

## CHAPTER 1

# AIMING HIGHER

This rate training manual is designed to help you meet the occupational qualifications for advancement to Gunner's Mate Missile First and Chief. Chapter 2 through 12 deal with the technical subject matter of the Gunner's Mate Missile rating. The present chapter provides introductory information that will help you in working for advancement in rate. It is strongly recommended that you study this chapter carefully before beginning intensive study of the chapters that follow.

### REWARDS AND RESPONSIBILITIES

Advancement in rate brings both increased rewards and increased responsibilities. The time to start looking ahead and considering the rewards and the responsibilities of advancement is right now, while you are preparing for advancement to GMM1 or GMMC.

By this time, you are probably well aware of many of the advantages of advancement in rate - higher pay, greater prestige, more interesting and challenging work, and the satisfaction of getting ahead in your chosen career. By this time, also, you have probably discovered that one of the most enduring rewards of advancement is the personal satisfaction you find in developing your skills and increasing your knowledge.

The Navy also benefits by your advancement. Highly trained personnel are essential to the functioning of the Navy. By each advancement in rate you increase your value to the Navy in two ways. First, you become more valuable as a technical specialist in your own rating. And second, you' become more valuable as a person who can supervise, lead, and train others and

thus make far reaching and long lasting contributions to the Navy.

In large measure, the extent of your contribution to the Navy depends upon your willingness and ability to accept increasing responsibilities as you advance in rate. When you assumed the duties of a GMM3, you began to accept a certain amount of responsibility for the work of others. With each advancement in rate, you accept an increasing responsibility in military matters and in matters relating to the occupational requirements of the Gunner's Mate M rate.

You will find that your responsibilities for military leadership are about the same as those of petty officers in other ratings since every petty officer is a military person as well as a technical specialist. Your responsibilities for technical leadership are special to your rating and are directly related to the nature of your work. Operating and maintaining the ship's missile systems is a job of vital importance, and it's a teamwork job; it requires a special kind of leadership ability that can be developed only by personnel who have a high degree of technical competence and a deep sense of personal responsibility.

Certain practical details that relate to your responsibilities for launching system administration, supervision, and training are discussed in chapter 11 of this training manual. At this point, let's consider some of the broader aspects of your increasing responsibilities for military and technical leadership.

**YOUR RESPONSIBILITIES WILL EXTEND BOTH UPWARD AND DOWNWARD.**-Both officers and enlisted personnel will expect you to translate the general orders given by officers

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into detailed, practical on-the-job language that can be understood and followed even by relatively inexperienced personnel. In dealing with your juniors, it is up to you to see that they perform their work properly. At the same time, you must be able to explain to officers any important needs or problems of the enlisted men.

**YOU WILL HAVE REGULAR AND CONTINUING RESPONSIBILITIES FOR TRAINING.**-Even if you are lucky enough to have a highly skilled and well trained missile launching force, you will still find that training is necessary. For example, you will always be responsible for training lower rated men for advancement in rate. Also, some of your best workers may be transferred and inexperienced or poorly trained personnel may be assigned to you. Or a particular job may call for skills that none of your personnel has. These and similar problems require you to be a training specialist who can conduct formal and informal training programs to qualify personnel for advancement and who can train individuals and groups in the effective execution of assigned tasks.

**YOU WILL HAVE INCREASING RESPONSIBILITIES FOR WORKING WITH OTHERS.**-As you advance to GMM1 and then GMMC, you will find that many of your plans and decisions affect a large number of people, some of whom are not in your division, and some of whom are not even in the weapons department. It becomes increasingly important, therefore, to understand the duties and responsibilities of personnel in other ratings. Every petty officer in the Navy is a technical specialist in his own field. Learn as much as you can about the work of their ratings, and plan your own work so that it will fit in with the overall mission of the organization.

**AS YOUR RESPONSIBILITIES INCREASE, YOUR ABILITY TO COMMUNICATE CLEARLY AND EFFECTIVELY MUST ALSO INCREASE.**- The basic requirement for effective communication is, a knowledge of your own language. Use correct language in speaking and in writing. Remember that the basic purpose of communication is understanding. To lead, supervise and train others, you must be able to

speaking and write in such a way that others can understand exactly what you mean.

A second requirement for effective communication in the Navy is a sound knowledge of the Navy way of saying things. Some Navy terms have been standardized for the purpose of ensuring efficient communication. When a situation calls for the use of standard Navy terminology, use it.

Still another requirement of effective communication is precision in the use of technical terms. A command of the technical language of the Gunner's Mate M rating will enable you to receive and convey information accurately and to exchange ideas with others. A person who does not understand the precise meaning of terms used in connection with the work of his own rating is at a disadvantage when he tries to read official publications relating to his work. He is also at a great disadvantage when he takes the written examinations for advancement in rate. Although it is always important for you to use technical terms correctly, it is particularly important when you are dealing with lower rated men; sloppiness in the use of technical terms is likely to be very confusing to an inexperienced man.

**YOU WILL HAVE INCREASED RESPONSIBILITIES FOR KEEPING UP WITH NEW DEVELOPMENTS.**-Practically everything in the Navy - policies, procedures, equipment, publications, systems - is subject to change and development. As a GMM1, and even more so as a GMMC, you must keep yourself informed about all changes and new developments that might affect your rating or your work. Some changes will be called directly to your attention, but others you will have to look for. Try to develop a special kind of alertness for new information. Keep up to date on all available sources of technical information. And, above all, keep an open mind on the subject of missile launchers and associated equipment. New types of missiles are constantly being designed and tested, and existing types of launching systems are subject to modification. If you look back over the history of missile launchers, you will find that a number of important changes have occurred, and other changes are being made constantly. New missiles have been introduced

and launching systems had to be designed or modified for them. Greater sophistication in missile guidance and control has required greater cooperation between GMMs and FTs. The addition of nuclear warheads to many of the missiles has increased the security problem and aggravated the safety problem. These changes are by no means the only ones that have occurred; they are noted here merely to indicate the variety of changes that can be expected in the field of missile systems and associated equipment.

## **THE GUNNER'S MATE**

The Gunner's Mate (GM) rate was first established in 1797. In May of 1864, General Order 37 established the pay grade of Chief Petty Officer. It was not until 1894, by General Order 409 that the pay grades of third class through first class petty officers were established. The GM at all rate levels became the "jack of all trades" in the ordnance field. As new gun systems were developed the need for special training and a system of shipboard billets became necessary. In July of 1903, General Order 137 established the rate's of Turret Captain first class and chief. From WWI to WWII the GM rate structure changed very little. During WWII two new rates were established; the Armourer and Powderman. The rate structure was changed again in 1947 to three new ratings: the GMM (mount), the GMA (armourer) and the GMT (turret). In 1948 all personnel in the Gunner's Mate rating were combined into one general GM rate. Each member of the GM rating was assigned a job code number which reflected a specific type of weapon or weapon system and was used as a guide for shipboard assignments. In 1958 the pay grades of E-8 and E-9 were established for all Naval ratings. It was not until 1961 that the present GM rate structure was developed.

### **The Gunner's Mate Missile Ratings**

As aircraft performance (speed, maneuvering and altitude capabilities) increased the efficiency of gunfire against them decreased correspondingly. This situation led to the development of a surface to air missile system which became operational in the fleet in 1955. In 1944 the

Navy assigned development of a surface to air missile project to John Hopkins University. This project, known as "Bumblebee", produced the Navy's 3Ts; Terrier, Talos, and Tartar missiles.

The Terrier medium range surface to air missile became the Navy's first operational missile system aboard the USS Boston (CA59) in 1955. The first guided missile ship, the USS Gyatt (DDG-1), was equipped with GMLS Mk 8 and was used as a test frame for evaluating Terrier missiles and never became an operational unit of the fleet.

The long range Talos surface to air missile became the Navy's second operational missile system aboard the USS Galveston late in 1958 and gave the fleet a missile nuclear weapon capability against aircraft.

The Tartar short range surface to air missile was the last of the 3Ts to become operational and was designed to be used aboard DDG and DEGs.

As weaponry changed in types and complexity so did the Gunner's Mate' Rating. When guided missile systems were added to the fire power of the fleet, selected personnel of the general rating of Gunner's Mate were given the responsibility of operating and maintaining the missile launching systems. As the missile system multiplied and became more sophisticated and the working knowledge of electricity and electronics became more extensive, the decision was made to separate the general service rating into three allied ratings. In 1961 the GM rating was split into three groups: the GMG (Guns), the GMT (Nuclear) and the GMM (Missile). Each group is now responsible for maintaining, operating, training and repairing the equipments of a specific type weapon system.

The Missile Gunner's Mate is required to operate and perform organizational and intermediate maintenance on guided missile launching groups, and missile handling equipment; make detailed casualty analyses; inspect and repair electric, electronic, hydraulic, and mechanical systems and servosystems in missile launching systems; and supervise personnel in handling and stowing missiles and supervise wing and fin assemblymen in their duties. To obtain all the skills and technical background necessary for the maintenance, operation, and repair of guided missile launchers, the GMM must have an

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extensive knowledge of hydraulics, be able to use a wide variety of tools and test equipment, and have a working knowledge of electricity and electronics as well as all explosives associated with a surface launched missile.

The separation of the ratings holds true up to and including E-7. At the E-8 and E-9 levels, the GMG and GMM requirements are combined. This means that the E-7 Gunner's Mate M, to be advance to E-8, must be prepared to maintain the conventional weapons. An E-7 GMM, taking an examination for E-8 (GM), will be examined on qualifications expected of a GMG in addition to his own.

The GMM rating can be further subdivided into classes, each class being assigned a code number. The purpose of these codes is to assist in identifying personnel in a rating when a broad definition (such as GMM) is not sufficient to identify his special skill. These are called Navy Enlisted Classification (NEC) Codes. The codes are changed to suit the needs of the Navy. At the present time, all trainees are given NEC code numbers. Some codes are canceled and personnel in them are recoded. For example, GM-0982 was canceled and replaced by GM-0986, Terrier, Mk 4/10. Men assigned that code are specially qualified in the Terrier missile system. A complete list of the codes is in the Manual of Navy Enlisted Classifications, NAVPERS 15105 (latest revision).

### CLASSIFICATION CODES

The NEC Coding system is designed to facilitate management control over enlisted skills by accurately identifying billets and personnel and to ensure maximum skill utilization in distribution and detailing. There are three types of NEC's.

1. Entry Series. These NBC's identify aptitudes and qualifications not discernible from rates alone. They are used to code personnel who are not yet identified strikers or who are in training for change of rating or status. All USN or USNR paygrade E-2 and E-3 personnel, who are not designated strikers, are assigned a Rating Entry NEC of an appropriate rating within the normal path of advancement. Rating Conversion

NEC's parallel Rating Entry NEC's but are assigned only to identify petty officers or identified strikers, who are assigned in-service training for change of rating or status under approved programs. The Entry Series NEC's for our rating are

<u>Entry</u>	<u>Title</u>	<u>Conversion NEC</u>
GMM-0950	Gunner's Mate (M) Basic	GM-0899

2. Rating Series. These NEC's are related to specific general and service source ratings. They are used to identify billet requirements which are not sufficiently identified by rates, and to identify the personnel who are qualified to be distributed and detailed to fill these requirements. The following is a list of the Rating Series NEC's for our rating, showing source ratings, applicable courses, and a brief description of the jobs involved.

#### Priority Number

4 *GM-0984 Terrier Missile and GMLS (MK 9) Maintenance Technician*  
Applicable Course: None

NOTE: No new assignment of this NEC will be made.

4 *GM-0986 Terrier Missile and GMLS (MK 4/10) Maintenance Technician*  
Applicable Course: Terrier Guided Missile Launching System MK 10, Class C (A-1 2 I-0046)

4 *GM-0987 Tartar Missile and GMLS (MK 11) Maintenance Technician*  
Applicable Course: Tartar Guided, Missile Launching System MK 11, Class C (A-121-0043)

4 *GM-9988 Tartar Missile and GMLS (MK 13/22) Maintenance Technician*  
Applicable Course: Tartar Guided Missile Launching System MK 13, (A-1 2 1-0044 )

- 3 *GM-O993 Improved Point Defense Launching System (MK 29 Mod 0) Technician*  
Applicable Course: Under development
- 3 *GM-O997 Talos Missile and GMLS (MK 7) Maintenance Technician*  
Applicable Course: None  
Component NEC: GM-O998  
NOTE: This NEC is assigned to personnel after having satisfactorily demonstrated performance on GMLS MK7.
- 4 *GM-O998 Talos Missile and GMLS (MK 12) Maintenance Technician*  
Applicable Course: Talos Guided Missile Launching System MK 12, Class C (A-121-0042)
- 2 *GM-O981 Ordnance Systems Technician*  
Source Ratings: GMG, GMM  
Applicable Course: Ordnance Systems Technician, Class "C" (Number to be Assigned)  
Component NECs: Any of:  
GM-O873, GM-O876, GM-O877, GM-O986, GM-O987, GM-O988, or GM-O988  
NOTES: (1) This NEC is assigned only to personnel in paygrades E-8 and E-9.  
(2) Satisfactory completion of applicable course is mandatory.  
Administers the test, maintenance, and repair of Guided Missile-Launching System, 5"/54 rapid fire Gun Mounts, and AS ROC Launching System Mk 16 with primary concern for overall systems maintenance: Ensures that tests and interface with other component systems properly reflect readiness of sub-system, system and integrated weapons system; and supervises organization and administration of weapons department.

3. Special Series. These NEC's are not related to any particular rating. They are used to identify billet requirements which are not sufficiently identified by rates, and to identify the personnel who are qualified to be distributed and detailed to fill these requirements. Special Series NEC's may be assigned to personnel in any rating, provided they are otherwise eligible to receive the training involved. It is not practical to present all of the Special Series NEC's in this rate training manual.

### Assignment Priorities

Each NEC has been assigned a priority number from 1 to 8, with priority 1 being the highest and 8 being the lowest. All Entry Series NEC's are priority 1, ensuring their assignment as primary NEC's. Because of personnel concerned (E-2 and E-3), they are always more significant than rates. All other NEC's are in consecutive priority sequence from 2 through 8.

When a man is qualified for two or more NEC's, the priority number determines which NEC is primary and which is secondary. The priorities for each GMM's NEC are shown in the preceding paragraph. If a Gunner's Mate is qualified for an Ordnance System Technician (GM - 0981 NEC) and a Tartar Missile And GMLS Mk 13/22 Maintenance Technician (GM - 0988 NEC), he would be coded GM 0981/GM 0988. His primary NEC is priority 2 and his secondary NEC is priority 4, The fact that one NEC is priority 2 and another is priority 4 does not imply that the priority 2 skill is a higher level skill than the priority 4 skill, Priority numbers are based on the need to retain NEC identification in any given instance and this need varies for each rating.

### TYPES OF ASSIGNMENTS

All ships that have surface to air missiles as armament or ammunition supply ships that carry surface to air missiles and shore activities where missiles are repaired, assembled, tested, and/or stored will have a GMM assigned for duty. Your duties naturally will vary according to your NEC and the type ship in which a Guided Missile Launching System (GMLS) is part of a Surface Missile System (SMS). Some large ships may

carry more than one GML system and require a large number of GMM's. Smaller require fewer personnel. Since the number of GMMs varies according to a type ship, so does the rate level of each ship. The senior GMM aboard a large ship (DLG) could be a E-8 or E-9 where on a small ship (DDG) the senior GMM could be a E-6 or E-7. As senior Gunner's Mate, our enlisted job code number is the primary factor in determining your assignability.

In training assignments ashore GMM's serve as instructors in the Gunner's Mate School Great Lakes, Ill; as item writer's (E-9 Gunner's Mate) at Naval Examining Center, Great Lakes, Ill.; and as a writer of Rate Training Manuals and/or Correspondence Courses at the Naval Training Publication Detachment, Washington D.C., where texts such as this one are prepared. In fulfilling duties in training billets, the knowledge gained afloat will be put to use in preparing training material. Personnel selected for training billets are carefully chosen and are expected to be experts in specific missile systems.

In addition to training billets the GMM can be assigned duty ashore at Naval Weapons Stations where missiles are assembled and tested prior to shipboard loading.

The billets mentioned above comprise a portion of the billets ashore for GMMs. In some instances your primary duties will be military rather than technical or occupational although such assignments are seldom made for personnel in critical ratings. .

- This training manual includes information that is related to both the KNOWLEDGE FACTORS and the PRACTICAL FACTORS of the qualifications for advancement to GMM1 and GMMC. However no training manual can take the place of actual on-the-job experience for developing skill in the practical factors. The training manual can help you understand some of the whys and wherefores, but you must combine knowledge with practical experience before you can develop the required skills. The Record of Practical Factors should be utilized in conjunction with this training manual whenever possible.

- This training manual deals almost entirely with the missile launching systems and associated equipment installed on conventional surface ships. It does NOT contain information that

is primarily related to supply ships, repair ships or tenders, or to submarines.

- Chapters 2 through 12 of this training manual deal with the occupational subject matter of the Gunner's Mate M rating. Before studying these chapters, study the table of contents and note the arrangement of information. Information can be organized and presented in many different ways. You will find it helpful to get an overall view of the organization of this training manual before you start to study it.

## SCOPE OF THIS TRAINING MANUAL

Before studying any book, it is a good idea to know the purpose and the scope of the book. Here are some things you should know about this training manual:

- It is designed to give you information on the occupational qualifications for advancement to GMM1 and GMMC.

- It must be satisfactorily completed before you can advance to GMM1 or GMMC, whether you are in the regular Navy or in the Naval Reserve.

- It is NOT designed to give you information on the military requirements for advancement to PO1 or CPO. Rate Training Manuals that are specially prepared to give information on the military requirements are discussed in the section of this chapter that deals with sources of information.

- It is NOT designed to give you information that is related primarily to the qualifications for advancement to GMM3 and GMM2. Such information is given in Gunner's Mate M (Missiles) 3 & 2 NAVTRA 10199.

The occupational Gunner's Mate M (Missiles) qualifications that were used as a guide in the preparation of this training manual are those promulgated in the Manual of Qualifications for Advancement, NAVPERS 18068-C, Charge 1. Therefore, changes in the Gunner's Mate M (Missiles) qualifications occurring after this change may not be reflected in the information given in this training manual. Since your major purpose in studying this training manual is to meet the qualifications for advancement to GMM1 or GMMC, it is important for you to

obtain and study a set of the most recent Gunner's Mate M qualifications.

### **Studying For The Test**

Trying to read and study every manual or publication related to Navy weapon systems is an unrealistic and inefficient goal. There are many OPs and OD's dealing with ordnance equipments which are used by the GMMs during maintenance and system upkeep. Each missile house of each ship of different classes has a different set of manuals which contain information related only to a specific missile or missile system. If every ship ordered all the OPs and ODs for every surface missile system within the fleet, there would be no room for missiles. The GMM would be firing paper instead of missiles. Since we all have a saturation point which certainly would be exceeded if we tried to study everything, a pamphlet is produced yearly which indicates which reference material is used as sources for examination questions in writing an advancement examination for all rate levels from E-4 thru E-9. This pamphlet, NAVTRA 10052, is available at your I and E office.

**BIBLIOGRAPHY FOR ADVANCEMENT STUDY, NAVTRA 10052 SERIES.**-The "bibliography" is the most important single item when preparing for advancement. This pamphlet is based upon the Manual of Qualifications for Advancement NAVPERS 18068-C, and lists the training manuals and other publications prescribed for use by all personnel concerned with advancement in rate training and writing advancement examinations. Thus, the Bibliography provides-a working list of material for enlisted personnel to study in preparation for advancement examination, and this same list is used by the item writer at the Naval Examining Center. The first few pages of the pamphlet show the military requirements references which apply to' all ratings. This part of the Bibliography is of special importance at the E4/E5 'levels, because separate examinations on military subjects are given locally at those rate levels.

Asterisks which appear throughout the listings indicate the Rate Training Manuals whose mandatory completion is specified by the Advancement Manual or Correspondence Courses that

are mandatory. A mandatory training manual may be completed by (1) passing the appropriate enlisted correspondence course based on the mandatory manual, (2) passing locally prepared tests based on the information given in the mandatory manual, or (3) in some cases, successfully completing an appropriate Navy school. Note that, as is pointed out in the Manual of Qualifications for Advancement, NAVPERS 18068-C, all higher pay grades may be held responsible for the material contained in publications listed for lower rates in their paths of advancement.

**RATE TRAINING MANUALS.**- The rate training and military training manuals are written using the professional and military quals from the Manual of Qualifications for Advancement as a guide. With a few exceptions, sufficient information is presented in these manuals to cover most quals. Obviously some quals, such as those on security, cannot be realistically covered in a rate and military training manual. These type of quals and others covered in basic manuals, such as Blueprint Reading and Sketching, are listed in the Bibliography by chapter and/or article numbers so that personnel taking advancement exams know exactly where to look for information not covered in rate and military training manuals.

Also, keep in mind that some of the test questions may be based on information contained in the GMM 3/2 and Military Requirements 3/2 RTMs because you are also responsible for quals of the lower rates. You can bet that there are some E-5s and E-6s who wish they had given the 3/2 manuals a little more attention before the last advancement exam.

### **The Advancement Examination**

All of the GMM's Advancement Examinations are written by an item writer at the Naval Examining Center, Great Lakes, Illinois. The item writer is responsible for constructing the 120 question professional section of the examinations, someone else usually writes the 30 military questions. The writer has a bank of many items that have been used on previous examinations and he will use many of the items from his bank when he constructs an examination. He will also write some new items.

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The examination questions are grouped by subject matter into categories, or sections. There may be from 5 to 12 sections on a particular test. Each item is carefully checked and re-checked to make sure it is a valid item.

Unfortunately, there is an unavoidable delay built into the examination system since the Bibliography is printed and distributed about one year in advance. For example, the Bibliography for the 1973 exams was printed in the spring of 1972. As soon as the Bibliography is made available to him, the Master Chief at the Naval Examining Center, begins writing the exams for the following year. During this period of time many changes may be made to the reference publications listed in the Bibliography. These changes may invalidate some of the exam questions. However, this will not affect your examination grade.

On the day that you take the advancement exam, the Master Chief at the Naval Examining Center also takes that same test. For your benefit, he thoroughly checks every item on the examination to make sure none are outdated. Any outdated questions that he finds will not be considered when the test is graded. This has the same affect as counting all four answers correct, because the answer you pick for an outdated question is correct, no matter which one you select. Thus, you do not have to worry about test items that contain superseded information.

Two important restrictions are placed upon the item writer: First, his examination must: cover all of the quals, as indicated by the Manual of Qualifications for Advancement, NAVPERS 18068-C, for the particular rate. He may also include questions that cover quals for lower rates within the GMM rating. In other words, when you take the GMMC exam you may have to answer questions that are based upon GMM 3 thru GMMC quals.

Second, his references are restricted to those listed in the Bibliography for Advancement Study, NAVTRA 10052, or the secondary references that are referred to by one of the references in the Bibliography. Lets say, for example, that somewhere in the GMM 3/2 Rate Training Manual, which is listed in the Bibliography, a reference is made to a publication which is not listed in the Bibliography, then that publication is also fair game.

**GRADING THE EXAMINATION.**-The Navywide Advancement Examination is graded by machine and the maximum score is 80 points. Figure 1-1 shows the bell shaped curve that is the basis for advancement examination grading.

After all of the answer sheets for a particular rate run through the machine, the average number of questions correct is assigned a score of 50 (in the middle of the curve). This means

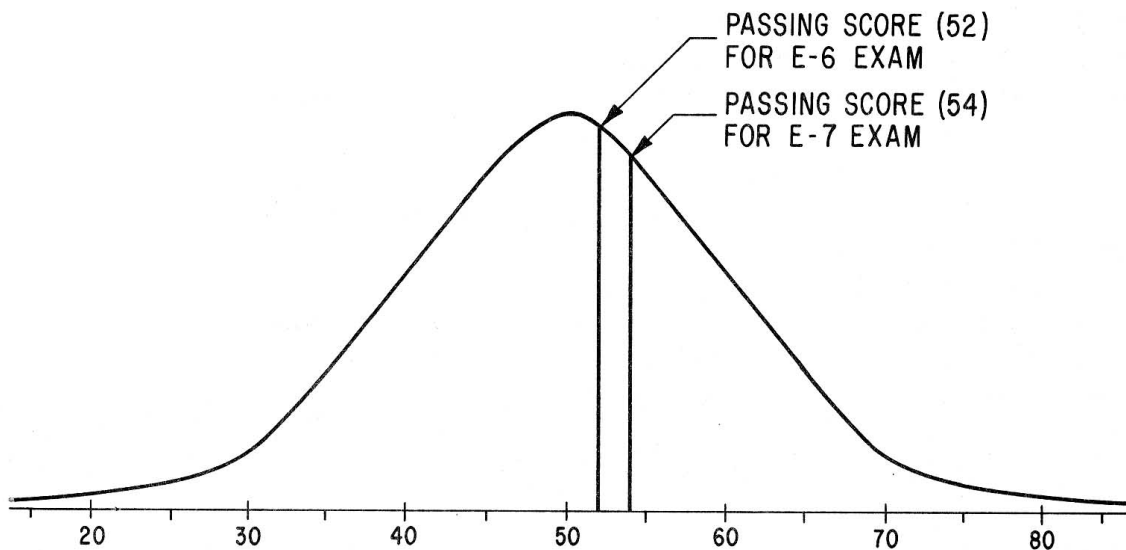


Figure 1-1.—Advancement examination grading curve.

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that the number of correct questions required to obtain a score of 50 will vary from test to test. Your test score then, is influenced by two factors; your own performance on the test and the performance of all of the other GMM's taking that same examination.

Once the test average (standard score 50) has been determined, the passing grade is established. Although special circumstances may require a different method of determining the passing grade, it is normally determined as follows:

- To pass the 3rd Class exam a striker must obtain a standard score of 48 (two points below the average). About 60% of all those taking the exam should pass. .
- Passing the 2nd Class exam requires the man to obtain a standard score of 50 (the examination average). About one half of all those taking the exam should pass.
- To pass the 1st Class exam, a standard score to 52 (two points above average) is required. About 42% of all those taking the exam should pass.
- To pass the Chiefs exam, a standard score of 54 (four points above the. average)-is required. About 34% of all those taking the exam should pass.

Lets say for example, that the average number of questions correct for a particular GMMC exam is 105. Then, 105 questions becomes the standard score of 50 points. For you to obtain a standard score of 54 (passing), you must answer correctly perhaps as many as 113 questions.

Notice that all along we have only talked about the total number of correct questions affecting your test score. Nothing has been said about having to pass each individual section of the exam. Many of us are led to believe that we must at least pass each .section of. the test. Not, so. No numerical grade is even assigned to each section. For profile sheet purposes, a letter is assigned to each section to point out weak areas. This enables you to better prepare for the next exam. Of course, if you miss most of the questions in one section of the exam, it may pull your overall grade down below the passing score, but it is your overall grade that determines whether you pass or fail, not. your performance

on each individual section of the test. Thus, your test grade is determined by the total number of questions that you answer correctly and your relative standing among your peers - nothing else.

**Multiple**

The competitive advancement system, as outlined in the Advancement Manual, NAVPERS 15989, utilizes a combination of factors to accumulate a final multiple for each candidate. The factors, which recognize the candidates knowledge, performance, and seniority, contribute to the final multiple. All personnel in each applicable pay grade, for each rating in the Navy, who have passed the most recent Navy-wide advancement examination are arranged in order of their final multiple, from the highest to the lowest. Advancements are then authorized to fill vacancies on the basis of final multiple achieved.

The final multiple system was revised and became effective with the August 1972 Navy-wide Advancement Cycle. The factors and their associated maximum points comprising the competitive Navy-wide advancement final multiple are as follows:

<u>FACTOR</u>	<u>MAXIMUM CREDIT</u>
Examination Score	80
Performance (Evaluations)	50
Length of service (Years)	20
Service in Pay Grade (Years x 2 )	20
Medals and Awards	15
PNA Points	15

Two substantive changes have been made to the awards factor.

1. Unit commendations will no longer be creditable. Holders of the following awards, who have previously received multiple credit for these awards, may not claim further multiple credit.

- Presidential Unit Citation
- Navy Unit Commendation
- Navy Meritorious Unit Commendation

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- Distinguished Unit Citation (Army)
- Meritorious Unit Emblem Citation (Army)
- Distinguished Unit Citation (Air Force)
- Outstanding Unit Award (Air Force)

2. A letter of commendation awarded to you will be creditable to the awards factor of final multiple. Generally, circumstances which would be the subject of a letter of commendation consist of noteworthy commendable accomplishments beyond the usual requirements of duty, or exceptional displays of energy, judgment, or initiative. You will be credited with one point for each letter of commendation in this category up to a maximum of two points provided:

a. The letter of commendation is signed by a flag officer or officer senior to, and in the chain of command of, your commanding officer/officer in charge.

b. The date of the letter is subsequent to 1 April 1971, and dated prior to the administration date of the Navy-wide examination for which credit is desired.

c. The letter of commendation was awarded to you while in present pay grade, and you have maintained continuous active service in present pay grade subsequent to the date the commendation was delivered: Therefore, if your service in rate is interrupted by reduction or discharge and ensuing broken, service, you will not receive credit for letters of commendation earned prior to the interruption. Also, you will only receive credit for letters of commendation earned while serving in the pay grade immediately below the grade for which you are being examined.

A new factor PNA (passed but not advanced) points, is now included in the final multiple of the competitive Navy-wide advancement system. In February 1972, the U.S. Naval Examining Center started assigning PNA points to all Navy-wide examination participants who passed the examination but were not authorized advancement due to quota limitations. These points are shown on your profile card which is updated during each examination cycle.

PNA points are comprised of two subfactors, Navy-wide examination score and performance mark standing. Individually, both subfactors are

weighted in relation to your standing among all those who participated in your specific examination rate for a given cycle. In the case of the performance mark standing subfactor, your performance mark averages are submitted to the Naval Examining Center and are used as the basis for determining your performance standing in relation to your contemporaries. PNA points are awarded in accordance with the schedule I established for each sub factor as follows:

EXAMINATION SCORE	POINTS
70 thru 80	1.5
60 thru 69	1.0
Passing thru 59	0.5

PERFORMANCE MARK AVERAGE	POINTS
Top 25 percent	1.5
Upper 25 to 50 percent	1.0
Lower 50 to 25 percent	0.5
Bottom 25 percent	0.0

PNA points awarded as a result of previous advancement examination cycles (subsequent to February 1972) will be automatically credited to each individual's final multiple, by the Naval Examining Center. These points will be creditable toward the individual's most recent five of the last six Navy-wide advancement cycle.. Accumulation of the PNA points for an individual candidate is limited to three (3) points (1.5 for exam score, 1.5 for performance) per advancement cycle to a maximum of 7.5 for exam score and 7.5 for performance mark for a total combined maximum of 15 points. In determining the cumulative total PNA points, "the most recent five" includes examinations failed or those where the results were assigned a BUPERS or command requested invalidation or other special category which warrants processing similar to a "fail." The individual, of course, is not awarded PNA points when he fails the test. The "most recent five" does not, however, include examinations in which the individual did not participate (no show). Also excluded are those special categories where fairness to the individual dictates a processing similar to the "no show" category. The procedure used in processing a "no show" accounts for reemployment of the "last six Navy-wide advancement

cycles. This means, that subsequent to the February 1974 advancement cycle, an individual who does not participate in one of the last six Navy-wide advancement cycles may still accumulate the maximum credit of 15 PNA points based upon the five examinations in which he participated. However, should the member fail to participate in two or more of the last six examinations, he cannot possibly accumulate the maximum points authorized for the PNA actor.

The award of PNA points to an individual is contingent upon his participation in an examination resulting in a passed but not advanced status. The crediting of PNA points to the individual's final multiple requires that he participate in a subsequent examination for the examination rate for which the PNA points were awarded him. For example, lets say a GM2 took the GM 1 examination for the first time in August 1972. If he passed the test, then he would be awarded PNA points according to his relative standing in examination score and performance mark average. These points were not considered in his August 1972 final multiple, but they will be added to his multiple on the February 1973 examination. PNA credit is not authorized in cases where the individual's examination rate is other than the rate which constitutes the correct path of advancement for his present rate. Therefore, anyone undergoing rating conversion may not retain PNA points awarded for the rate from which he is converting.

Figures 1-2 through 1-6 show Examination Profile Information sheets as they might be returned to a man who takes several advancement examinations without being advanced.

In figure 1-2, Petty Officer Appleton's profile information reveals that he passed the examination (with a standard score between 60 and 69). Regrettably his overall final multiple was 2.11 below the minimum required for advancement to HT2 as a result of the Series 60 Navy-wide examination. The Series 60 examination was the regular February 1972 Navy-wide advancement cycle. Petty Officer Appleton has been awarded PNA points which, will be creditable toward his final multiple in a future examination. The information on the projected PNA points line indicates that from this Series 60 (S60) examination,

Petty Officer Appleton received an award of 1.0 PNA points for his relative standing on the written examination. Also, he received 1.5 NPA points for performance standing which, in his case, was within the top 25 percent performance-wise of those members who participated in the Series 60 examination for HT2.

Figure 1-3 reveals that Petty Officer Appleton maintained the recommendation of his commanding officer as is evidenced by his participation in the August 1972 (Series 61) Navy-wide examination for HT2. Again he passed the examination and ended up short of the minimum final multiple required for advancement, even with 2.5 PNA points (from the February 1972 exam) which are included in his final multiple of 130.02. The projected PNA points line now reveals that Petty Officer Appleton has been awarded 0.5 for his relative exam score and 1.0 for performance mark average in the way of PNA points from the August 1972 Navy-wide examination.

In figure 1-4, even with 4 PNA points from the February and August 1972 examinations which are now included in his final multiple of 131.52, Petty Officer Appleton is still shy on minimum final multiple.


He has also received an additional award of 2.5 PNA points which will make him very competitive in the next Navy-wide examination.

As projected in figure 1-5 Petty Officer Appleton failed the Series 64, August, 1973 examination. Petty Officer Appleton isn't awarded any PNA points on the projected PNA points line for this examination. Remember! Performance PNA points also only go to those who pass the examination. Petty Officer Appleton still has the 6.5 PNA points awarded him for his participation in the Series 63, 61 and 60 examinations. Notice also that final and minimum multiples are not shown since these multiples are only displayed when the man passes the examination. .

In figure 1-6 Petty Officer Appleton is back on track. He passed the Series 66, February . 1974 HT2 exam. In addition to other multiple factors such as length of service and service in pay grade added to his final multiple score, Petty Officer Appleton has 6.5 PNA points included in his 132.32 final multiple for the S66 exam. If he had passed the S64 exam and picked

GUNNER'S MATE M 1 & C

**DEPARTMENT OF THE NAVY**  
**NAVAL EXAMINING CENTER**  
GREAT LAKES, ILLINOIS



I

FROM: COMMANDING OFFICER

TO: APPLETON CRABBY 919-23-2473 HT3 HT2

SUBJ: EXAMINATION PROFILE INFORMATION  
PROJECTED PNA PTS. S60-1.0/1.5

SERIES/DATE      APC      DCAPC  
60-FEB-72      1234-1236-11

1234-18333

THE INFORMATION PROVIDED BELOW IS A PROFILE OF YOUR RELATIVE STANDING WITH ALL OTHERS IN YOUR RATE IN EACH SUBJECT-MATTER SECTION. THE INFORMATION IS TO BE USED WITH THE SUBJECT-MATTER IDENTIFICATION SHEET FOR THE EXAMINATION SERIES INDICATED. STANDINGS ARE BASED ON OVER 90% RETURNS; NO SIGNIFICANT CHANGE WITH ALL RETURNS IN.

EXAMINATION STATUS	YOUR FINAL MULTIPLE	MINIMUM MULTIPLE REQUIRED	SECTION	1	2	3	4	5	6	7	8	9	10	11	12	PAGE
PASS	127.52	129.63	STANDING	H	E	S	E	A	-	-	-	-	-	-	-	001

COPY TO SERVICE RECORD      CODE INTERPRETATION

S (Superior)= upper 10%  
E (Excellent)= upper 20%  
H (High) 30%


HA (High Average)= upper 40%  
A (Average)= middle  
LA (Low Average)= lower 40%

L (Low)= lower 30%  
P (Poor)= lower 20%  
VP (Very Poor)= lower 10%

181.38-60

Figure 1-2.—Exam Series 60 Profile Sheet.

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**NAVAL EXAMINING CENTER**  
GREAT LAKES, ILLINOIS



II

FROM: COMMANDING OFFICER

TO: APPLETON CRABBY 919-23-2473 HT3 HT2

SUBJ: EXAMINATION PROFILE INFORMATION  
PROJECTED PNA PTS. S61-0.5/1.0 S60-2.5

SERIES/DATE      APC      DCAPC  
61-AUG-72      1234-1236-11

1234-18333

THE INFORMATION PROVIDED BELOW IS A PROFILE OF YOUR RELATIVE STANDING WITH ALL OTHERS IN YOUR RATE IN EACH SUBJECT-MATTER SECTION. THE INFORMATION IS TO BE USED WITH THE SUBJECT-MATTER IDENTIFICATION SHEET FOR THE EXAMINATION SERIES INDICATED. STANDINGS ARE BASED ON OVER 90% RETURNS; NO SIGNIFICANT CHANGE WITH ALL RETURNS IN.

EXAMINATION STATUS	YOUR FINAL MULTIPLE	MINIMUM MULTIPLE REQUIRED	SECTION	1	2	3	4	5	6	7	8	9	10	11	12	PAGE
PASS	130.02	135.68	STANDING	A	HA	A	A	HA	A	-	-	-	-	-	-	001

COPY TO SERVICE RECORD      CODE INTERPRETATION

S (Superior)= upper 10%  
E (Excellent)= upper 20%  
H (High) 30%

HA (High Average)= upper 40%  
A (Average)= middle  
LA (Low Average)= lower 40%

L (Low)= lower 30%  
P (Poor)= lower 20%  
VP (Very Poor)= lower 10%


181.38-61

Figure 1-3.—Exam Series 61 Profile Sheet.

Chapter 1 - AIMING HIGHER

9ND-C-11989

**DEPARTMENT OF THE NAVY**  
**NAVAL EXAMINING CENTER**  
GREAT LAKES, ILLINOIS



III

FROM: COMMANDING OFFICER

TO: APPLETON CRABBY 919-23-2473 HT3 HT2

SUBJ: EXAMINATION PROFILE INFORMATION  
PROJECTED PNA PTS. S63-1.0/1.5 S61-1.5 S60-2.5

SERIES/DATE 63-FEB-73 APC DCAPC 1234-1236-11

1234-15333

THE INFORMATION PROVIDED BELOW IS A PROFILE OF YOUR RELATIVE STANDING WITH ALL OTHERS IN YOUR RATE IN EACH SUBJECT-MATTER SECTION. THE INFORMATION IS TO BE USED WITH THE SUBJECT-MATTER IDENTIFICATION SHEET FOR THE EXAMINATION SERIES INDICATED. STANDINGS ARE BASED ON OVER 90% RETURNS; NO SIGNIFICANT CHANGE WITH ALL RETURNS IN.

EXAMINATION STATUS	YOUR FINAL MULTIPLE	MINIMUM MULTIPLE REQUIRED	SECTION												PAGE	
			1	2	3	4	5	6	7	8	9	10	11	12		
PASS	131.52	135.70	STANDING	E	E	H	E	H	E	-	-	-	-	-	-	001

COPY TO SERVICE RECORD CODE INTERPRETATION

S (Superior) = upper 10%  
E (Excellent) = upper 20%  
H (High) 30%

HA (High Average) = upper 40%  
A (Average) = middle  
LA (Low Average) = lower 40%


L (Low) = lower 30%  
P (Poor) = lower 20%  
VP (Very Poor) = lower 10%

Figure 1-4.—Exam Series 63 Profile Sheet.

181.38-63

9ND-C-11989

**DEPARTMENT OF THE NAVY**  
**NAVAL EXAMINING CENTER**  
GREAT LAKES, ILLINOIS



IV

FROM: COMMANDING OFFICER

TO: APPLETON CRABBY 919-23-2473 HT3 HT2

SUBJ: EXAMINATION PROFILE INFORMATION  
PROJECTED PNA PTS. S64-FAIL S63-2.5 S61-1.5 S60-2.5

SERIES/DATE 64-AUG-73 APC DCAPC 1234-1236-11

1234-15333

THE INFORMATION PROVIDED BELOW IS A PROFILE OF YOUR RELATIVE STANDING WITH ALL OTHERS IN YOUR RATE IN EACH SUBJECT-MATTER SECTION. THE INFORMATION IS TO BE USED WITH THE SUBJECT-MATTER IDENTIFICATION SHEET FOR THE EXAMINATION SERIES INDICATED. STANDINGS ARE BASED ON OVER 90% RETURNS; NO SIGNIFICANT CHANGE WITH ALL RETURNS IN.

EXAMINATION STATUS	YOUR FINAL MULTIPLE	MINIMUM MULTIPLE REQUIRED	SECTION												PAGE	
			1	2	3	4	5	6	7	8	9	10	11	12		
FAIL			STANDING	VP	P	A	HA	VP	VP	-	-	-	-	-	-	001

COPY TO SERVICE RECORD CODE INTERPRETATION

S (Superior) = upper 10%  
E (Excellent) = upper 20%  
H (High) 30%

HA (High Average) = upper 40%  
A (Average) = middle  
LA (Low Average) = lower 40%

L (Low) = lower 30%  
P (Poor) = lower 20%  
VP (Very Poor) = lower 10%

Figure 1-5.—Exam Series 64 Profile Sheet.

181.38-64

**DEPARTMENT OF THE NAVY**  
**NAVAL EXAMINING CENTER**  
GREAT LAKES, ILLINOIS

FROM: COMMANDING OFFICER

TO: APPLETON CRABBY 919-23-2473 HT3 HT2

SUBJ: EXAMINATION PROFILE INFORMATION  
PROJECTED PNA PTS. S66-1.0/1.0 S64-FAIL S63-2.5 S61-1.5 S60-2.5

SERIES/DATE 66-FEB-74 APC DCAPC 1234-1236-11

THE INFORMATION PROVIDED BELOW IS A PROFILE OF YOUR RELATIVE STANDING WITH ALL OTHERS IN YOUR RATE IN EACH SUBJECT-MATTER SECTION. THE INFORMATION IS TO BE USED WITH THE SUBJECT-MATTER IDENTIFICATION SHEET FOR THE EXAMINATION SERIES INDICATED. STANDINGS ARE BASED ON OVER 90% RETURNS. NO SIGNIFICANT CHANGE WITH ALL RETURNS IN.

EXAMINATION STATUS	YOUR FINAL MULTIPLE	MINIMUM MULTIPLE REQUIRED	SECTION	1	2	3	4	5	6	7	8	9	10	11	12	PAGE
			STANDING	A	A	A	HA	E	-	-	-	-	-	-	-	-
PASS	132.32	134.20														

COPY TO SERVICE RECORD

CODE INTERPRETATION

S (Superior) : upper 10%

E (Excellent) : upper 20%

H (High) 30%

HA (High Average) : upper 40%

A (Average) : middle

LA (Low Average) : lower 40%

L (Low) : lower 30%

P (Poor) : lower 20%

VP (Very Poor) : lower 10%

181.38-66

Figure 1-6.—Exam Series 66 Profile Sheet.

up 2.0 PNA points, he would have be authorized advancement from the S66 examination with a final multiple of 134.32.

**ADVANCEMENT OPPORTUNITIES FOR PETTY OFFICERS**

Making chief is not the end of the line as far as advancement is concerned. Proficiency pay, advancement to E-8 and E-9, advancement to Warrant Officer, and advancement to commissioned officer status are among the opportunities that are available to qualified petty officers. These special paths of advancement are open to personnel who have demonstrated outstanding occupational ability, the highest order of leadership and military responsibility, and unquestionable moral integrity.

**Proficiency Pay**

The Career Compensation Act of 1949, as amended, provides for the award of proficiency pay to designated enlisted personnel who possess special proficiency in a military skill. Proficiency pay is given in addition to your regular pay and allowances and any special or incentive pay to

which you are entitled. Enlisted personnel pay grades E-4 through E-9 are eligible for proficiency pay. Proficiency pay is allocated by ratings and NECs, with most awards being give in the ratings and NECs which are designated critical. The eligibility requirements for proficiency pay are subject to change. In general however, you must be recommended by your commanding officer, have a certain length of time on continuous active duty, and be career designated.

**Advancement to E-8 and E-9**

Chief petty officers may qualify for the advanced grades E-8 and E-9 which are now provided in the enlisted pay structure. These advanced grades provide for substantial increase in pay, together with increased responsibilities and additional prestige. The requirements for advancement to E-8 and E-9 are subject to change, but in general include a certain length of time in grade, a certain length of time in the naval service, a recommendation by the commanding officer, and a sufficiently high mark on the servicewide examination. The final selection for E-8 and E-9 is made by a regularly convened selection board.

## Motivation

The Navy has taken great strides in improving its living standards. The food is better and even the pay has become reasonable. These factors fulfill a man's basic survival and security needs, but they are not motivating factors. We have to look elsewhere for factors that will motivate him. When we learn to recognize motivating factors and use them correctly, we will obtain better results and our subordinates will be happier in their jobs. We are all capable of performing "impossible" tasks if motivated properly.

No one has all of the answers to effective management. However, the highest degree of effectiveness is realized when management techniques are based upon the following list of assumptions:

1. People are not lazy, indifferent, uncooperative or uncreative. Work is as natural as play or rest.
2. Tight controls and threats of punishment are not the only means of getting men to work. Men will exercise self-direction and self-control toward objectives to which they are committed.
3. Every man must have a meaningful job. Without meaningful work he is bored and not of much use.
4. Man is a growing, learning animal who craves recognition.
5. Most men learn to accept and to seek responsibility.
6. The average man's intellectual potentials are only partially utilized. Most are capable of a high degree of imagination, ingenuity, and creativity.
7. Man by his nature is gregarious. One of his basic urges is his desire to be an integral part of some group. He must feel that he is an important, contributing member of the group.

Do we, as managers, really consider the needs and desires of our subordinates? Most of us have our own preconceived ideas of what a person's needs are. We try to compare a subordinate's

reaction, to various management techniques, to what we think our own reactions would be under similar circumstances. Thus, we set up a model subordinate, usually based upon ourselves, and we decide to manage according to our model's desires, and treat everyone the same-be consistent. This is entirely the wrong approach. In the first place, no two individuals are alike. We all react differently to different situations. Therefore, a good manager must know and understand his men and be flexible enough to adjust his management techniques according to the individual(s). Flexibility is a key to successful management.

Job assignments should be planned to challenge the ability of each individual. When a man masters one task, make his next one is just a little more difficult. Always keep in mind that, for motivating purposes, succeeding is better than success. For example, operating a control panel during a missile firing exercise is a great challenge for a GMM striker, but once he becomes a proficient operator, his job should be changed to increase his interest. If not, he may become bored and his efficiency as a system operator may decrease. If it's not possible to change his job, explain the reasons why. Encourage competition between strikers by using a different striker on a control panel during a firing exercise. If a GMM striker is stationed outside of a missile launcher system during firing exercise, make sure that he also has an opportunity to try the job of a control panel operator. Each subordinate must be assigned some challenge no matter how large or small. Use any challenge you may think of to keep strikers interested. When a challenge is accepted by a striker, assignment of responsibility should follow. If a striker shows good leadership among other strikers encourage him by asking opinions about daily evolutions. in which they are involved and also encourage group opinions prior to and after training sessions or training exercises. Occasionally examine your management techniques and keep an open mind for new and useful methods. A good idea from a striker may make your job easier. Always listen to your "missile gang" and respect their opinions.