to which a listed substance is assigned is given in the List of Dangerous Goods. The packing group criteria for the classes and divisions are given in Section 3.

5. Visual aids

And now for even more fun!!!

5. Visual aids

Listen up.....



Retention of information after 3 days



Hear Only

15%



See Only

35%



+



See and Hear

65%

And one last thing.....

If you are going to use Powerpoint slides think about the colours!!!!



That's all
folks!