



MASTER DIRECTIVES

MAG-12 S-1

UNITED STATES MARINE CORPS

MARINE AIRCRAFT GROUP 12
FIRST MARINE AIRCRAFT WING, FMFPAC
UNIT 37150
OPR AD 96602-7150

GruO 5100.12 w/ch 1
DSS
25 JUN 1991

GROUP ORDER 5100.12 w/ch 1, 2, 3

From: Commanding Officer
To: Distribution List

Subj: LASER SAFETY PROGRAM

Ref: (a) ~~NAVMEDCOMINST 6470.2A~~ *BUIMEDINST 6470.23*
(b) ANSI Z136.1 - ~~1986~~ 1993 ch. 2
(c) SPAWARINST 5100.12A B ch. 2
(d) ~~SECNAVINST 5100.5~~ *WqO 5100.3*

Encl: (1) Laser Incident Report
(2) Class 3b and Class 4 Laser Inventory Report
(3) Military Exempt Laser Inventory Report
(4) Laser Safety Eye Examination Report

1. Purpose. To establish safety criteria and responsibility for the safe operation of lasers used by Marine Aircraft Group 12 squadrons.

2. Cancellation. GruO 8020.2A_x and *NAVMEDCOMINST 6470.2A₉*

3. Background

a. The widespread use of lasers in military applications has greatly increased the probability of personnel exposure to injurious levels of laser radiation. Reference (a) establishes the medical surveillance of laser personnel. Reference (b) is the accepted military and industrial standard for laser hazard evaluation, the control of lasers and personal protective measures within the Navy and Marine Corps. Reference (c) standardizes policies and guidelines for the identification and resolution of laser radiation hazards. ~~Reference (d) exempts some military use lasers from controls set forth in references (b) and (c) for radiation hazards. ref (d) establishes policy and assigns responsibilities for the safe use of lasers systems within 1st MAW units.~~

b. The lasers systems utilized by MAG-12 squadrons generate an intense, coherent beam of light in the non-visible spectrum. Bursts of extremely high power output occur in exceptionally short periods of time resulting in a beam of such intensity that it may cause severe and permanent eye damage, including total loss of sight. This hazard exists with intrabeam viewing, but can also exist omni-directionally from a target or impact area due to beam reflections. The laser hazard increases when binoculars, spotting scope or any devices employing objectives lenses are utilized.

4. Responsibilities

Enclosure (1)

GruO 5100.12
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a. Group Laser Systems Safety Officer (L^SSO). An individual shall be designated in writing as the Group Laser Systems Safety Officer (LSSO). This should normally be the Group Aeromedical Safety Officer (AMSO). The LSSO shall have direct access to the Commanding Officer and sufficient technical competence and authority to approve or disapprove the local use of lasers. The LSSO shall:

(1) Successfully complete the LSSO Course (NAVSEA SET 460 or equivalent Cat II Laser Safety Course).

(2) Periodically survey all MAG-12 laser installations to ensure compliance with this instruction in safety, installation and operational use, and the currency of records on equipment and personnel.

(3) Maintain all necessary records required by references (a) and (c).

(4) Investigate all laser radiation mishaps and incidents, ensure appropriate corrective actions are taken and that a report is submitted to NAVMEDCOM (Code 53) within 30 days per reference (a). Utilize enclosure (1).

(5) Maintain a record of all lasers and their location.

(6) Submit an annual inventory by 31 August of all military exempt and Class III and Class IV lasers to SPARWARS, per reference (c). Utilize enclosures (2) and (3).

(7) Provide indoctrination and refresher training annually on laser hazards to all aircrew and personnel exposed to lasers.

(8) Monitor the safe use of lasers on target/bombing ranges. Range laser safety shall be the joint responsibility of the Range Officer, Group Director of Safety, LSSO and of the user. They shall ensure that:

(a) Aircraft comply with all range procedures, regulations and boundaries as to prevent inadvertent lasing of other aircraft or personnel.

(b) Laser eye protection (LEP) is worn by all exposed personnel.

(c) The target is certified safe for laser operations.

b. Laser Operating Squadrons. All squadrons attached to MAG-12 utilizing lasers shall establish a laser hazard control program which shall include as a minimum the following:

(1) Squadron Laser Systems Safety Officer (LSSO). An individual shall be designated in writing as the Squadron Laser Systems Safety Officer (LSSO). A copy of the designation shall be

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forwarded to the MAG-12 LSSO. The Squadron LSSO shall have direct access to the Commanding Officer and Department Head of the Squadron and shall have sufficient technical competence and authority to approve or disapprove the use of lasers. The Squadron LSSO shall:

(a) Maintain all necessary records required by references (a) and (c) and other applicable regulations.

(b) Submit, to the Group LSSO, an inventory of all military exempt and Class III and Class IV lasers held in squadron custody within 30 days of arrival aboard MCAS Iwakuni or no later than 15 August, whichever is sooner. Refer to enclosures (2) and (3).

(c) Maintain records on all personnel exposed to lasers and submit rosters to the Medical Officer for medical surveillance and eye examinations per references (a) and (b). Utilize enclosure (4).

(d) Report all squadron laser radiation hazards and incidents to the Group LSSO and initiate immediate corrective action. Reports shall be submitted in the format per enclosure (1).

(e) Periodically inspect all squadron lasers and laser facilities for safety.

(f) Establish and promulgate a written squadron standing operating procedure (SOP) for laser operations.

(g) Attend the Group Laser Safety Committee meetings.

(h) Ensure warning signs are installed in appropriate locations as depicted in reference (c).

(i) Establish a laser eye protective program. Ensure all exposed personnel are adequately protected from laser radiation. Laser eye protection (LEP) devices of adequate optical density that attenuate/absorb the laser wavelengths in use shall be provided, properly labeled, and periodically evaluated.

(j) Ensure that all aircrew and other personnel who work with lasers receive formal classroom laser safety training regarding all laser hazards.

(k) Conduct a Medical Surveillance Program in accordance with references (a) and (b). Conduct pre-assignment eye examinations on all laser personnel, in accordance with sections E2.2.2 through E2.2.6 of reference (b), utilizing enclosure (4).

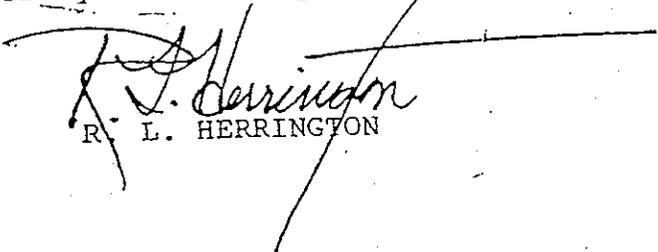
(l) Monitor the safe use of lasers on target/bombing ranges.

25 JUN 1994

(m) Maintenance. All laser maintenance, both organizational and intermediate levels, shall be performed per applicable organization safety instructions and maintenance manuals.

c. Group Laser Safety Committee. The MAG-12 Laser Safety Committee is established to bring the responsible Laser Systems Safety Officers together periodically. The purpose is to review any unsafe conditions, operations or other factors that may develop, and take corrective action as required. Unresolved conditions shall be forwarded to the Commanding Officer. The committee shall convene at the call of the Chairman and consist of the following representatives:

- (1) Chairman - Group LSSO.
- (2) Intermediate Maintenance (MALS-12); QA or Avionics.
- (3) Medical Officer, MAG-12.
- (4) Squadron Laser Systems Safety Officers.


R. L. HERRINGTON

DISTRIBUTION: A



UNITED STATES MARINE CORPS

MARINE AIRCRAFT GROUP 12
FIRST MARINE AIRCRAFT WING, FMFPAC
UNIT 37150
FPO AP 96603-7150

GruO 5100.12 Ch 1
DSS

31 MAY 1994

GROUP ORDER 5100.12 CH 1

From: Commanding Officer
To: Distribution List

Subj: LASER SAFETY PROGRAM

1. Purpose. To make pen changes to the basic Order.

2. Action

a. On page 1, reference section, delete "(d) SECNAVINST 5100.5".

b. On page 1, paragraph 3a, delete last sentence.

c. On page 1, paragraph 3b, line 1, change "lasers" to read "laser".

d. On page 1, paragraph 3b, line 9, change "objectives lenses" to read "objective lense".

e. On page 2, paragraph 4a, line 1, change "(LLSO)" to read "(LSSO)".

3. Filing Instructions. This Change transmittal will be filed immediately following the signature page of this basic Order.


I. B. BRESSLER vsr
By direction

DISTRIBUTION: A



UNITED STATES MARINE CORPS
MARINE AIRCRAFT GROUP 12
1ST MARINE AIRCRAFT WING, MARFORPAC
UNIT 37150
FPO AP 96603-7161

GruO 5100.12 Ch 2
DSS
07 MAR 2000

GROUP ORDER 5100.12 Ch 2

From: Commanding Officer, Marine Aircraft Group 12
To: Distribution List

Subj: LASER SAFETY PROGRAM

1. Purpose. To direct pen changes to the basic order.

2. Action

a. Change reference (b) to read "ANSI Z136.1 - 1993" vice "ANSI Z136.1 - 1986"

b. Change reference (c) to read "SPAWARINST 5100.12B" vice "SPAWARINST 5100.12A"

3. Filing Instructions. File this change transmittal immediately behind the signature page of the basic order.


J. M. TRIPLETT
By direction

DISTRIBUTION: A



UNITED STATES MARINE CORPS

MARINE AIRCRAFT GROUP 12
1ST MARINE AIRCRAFT WING, MARFORPAC
UNIT 37150
FPO AP 96603-7150

GruO 5100.12 Ch 3
DSS
26 Jun 01

GROUP ORDER 5100.12 Ch 3

From: Commanding Officer, Marine Aircraft Group 12
To: Distribution List

Subj: **LASER SAFETY PROGRAM**

1. Purpose. To direct pen changes to the basic Order.
2. Action
 - a. On page 1, reference (a), delete NAVMEDCOMINST 6470.2A and add BUMEDINST 6470.23.
 - b. On page 1, reference (d), delete SECNAVINST 5100.5 and add WgO 5100.3.
 - c. On page 1, paragraph 2, add NAVMEDCOMINST 6470.2A.
 - d. On page 1, paragraph 3, add the statement, ref (d) establishes policy and assigns responsibilities for the safe use of laser systems within 1st MAW units.
 - e. On page 2, paragraph 4a (6), line 2, change "SPARWARS" to read "SPAWAR".
3. Filing Instructions. This Change transmittal will be filed immediately following the signature page of this basic Order.

A. M. LAMOURIA
By direction

DISTRIBUTION: A

GruO 5100.12
25 JUN 1981

(REPORT FORMAT)
LASER INCIDENT REPORT

(Squadron Heading)

Originator
5100
(date)

From: Commanding Officer
To: Commanding Officer, Marine Aircraft Group 12 (Attn: LSSO)
Subj: LASER INCIDENT REPORT NUMBER _____
Ref: (a) GruO 5100.12
Encl: (1) Medical Report

1. Per the reference, the following information is forwarded concerning a personal injury as the result of possible exposure to laser radiation:

a. Narrative. (Provide a plain language narrative of the incident. Include the time, date, location, name/rank/SSN of the individual(s), and the type and wavelength of the laser.)

b. Description of laser source

(1) Equipment nomenclature/Aircraft BUNO _____

(2) Operating mode _____

(3) Power output during exposure (estimate) _____

(4) Maximum duration of exposure _____

(5) Distance of individual from laser source _____

c. Medical surveillance and post incident medical assessment.

d. Point of contact: (Name and phone number of squadron LSSO).

//SIGNATURE//

ENCLOSURE (1)

GruO 5100.12
25 JUN 1991

(REPORT FORMAT)
CLASS 3B AND CLASS 4 LASER INVENTORY

From: Commanding Officer, (Squadron or Activity)
To: Commander, Space and Naval Warfare Systems Command (SPAWAR
OOF)
Via: Commanding Officer, Marine Aircraft Group 12
Subj: CLASS 3B AND CLASS 4 LASER INVENTORY FOR FY _____
Ref: (a) SPARWARINST 5100.12A

1. Per the reference, the following is submitted:

Laser type: (include laser medium, emitted wavelengths, maximum
power output of laser radiation, pulse duration and
laser class.)

Manufacturer: _____

Serial Numbers: _____

Contract Number: _____

Number
of Lasers: _____

National
Stock Number: _____

Plant Account
Account Number(s): _____

Disposition

a. Program/User/Custodian(s) _____

b. Location(s) _____

c. Use(s) _____

//SIGNATURE//

ENCLOSURE (2)

25 JUN 1991

(REPORT FORMAT)
MILITARY EXEMPT LASER INVENTORY

From: Commanding Officer, (Squadron or Activity)
To: Commander, Space and Naval Warfare Systems Command (SPAWAR OFF)
Via: Commanding Officer, Marine Aircraft Group 12
Subj: MILITARY EXEMPT LASER INVENTORY FOR FY _____
Ref: (a) SPAWARINST 5100.12A

1. Per the reference, the following is submitted:

Laser type: (include laser medium, emitted wavelengths, maximum power output of laser radiation, pulse duration and laser class.)

Manufacturer: _____

Serial Numbers: _____

Contract Number: _____

Number of Lasers: _____

National Stock Number: _____

Exemption Qualification: (check the appropriate line)

Combat _____ Training _____ Classified _____
Status

Number of lasers: _____

In Use: _____ In Storage _____ Awaiting Disposition _____

Transferred within DOD to: _____

Serial Number(s) _____

ASD Approval Date _____ Transfer Date _____

Disposed outside of DOD to: _____

Serial Number(s) _____

ASD Approval Date _____ Transfer Date _____

//SIGNATURE//

ENCLOSURE (3)

GruO 5100.12
25 JUN 1991

(REPORT FORMAT)
LASER SAFETY EYE EXAMINATION REPORT

(Squadron Heading)

Originator
5100
(date)

From: Laser Systems Safety Officer
To: Officer-in-Charge, Naval Regional Medical Center, Branch
Clinic, Marine Corps Air Station, Iwakuni, Japan

Subj: LASER SAFETY EYE EXAMINATION; REQUEST FOR

Ref: (a) NAVMEDCOMINST 6470.2A

1. Per reference, a pre-assignment laser eye examination is requested for:

NAME _____ RANK _____ SSN/MOS _____

2. (To be completed by the medical examining authority).

a. Post examination results. (Pre-assignment laser eye examination results documented in this section.)

b. Examination completed by:

NAME/TITLE _____ DATE _____

3. This report is forwarded to the individual's training folder.

//SIGNATURE//

Copy to:
SNM's training jacket

ENCLOSURE (4)