

~~TOP SECRET~~
CHIEF OF THE DEFENCE STAFF

Memorandum

From: Wg Cdr W McC Rae RAF
SCDS(B)1

To: PSOL/CDs

Date: 28 MAY 82

23
All also see Tot
enclaves in file.

SITREP: LASER BEAM IN FIS

1. First pair of laser guns will leave UK Sunday, arrive ASI Mon. and could be operational by Thurs in FIS if given highest priority.
2. Guns will be sited to YARMOUTH and FALMOUTH.
3. Baffins are not so confident about the previously predicted max range of 5km — 3km is a more reliable estimate. Also, irreversible damage to the eye is more likely to occur at ranges of less than $\frac{1}{2}$ km, not the 1 km or less mentioned yesterday.

1000' Forward Throw - Snakeeye 500lb Retard - released at 450 kts, 100' straight ahead.
2500' — " — " — " — " — steep decline at 1500' a/sl.
1500' — " — " — " — " — 450 kts, 100' straight ahead.
3000' — " — 1000lb Retard - released at 1500' a/sl.
~~TOP SECRET~~

CHIEF OF THE DEFENCE STAFF

Memorandum

From: Wg Cdr W McC Rae RAF
SCDS(B)1

To:

PSO/CDs

Date: 28 May 82

Clever!

REMOTE LABEL TARTLET DESIGNATOR



1. Troops mark potential targets and leave designator in position with its classman interface for remote triggering.
2. Harrier pilot releases bomb in toss manoeuvre, and presses a button which passes a triggering audio tone to the classman.
3. Once triggered, a built in time switch allows missiles to pass before the designator is automatically switched on. At this stage, the bomb is at the apex of its profile, and in the 'basket' thrown up from the designated target.
4. Bomb guidance is activated, and the weapon is manoeuvred onto the target.

Q2514

Q2514

CHIEF OF THE DEFENCE STAFF

Memorandum

From: Wg Cdr W McC Rae RAF
SCDS(B)1

To: ~~Popless~~

Date: 27 Mar 82

Free-keep handy
for b'f'g PM

CURRENT POSITION LASER GUIDED BOMBS / MARKERS

1. 2 Laser Guided Bombs are available for Task Force use now, as are 7 designators/markers less whatever, if any, were lost on the SAS sinking accident.
2. Tomorrow 2 remote designator/markers will be with the Task Force.
3. ETA 5 Jun with Task Force are 20 LGBs.
4. 52 LGBs ^{24 loads} are being ordered for shipment today for delivery to ASI, ETA ^{ASI} Saturday 29 May. Speed of delivery to Task Force thereafter will depend upon CTF priorities.

Can u tell me how
this works?

Leave Damore Wins note attached.

~~Sensitive~~

~~TOP SECRET~~

CHIEF OF THE DEFENCE STAFF

Seen by

CAS
J.B.

Memorandum

From: Wg Cdr W McC Rae RAF
SCDS(B)1

To: PSO KDS 27/5

Date: 27 May 82

LASER DAMAGE WEAPONS IN FIS

1. Attached is ND proposal for a laser weapon which would dazzle, or, at worst, irreversibly damage Arg Pilot eyeballs and thus seriously reduce their chances of pressing home a successful attack.
2. Max Range is 3-5km. AT 5km beamwidth is around wingtip to wingtip on an A-4.
3. LAS Sight would be employed. The beam is a green visible (inc daylight) - psychological deterrent to Arg pilots, and facilitate control for our aircraft.
4. Availability 2 at Lynham Sunday; it given highest priority could be with Task Force Tuesday. Takes 10-15 hours to set up, test.
5. A further 4 at Lynham one week later.
6. Military Laser Safety Centre are happy with proposal.

~~Sensitive~~

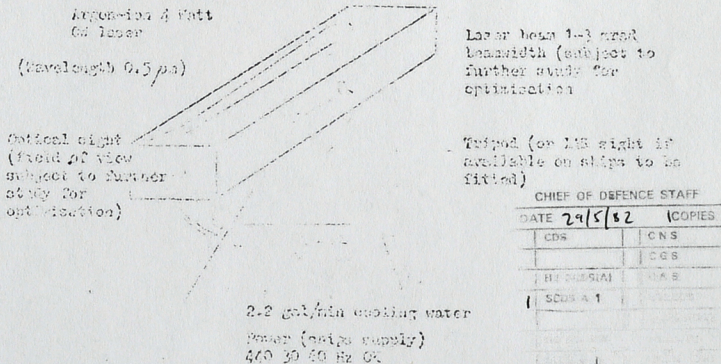
~~TOP SECRET~~

261

LASER BEAM WEAPON

1. It is proposed that lasers could be used to supplement the air defence of our forces, particularly surface ships, in the South Atlantic. Based on evidence to date the Anglo-American aircraft pilots depend on visual information for pressing home their attacks on our forces. The laser arrangement proposed would deny them, or seriously interfere with, this visual information.
2. One or more lasers would be mounted on each surface ship to be protected on a simple stabilized platform or tripod. The laser would be pointed towards the aircraft by an operator using an optical sight. The proposed laser would cause the pilot to experience a dazzle effect, similar to looking directly at the sun, at ranges exceeding 3 km under worst conditions (the actual range depends on laser beamwidth and meteorological conditions; the 3 km dazzle range corresponds to 3 mrad beamwidth and 5 km visibility).
3. At shorter ranges, probably less than 1 km, the laser beam could cause irreversible damage to the pilots' eyes. The energy threshold for damage to the human eye is not precisely known. These values are based on limited experimental data; a detailed experimental programme involving aircraft pilots has not been undertaken, but the feeling of the scientists involved is that it would be very difficult for a pilot to accurately aim a bomb (or other non-homing projectile) under these conditions.

The proposed arrangement would be as shown below; this is the type of equipment which could be assembled at short notice (a few days).



Two approximation layouts are immediately available - one at AUMS and one at RAE

See type.

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TOP SECRET

Farnborough. Some special packaging of these would be necessary before they could be sent out. A further 4 (or more) similar lasers are believed to be available for immediate delivery from the suppliers. Staff at RLE Farnborough have also been involved in some of the initial discussions and could probably usefully assist in preparation of the equipment.

24 May 1932

DR R M LOGAN
XAZ
ASWE, Portsdown

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TOP SECRET