

# CHAPTER 8

## AUXILIARY PERSONAL EQUIPMENT

### Section 8-1. Description

#### 8-1. GENERAL.

8-2. Auxiliary Personal Equipment covered by this chapter consists of items of equipment worn or used by aircrew

personnel to enhance operations within the aircraft and/or personal safety.

### Section 8-2. Boom Microphone Light, ML-8

#### 8-3. GENERAL.

8-4. The ML-8 Boom Microphone Light, hereinafter referred to as the lip lite, is optional equipment to be installed in accordance with ACC 620 if desired by the aircrewmember. The lip lite provides a hands-free alternate means of obtaining cockpit lighting during night operations.

#### 8-5. CONFIGURATION.

8-6. The lip lite is a self-contained assembly drawing its power from a battery unit attached to the helmet.

#### 8-7. APPLICATION.

8-8. The lip light is authorized as optional equipment on helmets used in rotary wing aircraft, fixed wing non-ejection seat aircraft, and helmets used by pilot and COTAC aircrewmembers of S-3 series aircraft. Helmets involved are the HGU-67, HGU-68, HGU-84, and HGU-85.

#### 8-9. INSTALLATION.

8-10. The ML-8 lip lite is installed as follows:

Materials Required		
Quantity	Description	Reference Number
1	Microphone Light Kit	ML-8
	-or-	
1	Lip Lite	NIIN 01-362-4902
2	Battery, AA	NIIN 00-985-7845
1	Tiedown Strap	MS3367-4-9 NIIN 00-727-5133
As Required	Fastener, Pile Tape	MIL-F-21830 NIIN 01-033-1735
As Required	Fastener, Hook Tape	MIL-F-21840 NIIN 01-033-1734
1	Battery Bag	BG-AA (COML)
1	Battery Holder	ML2-7 (COML)

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1. Attach lip lite to boom mike bracket using pivot screw provided in kit.
2. Place pile tape on microphone.
3. Place hook tape on lip lite.
4. Attach battery bag on rear of helmet using hook and pile tape provided in kit.
5. For added security route tiedown strap over top of microphone and through hole in top of lip lite. Remove excess strap.
6. Conduct appropriate test and/or operational check upon completion of modification/installation.

### 8-11. MAINTENANCE.

8-12. Maintenance requirements of the lip lite shall be limited to replacement of parts and inspection. All maintenance actions shall be documented in accordance with OPNAVINST 4790.2 Series.

**8-13. INSPECTION.** Inspection shall consist of visual type Preflight/Postflight and Special Inspections.

**8-14. Preflight/Postflight Inspection.** The lip lite shall be inspected during the Preflight/Postflight inspection of the helmet on which it is installed by the aircrew member to whom the helmet is assigned.

**8-15. Special Inspection.** Special Inspection of the lip lite shall be performed every 90 days in conjunction with 90-day inspection requirements of the helmet on which it is installed. The inspection shall be performed at organizational maintenance level and shall consist of a visual inspection and functional check of the lip lit.

**8-16. Visual Inspection.** The visual inspection of the lip lite is performed as follows:

1. Check function of lip lite.
2. Check security of attachment of connections and components.
3. Check batteries and battery holder for corrosion.
4. Inspect battery bag and electrical wire for cuts, tears, and abrasions.

## Section 8-3. Parachutist Goggles

### 8-17. GENERAL.

8-18. The parachutist goggles are worn beneath the helmet visor to provide added eye protection when conducting air operations in areas of high concentrations of dust, ash, or sand. Authorized goggles are available through normal supply channels or open purchase from commercial sources.

### 8-19. CONFIGURATION.

8-20. Sky Eye goggles, P/N 91-8854, and Headlights goggles, P/N GTX-H11, incorporate a lexan polycarbonate lens with a urethane face seal and are worn over the outside of the HGU-84/P series protective helmet. The goggles fit well into the facial cavity of the helmets under the visor and provide an airtight seal around the eyes. The Zan anti-fog goggles (Cruiser model), P/N BCA001C, and (Bugey2 model), P/N BA2001C, incorporate a clear polycarbonate lens within a rigid plastic frame with a urethane face seal. The

Zan goggles are worn around the head, under the HGU-84/P series protective helmets. The Zan goggles are authorized for non-pilot aircrew members only. The Zan anti-fog goggles, like the parachutist goggles, are compatible with the facial cavity of the helmets and are worn under the visor providing an airtight seal around the eyes. The Gentex goggles, P/N G022-4607-02, also come with a clear polycarbonate lens and urethane face seal, providing an airtight seal around the eyes. The Gentex goggles, however, may be snapped directly to the helmet in place of the visor or the goggle straps may be altered to permit concurrent use of the visor and goggles. The ESS goggles, P/N ESS01CB-NV, can be worn either under the helmet or over the outside of the helmet.

### 8-21. APPLICATION.

8-22. Parachutist goggles are intended for use by fixed-wing and rotary-wing USN/USMC aircrew members when required to conduct air operations in areas of high concentrations of dust, ash, or sand.

**8-23. SIZING.**

8-24. The Parachutist goggles are available in one universal size. Gentex goggles, P/N G022-4607-02, and ESS goggles, P/N ESS01CB-NV, are available through normal supply channels under NIIN 01-289-2831 and NIIN 01-492-5720 respectively. The commercial sources for Sky goggles, P/N 91-8854, Headlights goggles, P/N GTX-H11, and Zan goggles (Cruiser model), P/N BCA001C and (Bugey2 model), P/N BA2001C are:

Sky Eyes Limited  
6469 Magnolia Court  
Englewood, CO 80111  
Telephone (303) 779-9042  
FAX (303) 722-2782

Headlights Goggle  
9 Numbers International Inc.  
Telephone 1-800-653-9003  
FAX (717) 865-0242

Zan Headgear  
5629 Copley Drive  
San Diego, CA 92111  
Telephone 1-800-603-2662, Ext. 1303  
FAX (858) 715-0066

**8-25. MODIFICATIONS.**

8-26. There are no current directives affecting the parachutist goggles.

**8-27. MAINTENANCE.**

8-28. Maintenance of the parachutist goggles shall consist of inspection, cleaning, and necessary repairs at the organizational level. Maintenance and inspection actions shall be documented in accordance with OPNAVINST 4790.2 Series.

**8-29. INSPECTION.** Inspections shall consist of Acceptance/Special, Preflight, and Postflight performed at the organizational level. Inspections shall be visual inspections in accordance with paragraph 8-32.

**8-30. Acceptance/Special Inspection.** This inspection shall be performed by an Aircrew Survival Equipmentman prior to issue and every 90 days thereafter.

**8-31. Preflight/Postflight Inspection.** The preflight and postflight inspections shall be performed before and after each flight by the aircrewmember to whom the goggles are assigned.

**8-32. Visual Inspection.** The visual inspection of the parachutist goggles shall be performed as follows:

1. Lens for scratches, abrasions, pitting, and cleanliness.
2. Straps for cuts, tears, and chafing.
3. Face seal for adhesion to lens, cuts, rips, and deterioration.
4. Snap fasteners for security of attachment, corrosion, and operation.
5. Discrepancies noted shall be documented and the goggles turned in for maintenance action.

**8-33. SERVICE LIFE.** The parachutist goggles shall remain in service until damaged beyond economical repair.

**8-34. CLEANING.** Cleaning of the goggles shall be performed by the aircrewmember to whom assigned or the Aircrew Survival Equipmentman prior to issue as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Plastic Polish, Type I	P-P-560 NIIN 01-133-5375



Do not use solvent or hot water on goggles.

1. Light scratches may be removed using plastic polish, P-P-560, in accordance with instructions on the container.
2. Remove dust and fingerprints by first rinsing with clear warm water then wash with warm soapy water or steaming with breath.
3. Dry with clean, soft cloth, or soft tissue.

**8-35. REPAIRS/REPLACEMENT/FABRICATIONS.** Repair, replacement, and fabrication maintenance shall be performed by an Aircrew Survival Equipmentman. Repairs, replacement, and/or fabrications shall include but are not limited to the following:

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### 8-36. Minor Repairs.

#### Materials Required (Cont)

Materials Required			Quantity	Description	Reference Number
As Required	Adhesive, Polychloroprene, Class 3	MIL-A-5540 NIIN 00-515-2246	2	Stud, Snap Fastener	MS27983-3 NIIN 00-276-4908
As Required	Cap, Snap Fastener	MS27983-1 NIIN 00-891-9073	4	Post, Snap Fastener	MS27983-4 NIIN 00-276-4978
As Required	Socket, Snap Fastener	MS27983-2 NIIN 00-945-2577			



Use care when removing cap and socket fasteners. Do not damage adjustment straps.

#### 1. Re-cement loose or detached face seal.

a. Apply adhesive to underside of face seal and goggle edge.

b. Allow adhesive to become tacky (approximately 15 minutes).

c. Press face seal firmly onto goggle.

2. Replace damaged or missing snap fasteners using standard shop procedures.

1. Using end cutters or diagonal cut pliers, remove existing snap fastener cap and socket from right and left goggle adjustment straps and discard.

2. Cut two 5 1/2-inch lengths of elastic webbing and fold each length in half. At center of webbing one inch from folded end, cut a hole through folded webbing using rotary punch.

3. Unfold webbing, then using post (MS27983-4), install socket (MS27983-2N) and stud (MS27983-3) facing upward on each webbing length.

4. With right hand goggle adjustment strap laid out flat, fold elastic webbing over end of adjustment strap where snap fastener was removed. Align installed fasteners, with socket positioned inward, over hole created by removal of original fastener.

**8-37. Fabrication/Replacement.** Fabricate and/or replacement of parachutist goggle dual snap fastener strap for combined use of goggle and HGU-84/P or HGU-67/P helmet visor.

#### NOTE

All stitching shall be Type 301 lockstitch, 7 to 10 stitches per inch with minimum 1/2-inch backstitch.

a. Maintaining snap fastener alignment, sew elastic webbing onto adjustment strap using three rows of stitches 1/8 inch apart positioned as close as practical to right and left side of installed snap fasteners.

b. Fold cut ends of elastic webbing under 1/4 inch and secure to adjustment strap using two rows of stitches 1/8 inch apart.

5. Repeat procedure on left adjustment strap, ensuring socket is positioned inward.

#### Materials Required

Quantity	Description	Reference Number
As Required	Webbing, Cotton Elastic, Black, Type I, Class I, 3/4-Inch	MIL-W-5664 NIIN 00-432-8179
As Required	Thread, Nylon, Size E, Sage Green	V-T-295 NIIN 00-204-3884
2	Socket, Snap Fastener	MS27983-2N NIIN 00-486-7929

## 8-4 Change 5

## Section 8-4. Microphone Mount on T-Bayonet

### 8-38. GENERAL.

8-39. The Microphone Mount on T-Bayonet (hereinafter referred to as bayonet mic mount) is optional equipment for use by T-34 series instructor pilots who already have HGU-68/P helmets. The bayonet mic mount provides a means of utilizing a boom microphone without having to permanently affix a boom microphone mount to the helmet.

### 8-40. CONFIGURATION.

8-41. The bayonet mic mount, P/N 8322, is available as an open purchase item from:

Flight Suits  
1675 Pioneer Way  
El Cajon, CA 92020  
Telephone 800-748-6693  
www.flightsuits.com

### 8-42. APPLICATION.

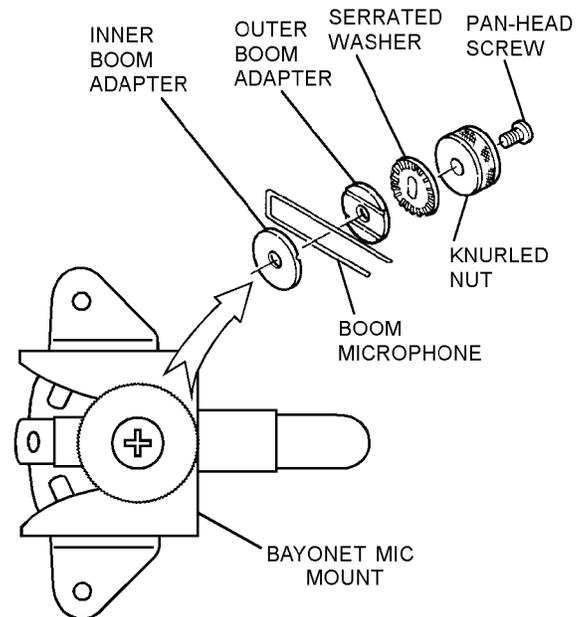
8-43. The bayonet mic mount is intended for use by T-34 series instructor pilots whose previously issued HGU-68/P helmets already have bayonet receivers and who do not wish to permanently affix a boom microphone mount to their helmet.

### 8-44. INSTALLATION.

#### 8-45. INSTALLATION OF BOOM MICROPHONE ONTO BAYONET MIC MOUNT.

1. Remove outer pan head screw from the knurled nut of the boom swivel assembly.
2. Remove the knurled nut from the boom swivel assembly by twisting it counterclockwise.
3. Remove the serrated washer and upper half of boom adapter.
4. Place boom microphone assembly between the inner and outer boom adapters, ensuring that the boom is aligned in the adapter grooves. Hold parts together.

5. Install the boom microphone and adapters; install the serrated washer with serration inboard. Install the knurled nut with the countersink outboard. Tighten the knurled knob. Secure the pan head screw.



Steps 4 and 5 - Para 8-45

8p45s4

### 8-46. MAINTENANCE.

8-47. Maintenance requirements of the bayonet mic mount shall be limited to replacement of parts and inspection. All maintenance actions shall be documented in accordance with OPNAVINST 4790.2.

**8-48. INSPECTION.** Inspection shall consist of Preflight/Postflight and Special Inspections.

**8-49. Preflight/Postflight Inspections.** The Preflight/Postflight Inspections consist of a visual inspection.

**8-50. Special Inspection.** The Special Inspection consists of a visual inspection.

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