

January 2005

Chapter 5

Night Vision Equipment

Section 5.1

Night Vision Equipment Distribution Lists

1. **Tables A through F are recommended night equipment distribution lists for the rifle company. Allocation recommendations are in bold type. Comments from Marines from OIF are in italics. Comments from the 2004 Marine Gunner's Conference are in italics.**

Current equipment is shown as currently allocated by rifle company T/E N1174, dated 27 Feb 2004. T/E B1184 is for rifle companies in Hawaii, N1164 is for 1st MarDiv, N1174 is for 2nd MarDiv, and N1184 is for 3rd MarDiv. (182) Marines are assigned to the Marine rifle company. Recommended changes to current allocations are shown as 'R' for 'Required.'

2. **Weapons are shown as allocated by rifle company T/O 1013G, dated 03 April 2000.**

(130) M-16, (27) M-249, (21) M-9, and (4) M-4 are currently allocated by T/O. (27) M-203s are currently allocated by T/E. *The Marine Gunner's Conference recommended that (12) Marines currently armed with M-9 should be armed with M-16 instead.*

Table A Rifle Platoon	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino
Squad Leader	1					1	1	1	R			R	R	1		R
Team Leader		1				1		1	R	1		R				
Auto Rifle			1			1		R			1					
Asst Auto R	1					R		R	R			R				
Rifleman	1				1			1	R			R				
Team Leader		1				1		1	R	1		R				
Auto Rifle			1			1		R			1					
Asst Auto R	1					R		R	R			R				
Rifleman	1				1			1	R			R				
Team Leader		1				1		1	R	1		R				
Auto Rifle			1			1		R			1					
Asst Auto R	1					R		R	R			R				
Rifleman	1				1			1	R			R				
Sqd TOTAL	7	3	3	0	3	7	1	7		3	3			1		
(3) Squads	21	9	9	0	9	21	3	21		9	9			3		

Plat Comdr	1					1	1	1	R			R	R		R	R	
Plat Sergeant	1					1	1	1	R			R		1		R	
Guide	1				1			R	R			R					
RO	1				1			R	R			R					
Plat TOTAL	25	9	9	0	11	23	5	23	0	9	27	0	0	4	0	0	
Additional Required						9		20	34			34	4		1	5	

Table B MG Sect	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino	
Section Leader				1	1		1	R								R	
1st Squad Ldr	1				1		1	R	R			R		1	R	R	
Team Leader	1				1		1	R	R			R	R				
Gunner				1	1			R			R						
Ammo Man	1				1			R	R			R					
Team Leader	1				1		1	R	R			R	R				
Gunner				1	1			R			R						
Ammo Man	1				1			R	R			R					
2nd Squad Ldr	1				1		1	R	R			R		1	R	R	
Team Leader	1				1		1	R	R			R	R				
Gunner				1	1			R			R						
Ammo Man	1				1			R	R			R					
Team Leader	1				1		1	R	R			R	R				
Gunner				1	1			R			R						
Ammo Man	1				1			R	R			R					
3rd Squad Ldr	1				1		1	R	R			R		1	R		
Team Leader	1				1		1	R	R			R	R			R	
Gunner				1	1			R			R						
Ammo Man	1				1			R	R			R					
Team Leader	1				1		1	R	R			R	R				
Gunner				1	1			R			R						
Ammo Man	1					R		R	R			R					
Sect TOTAL	15	0	0	7	21	0	10	0	0	0	0	0	0	0	3	0	0
Additional Required						1		22	15		6	15	6		3	4	

Table C Mortar Sect	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino
Sect Leader				1	1		1	R					R	1	R	R

Squad Leader				1	1		1										
A-Gunner				1		R											
Ammo Man	1					R		R	R				R				
Squad Leader				1	1		1										
A-Gunner				1		R											
Ammo Man	1					R		R	R				R				
Squad Leader				1	1		1										
A-Gunner				1		R											
Ammo Man	1					R		R	R				R				
Sect TOTAL	3	0	0	7	4	0	4	0	0	0	0	0	0	0	1	0	0
Additional Required						6		4	3				3	1		1	1

Table D Assault Sect	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino	
Sect Leader				1	1		1	1					R		1	R	
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Gunner				1	1		1	1		1							
Ammo Man	1				1			R	R			R					
Sect TOTAL	6	0	0	7	13	0	7	7	0	6	0	0	0	0	1	0	0
Additional Required								6	6			6	1				1

Table E Company HQ Weapons HQ	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino
CO	M-4					1	1	R	R			R	R		R	R
XO	M-4					1	1	R	R			R	R		R	R
1stSgt	M-4					1		R	R			R				R
CoGySgt	M-4					1		R	R			R	R	1		R
Police Sgt	1				1			R	R			R				

Driver	1				1			R	R			R	R			
Co HQ TOTAL	6	0	0	0	2	4	2	0	0	0	0	0	0	1	0	0
Additional Required								6	6			6	4		2	4
Wpns Plat Cmdr	1				1	1	R	R				R	R	1	R	R
Wpns Plat Sgt	1				1	1	R	R				R		1		R
W HQ TOTAL	2	0	0	0	0	2	2	0	0	0	0	0	0	2	0	0
Additional Required								2	2			2	1		1	2

Table F Co TOTALS	M-16	M-203	M-249	M-9	PVS-7	PVS-14	3X	PEQ-2	VLI	PVS-17B	PAS-13	RCO	Beacon	LBS	PEQ-4	M-24 Mini Bino
1st Platoon	25	9	9	0	11	23	5	23		9	9			4		
Additional Required					9			20	34			34	4		1	5
2nd Platoon	25	9	9	0	11	23	5	23		9	9			4		
Additional Required					9			20	34			34	4		1	5
3rd Platoon	25	9	9	0	11	23	5	23		9	9			4		
Additional Required					9			20	34			34	4		1	5
MG Sect	15	0	0	7	21	0	10	0		0	0			3		
Additional Required					1			22	15		6	15	6		3	4
Mortar Sect	3	0	0	7	4	0	4	0		0	0			1		
Additional Required					6		4	3				3	1		1	1
Assault Sect	6	0	0	7	13	0	7	7		6	0			1		
Additional Required					0		6	6				6	1		0	1
Co HQ	6	0	0	0	2	4	2	0		0	0			1		
Additional Required					0		6	6				6	4		2	4
Wpns HQ	2	0	0	0	0	2	2	0		0	0			2		
Additional Required					0		2	2				2	1		1	2
Co TOTAL	107	27	27	21	73	75	40	76		33	27			20		
T/O and T/E	107	27	27	21	73	75	-	76	-	33	27	-	-	20	0	-
Additional Required					34			100	134		6	134	25		10	27

3. PVS-7 and PVS-14

Every Marine needs an NVG. (73) PVS-7 and (75) PVS-14 are currently allocated by T/E. (34) more PVS-14 are needed to equip every man. Company PVS-14 allocation should be raised from (75) to (109) on the T/E.

PVS-14 allows Marines to retain one eye for unaided observation, peripheral vision and situational awareness. Marines, especially SAW gunners and machinegunners, should have PVS-14 to shoot with PVS-17 or PAS-13. Eventually, all PVS-7s should be replaced with

PVS-14 for all (182) Marines, raising the company PVS-14 allocation to (182) on the T/E. *The Marine Gunner's Conference recommended this as well – (182) PVS-14 to equip every Marine of the rifle company.*

Every Marine needs a helmet mount. *Head strap mounts are useless.* Helmet mounts, NSN 5855-01-441-0401, should be ordered for all NVGs. All attachments – corpsmen, FOs, FACs, drivers, radio operators – need to join with an **NVG** mounted to a **helmet mount**.

4. 3X Magnifier

No specific number is currently allocated by T/E. Company 3X allocation should be (40) on the T/E. *The 3X is heavy and bulky, but is excellent for stationary defensive roles, especially for machinegunners and FOs at long ranges in the desert. The Marine Gunner's Conference recommended (67) – to additionally equip all (27) fire team leaders.*

5. PEQ-2

All weapons except the pistol need a PEQ-2. All M-16s and M-203s need a PEQ-2. All M-249s need a PEQ-2. All SMAWs need a PEQ-2. All M-240G need a PEQ-2 to lay the gun, define sectors, and control fires. *Even with PVS-17, the M-249 should still have a PEQ-2. Even with PAS-13, M-240s need a PEQ-2. The Marine Gunner's Conference agreed.*

Weapons platoon section leaders armed with pistols need a PEQ-2 for hand-held use if not issued a PEQ-4. Every Marine in the company except for six mortarmen needs a PEQ-2.

(76) PEQ-2 are currently allocated by T/E. Allocation should be raised from (76) to (176).

6. VLI Visible Light Illuminator Flashlight

Every rifle in the company needs white light capability. *In MOUT, every rifle needs white light. The Marine Gunner's Conference agreed.*

VLI is a good idea poorly executed – too big, too heavy, and it needs too many batteries. We did not take a single one into Iraq.

The current T/E specifies VLI “as required.” Company VLI allocation should be (134). A smaller and lighter light, capable both hand-held and weapons-mounted, should be fielded.

7. PVS-17B 2.25X Night Vision Sight

(33) PVS-17B are currently allocated by T/E. Systems Command recommends distribution to fire team leaders for mounting on the M-203 as a replacement for the PVS-4.

The Marine Gunner's Conference recommended PVS-17 be issued to automatic riflemen, machinegunners, and SMAW gunners, for a total of (39). PVS-17 is great on the M-249 for defensive positions but not for patrolling. An AT-4 mounting bracket is needed for PVS-17.

SMAW should mount PVS-17. Laser Boresight System can zero PVS-17 to SMAW and AT-4 very accurately. RCO used in line with PVS-14 detracts from usefulness of PVS-17.

8. PAS-13 TWS Thermal Weapons Sight (TWS)

(27) PAS-13 are currently allocated by T/E. Systems Command recommends distribution to automatic riflemen for the M-249. A lighter weight thermal sight, suitable for use with the M-249, should replace the PAS-13 in the infantry company. (6) additional PAS-13 should be allocated for M-240. Company TWS allocation should be raised from (27) to (33) on the T/E.

*The Marine Gunner's Conference recommended that PAS-13 be issued to automatic riflemen and machinegunners, who would then carry **both** PVS-17 and PAS-13.*

PAS-13 is effective for the M-240G but too big and heavy for the M-249. PAS-13 is too bulky to be mounted on individual weapons. It is valuable in the hand-held mode for OPs at the squad level. PAS-13 has poor battery life and cannot be used in conjunction with our lasers.

9. RCO Rifle Combat Optic

Every rifle in the company needs an RCO. *The scope was the favorite technological advancement for the average Marine. The perfect solution to acquire, identify, and discriminate targets at a distance, under poor conditions, and in MOUT. RCO improved marksmanship, improved low-light visibility, and improved BDA. Many stacked RCO with PVS-14 to get a true night capability.*

The T/E currently has no specific number of RCO. RCO allocation should be (134).

10. IR Beacon

All separate units need a multi-pattern IR Beacon. *A must for every unit fire team and up. Enough beacons are needed so both the vehicle and the unit are marked. Lack of different flashing patterns made it difficult to distinguish units on a crowded battlefield. The Marine Gunner's Conference recommended that the platoon sergeant also carry a beacon, bringing the total for a rifle platoon to (5).*

No specific number of IR Beacons are currently allocated by T/E. Company IR Beacon allocation should be (25) on the T/E.

11. LBS Laser Boresight System

(20) LBS are currently allocated by T/E. *Every squad needs the capability to boresight.*

12. PEQ-4

Company leaders need a powerful hand-held laser pointer. *Leaders need something that stands out on a battlefield crowded with PEQ-2 lights.*

ZERO (0) PEQ-4s are currently allocated by T/E. FACs are assigned PEQ-4 on the H&S Company T/E. A rifle-mounted or hand-held PEQ-2 can be used to direct local organic fires, but is not powerful enough to direct supporting direct fire units such as tanks, LAVs, or weapons company vehicles at longer ranges. Small unit leaders without FACs need a hand-held laser to mark targets for CAS.

Ten infantry company leaders need a powerful hand-held laser pointer for illuminating and marking targets, identifying lateral limits and target reference points, and coordinating supporting fires: CO, XO, Weapons Platoon Commander, Mortar Section Leader, (3) Platoon Commanders, and (3) machinegun squad leaders who need the ability to mark when they are attached out to platoons. PEQ-4 allocation should be raised from (0) to (10) on the T/E.

13. M-24 Mini-Binoculars

Key leaders down to the squad level need binoculars. *The RCO does not replace the requirement for binoculars.* Leaders need the flexibility and magnification binoculars provide over a weapon-mounted optic.

The T/E specifies binoculars “as required.” Company allocation should be (27) on the T/E.

14. General OIF Comments on Night Vision Equipment:

Every Marine needs NVGs and a PEQ-2 on his weapon. Every rifle needs an RCO and white light. But...we are strapping too many things on our weapons, making them unwieldy and affecting center of balance and marksmanship. We need to look at the amount of buttons. I question the ability of Marines to master the ever-growing array of equipment. Breakage, resupply, maintenance, and training issues are tremendous and should not be underestimated.