

GLP Usage – Speaker Notes

These notes can be used in conjunction with the RASC PowerPoint slide deck regarding GLP training. This information is also included in the slide deck on our website.

Slide 1	<p>Welcome. Presenting on behalf of the Royal Astronomical Society of Canada. Introduce yourself and others assisting with the training (name, personal background)</p> <p>RASC GLP story: In 2021, RASC began discussions with the Transport Canada (TC) when the first interim order came out. It was rather broad and even carrying a laser pointer was illegal. The TC recognized the value in working with the RASC and our cousins in Québec (SAM, la Société d'Astronomie de Montréal). Because the RASC was very much involved in public outreach, they could also get the message out about the safe use of GLPs.</p> <p>From there, a program was developed, and the interim order has now been moved into the regulations.</p>
Slide 2	<p>This program is to qualify users of the GLP and the spotters they use during RASC-endorsed events. It is the RASC Centres that control who is authorized to use a GLP.</p> <p>Once we have gone through the information to present plus completing the multiple-choice exam and reviewed, you will be considered trained and authorized at that point by the RASC Halifax Centre.</p> <p>For those attending from another Centre, we will notify your Centre of your course completion.</p> <p>Thank you for attending and sharing your love of astronomy with the public.</p>
Slide 3	<p>The Transport Canada rules and regulations are found within the Canadian Aviation Regulations (CAR) that are enforceable.</p> <p>CAR 601.20 No person shall project or cause to be projected a directed bright light source into navigable airspace in such a manner as to create a hazard to aviation safety or cause damage to an aircraft or injury to persons on board the aircraft. <u>Clarifications:</u> 1) “Navigable Airspace” = everything from the ground up. 2) “Bright light” = It does not state lasers although lasers, including lasers that meet that criteria. It references any bright lights that could impact aviation safety.</p> <p>CAR 601.21 ... written authorization obtained to project a bright light This is what the RASC has – written authorization under certain conditions.</p>
Slide 4	<p>The RASC has applied and received written authorization under certain conditions to use Handheld Green Laser Pointers for Astronomy.</p> <p>Deals with the possession of lasers: This deals with our permission to carry lasers. According to Health Canada and CAR it is illegal to carry lasers above 1 mW unless you have a permit to do so.</p> <p>Informs us of the 5 mW maximum for power: It is the users responsibility to ensure the power is not above 5 mW. You can purchase higher power GLPs.</p> <p>Provides links to interactive map.</p> <p>Requirements for training: This training fulfills this requirement in the written authorization.</p>
Slide 5	<p><u>Canadian Aviation Regulation 601.20</u> Enforceable regulation with fines and penalties – Must use GLPs according to the regulations and if you knowingly, willingly and don't use our permit correctly, you are personally liable. Penalties can be quite severe, fines starting at \$5000 and up.</p> <p>Deals with the projection of any bright light into airspace (air above us)</p> <p>Has the requirement to apply for a permit to project into the airspace.</p>

	<p><u>Question from Halifax Centre (March 12, 2023)</u> Q: What about use of flashlights with a narrow spot beam. Can they be used? A: Possession is not illegal. The question is how far does it go? Will it reach a cockpit and disorient the pilot and crew? Figure out how far does it go. Go a dark site area and point it to an object on the ground to determine the distance and amount the light spreads.</p>
Slide 6	<p>And now the details. In order to use the RASC permit the following must be complied with:</p>
Slide 7	<p>For the Written Authorization, the following criteria must be met:</p> <ul style="list-style-type: none"> • Must be an adult 18 years or older • Must be an RASC member in good standing for at least two years: <ul style="list-style-type: none"> • <u>Reason</u> was to eliminate the possibility of a person becoming a RASC member just to use a GLP; after a two-year membership, the Centre would have a better idea as to how responsible that member is and whether they can be trusted to use it safely as per regulations. • <u>Clarification</u>: “in good standing” means your membership dues are paid up. • Must have completed this GLP training course successfully in the past three years. <ul style="list-style-type: none"> • This means that everyone who successfully completes the course today must take the course again in 3 years to continue their certification as a user and/or spotter. • According to TC, training is to 100%. Assuming 10% of knowledge is lost each year, in 3 years’ time the knowledge is down to 70% and you are no longer qualified and in compliance. • Report any use of the written authorization to the RASC National Office <ul style="list-style-type: none"> • Because the TC puts resources to developing the authorization, they need to know it’s worth their while to continue to do so. • Provide the information to the Centre who will then report on an annual basis to the RASC. • A GLP report form is being drafted by Dennis Lyons, Judy Black and Donald Town; it should be available soon.
Slide 8	<p>The RASC holds a written authorization for the use of Hand Held Green Laser Pointers outside of the 10 KM zone around certified airports. This authorization is strictly for the RASC and its members – for both Users and Spotters. <u>Clarification</u>: “Certified airports” = can be found at this link that changes all the time: (NOTE: back out of the presentation and show them the map and how to use it)</p> <p style="text-align: center;"><u>Click Here for map where Handheld Lasers are Prohibited</u></p> <p>The red dots are certified airport. Within the red dot, you <u>cannot</u> use a GLP. If you are to use one, you must obtain a special permit from Transport Canada through your local office.</p> <p><u>Notes from Halifax Centre Training:</u></p> <ol style="list-style-type: none"> 1. Within Halifax are, there are two red circles. If you use your GLP in Bedford, you are outside the 10 km zone. 2. Military airports not necessarily showing because they may be outside of TC control. Prefer that you stay outside the 10 km allowable distance from the air base.
Slide 9	<p>You simply open the map and expand it to your location to confirm that you are not in the affected area.</p> <p>If possible, you should record your GPS location to provide with your final report for the event – makes the report more accurate. It also provides your Centre with the ability to confirm it is outside the 10 km zones. It is the person’s responsibility to ensure this is the case but the Centre also has the authority to say you cannot do use it there.</p>
Slide 10	<p>Must have applied to the Centre Executive to have the event recognized at least 8 hours prior to the event.</p> <ul style="list-style-type: none"> • It allows for Centre Executive to respond to the email. • The Centre must be notified in advance of an event in order for it to be considered a RASC event and therefore covered under the Written Authorization. • The member must meet criteria set by the Centre for instances where pop-up events occur. TC regulations must still be met at these pop-up events, i.e., trained user and a spotter. <p>This can be simply done by email unless your Centre has a more stringent requirement.</p>

	<ul style="list-style-type: none"> • Must be in writing for future confirmation, if needed. The email is a record of the request and that it confirms that the event meets all TC criteria. <p>If there are no questions from the Executive, you can consider the event is approved.</p>
Slide 11	<p>The application to the Executive must inform them of who the GLP user(s) and spotter(s) are.</p> <p>This allows the Executive to confirm that they are certified. Allows confirmation of site.</p> <p>Benefits of requiring those trained to be members for at least 2 years:</p> <ul style="list-style-type: none"> • If desired, a follow-up on requests and post-event can be done with those newly trained and with whom you are not completely familiar. • Longer term members are known and Centres can have more faith in them (assuming they have been actively involved in Centre events). <p>This process is not meant to be restrictive. It is meant to ensure that all criteria are met.</p>
Slide 12	<p>In order to use the permit, three things need to be in place. During the event, they must have a copy of the following documents.</p> <ul style="list-style-type: none"> • For the written authorization can be printed from the RASC website <ol style="list-style-type: none"> a) Go to https://www.rasc.ca/authorisation OR b) Login to the RASC site using your membership login email and password. <ul style="list-style-type: none"> • In the Search, type “green laser” • This will take you to Search Results • Choose “Laser Pointer Usage”, then choose “authorisation” in the lefthand menu. • Got to the bottom of the page to the printable PDF attachment; note the 3-year expiry date. • Membership card can be printed off from the secure section of the RASC website (secure.rasc.ca): <ul style="list-style-type: none"> • Login to the RASC secure site using your membership login email and password. • Choose “My Account” in the menu list in the blue righthand column. • Scroll down to the bottom of your personal information and click on “Print Temporary Card” • Info on the card: Name, expiry date, type of membership, Centre • Keep in mind the RASC has a policy of 2 months grace period. • RASC insurance can be printed from the RASC website: <ul style="list-style-type: none"> • Search for “public liability insurance” • This will take you to Search Results • Choose “Public Liability Insurance Information” • Scroll to the bottom is the General COI to get the confirmation of insurance. • This does cover us for GLP usage when used with the written authorization and TC criteria are met. <p>RASC has provided FAQs regarding the insurance. They are posted on the RASC Halifax Centre site - http://halifax.rasc.ca/images/documents/2022_RASC_Insurance_v2.pdf</p> <p>If using a GLP within the 10 km certified airport zone, this insurance will not cover you as it is considered a “special event.”</p> <ul style="list-style-type: none"> • You will have to make application to Transport Canada to conduct the session within the 10 km zone (for a one-time event or a series of events). • Once approved by TC, you must apply on-line for RASC event insurance. Allow at least 24-48 hours for a response from the RASC insurance carrier.
Slide 13	<p>Only a GLP of 5mW power or less can be used, and this is regulated by Health Canada.</p> <p>Health Canada has determined that anything larger is a public health hazard.</p> <ul style="list-style-type: none"> • You may get students saying, “I can get one off Amazon that is much larger.” – Yes, you can and it will arrive on your doorstep. • HOWEVER, it is illegal to have that laser without a permit for that laser and they will only issue it for scientific research or a licensed laser show. <p>Class IIIa or 3R are permitted: This certification is cited on the laser pointer itself.</p>

	<p>A GLP of this size can cause disorientation to an aircraft crew when exposed unexpectedly and is a major concern for aviation safety.</p> <ul style="list-style-type: none"> • When GLP light hits the plane's windscreen, it scatters and bathes the cockpit in a green light. If they are dark-adapted to their instrumentation, it becomes a significant issue. • If light received directly in the crew's eyes, it could cause retina damage. <p>Anyone can buy a GLP. It is part of our role as a trained RASC member to inform our public in outreach and other events we host as to the safe usage of GLPs.</p>
Slide 14	<p>CRITICAL - Spotter will be used at all times.</p> <ul style="list-style-type: none"> • In most locations, only one spotter is required but others may require two or more. <p>The GLP user will determine how many are required, however a minimum of one is to be in place at all times.</p> <p>The spotter must be in a position to clearly observe where the GLP is being used and watch for aircraft that may fly into the area.</p> <ul style="list-style-type: none"> • Spotter must be looking in all directions – in front towards the User and behind themselves. • You may find your audience may also note planes in the area. • If a plane is noted in one area of the sky, most presenters are flexible enough they can go to another area until the plane has passed by. <p>Aircraft will have position lights that are green, red and white and usually a flashing light as well. Note: The white light is at the tail of the plane (with red and green near the front) so it gives you a better idea as to which direction the plane is headed.</p> <p>Satellites also have a different colour and tend to move a lot faster.</p>
Slide 15	<p>A report of the event will be provided to the Executive so they can provide one to the National Office for Transport Canada</p> <ul style="list-style-type: none"> • Information to include User(s), Spotter(s), date, time, number in attendance, site/location (and GPS coordinates if available). <p>A condition of the written authorization is to provide TC with the usage of the permit at the end of the validity of the authorization.</p> <p>If you want to keep the authorization, report your events.</p>
Slide 16	<p>Remember that you are responsible for compliance with the permit.</p> <p>If you do not follow the permit, you may void your insurance coverage if something were to happen.</p>
Slide 17	<p>THIS IS IMPORTANT:</p> <p>Remember that Transport Canada see us as a positive influence and a partner in educating the public for GLP use.</p> <p>Whenever possible spend a few moments to talk about GLP safety, hazards and perhaps even promote joining the RASC to learn more!</p>
Slide 18	<p>Questions</p>
Slide 19	<p>Exam (poll or printed)</p>
--	<p>Thank you for attending. Halifax Centre will be apprised of your successful completion of this training session.</p>