RÄDDNINGS, SKYDDS &
SÄKERHETSUTRUSTNING
FÖR PROFESSIONELLT BRUK.

PROTECTION, RESCUE &
SAFETY EQUIPMENT FOR
PROFESSIONALS

NOTES FROM LONG DISTANCE VISIBILITY TEST WITH GREATLAND LASER - RESCUE LASERS AND SWEDISH S.A.R. HELICOPTER AND SEA RESCUE UNITS AT BALTIC SEA - MARCH 8, 2010

According to the long distance visibility test we were about to do here with the flares – we had to push forward the planned flight until Monday two days ago instead of the last weekend. That had to do with the large amount of cargo ships, tankers, and ferrys that got stuck by the Baltic thick ice. 37 ships at total, in a very short time. The SAR team had to stay extra alert due to emergency situation that could have happened!

The test was to confirm the visibility range of the flares and for the pilots to test and also for the pilots to see how they would experience the flare at range. Specially the green one according to the ongoing debate here! Etc etc. Also for us to be able to refere to the SAR crew, their opinion and this test – for those who puts these flares in question etc.

Time:	05:40 PM.
Out door temp:	2 degrees C below 0.
Wind speed:	2 m/s.
Flight weather at scene:	Flight weather – Clear. Some minor clouds at high altitude. No moon.
Flight altitude during flight to test scene.	2000 feet.
Out door temp at test scene:	5 degrees C below 0.
Wind speed at test scene:	13,9 m/s
Flight weather at test scene:	Flight weather – Clear. Some minor clouds at high altitude. No moon.

Wired down the SAR crew surface swimmer to the Hoover Craft on Baltic ice. Carefully instructed him of how to manage the flares at test from deck of the Hoover Craft.

Turned the helicopter at northerly course and sat of at 1750 feet at 140 knots. Flew up to 24 nm (nautic miles) GPS. Turned the heli towards the lasers hovering at 1500 feet. Radio contact all the way – with the Hoover Craft.

Both green and red laser flare crystal clear at range with naked human eye! Red laser flare slightly weaker though – however it was quite a bit longer than expected from the red laser flare!!

Turned heli back on course at north again and sat of at 1750 feet 140 knots again.

At range 31,5 nm (nautic miles) – about 58,4 km. Same procedure as before: down to 1500 feet and hovering towards the flares.

PROTAGIA RESCUE & SECURITY
Box 6096 SE 187 06 TÄBY
SWEDEN
TEL: +46 8 510 100 03 FAX: +46 8 510 139 55
E-MAIL: info@protagia.se

Member of Protagia Group Ltd.

AND - we are very pleased to confirm to you (if you did not know from earlier tests that you have done by your selves) that the green laser was totally strong crystal and brightly clear for the naked eye - no problem to see at all! Everyone was quite impressed and a bit surprised! More over surprisingly was that we could also see the red laser flare quite good however much weaker in comparison to the green - that was totally amazing.

We also could – at this point strongly assume that the green laser flare would – with no doubt – been able to be seen by naked human eye - at far longer range at these conditions. Pilots guessed even up to somewhere between 80 to 100 km.

By that we stopped test at this time having reached the described maximum visibility range for both lasers – even longer for both of them! At flight back towards the Hoover Craft the lasers were commanded to be turned on for the heli pilots and crew to see how they would experience the lasers flying right towards them and having them in their eye all the way through. They could then confirm no harmfulness according to blinding or likewise and nothing else strange for that matter! Just very effective for the cause! A green or red bright flash. Nothing else strange.

Wiring up the crew surface swimmer to heli. Hoover Craft sat of to base again and we were back to our base at flight end about 07:25 PM. Same weather conditions as at take off.

Everyone was very pleased with the successful flight and experience with the Greatland Laser Rescue Laser Flares!

We will highly recommend these rescue laser flares. Probably the best night time rescue signaling light device ever made so far.

STEPHAN BELAEW.
TEST LEADER AT SCEN.

PROTAGIA RESCUE & SECURITY
Box 6096 SE 187 06 TÄBY
SWEDEN
TEL: +46 8 510 100 03 FAX: +46 8 510 139 55
E-MAIL: info@protagia.se

Member of Protagia Group Ltd.