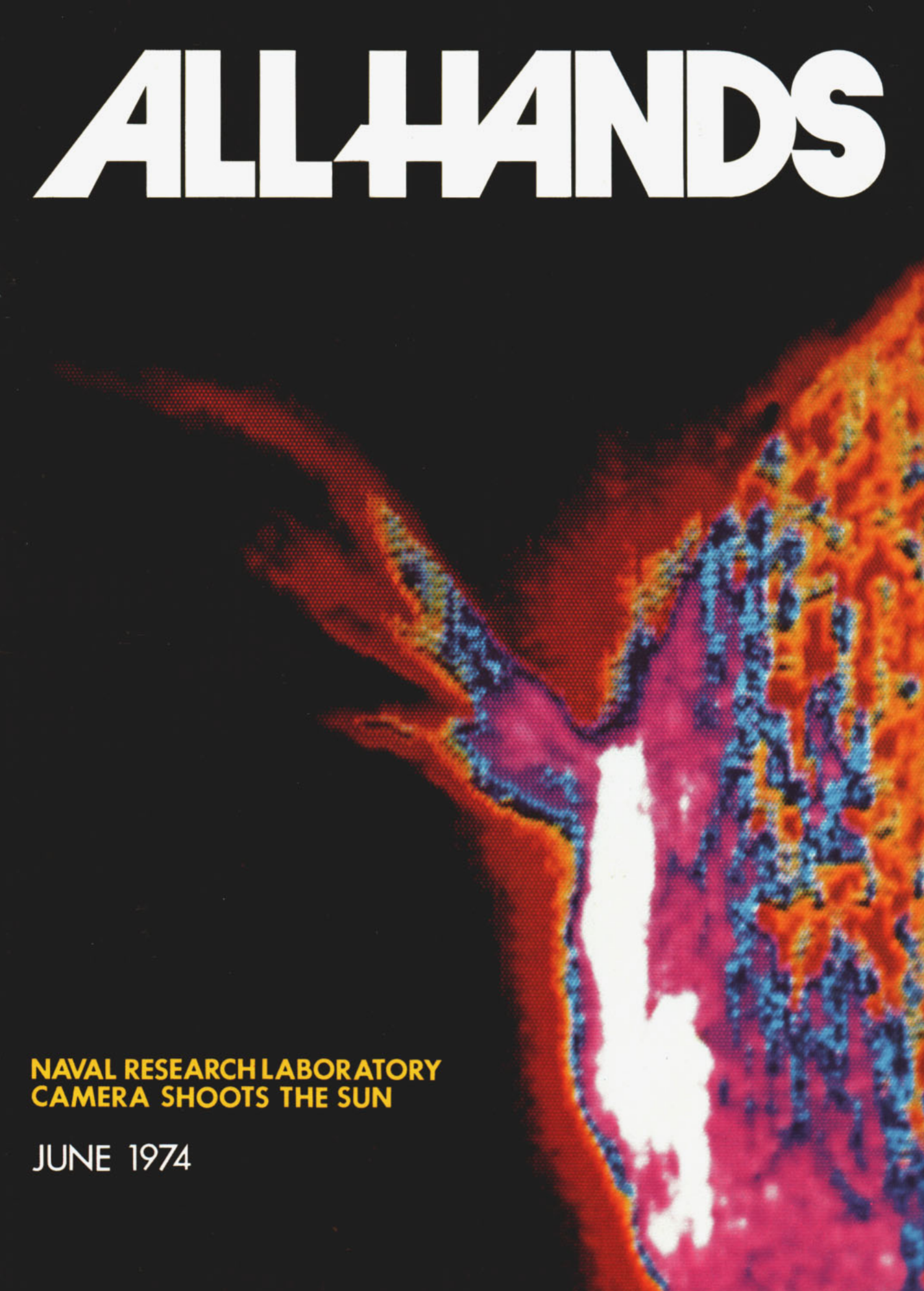
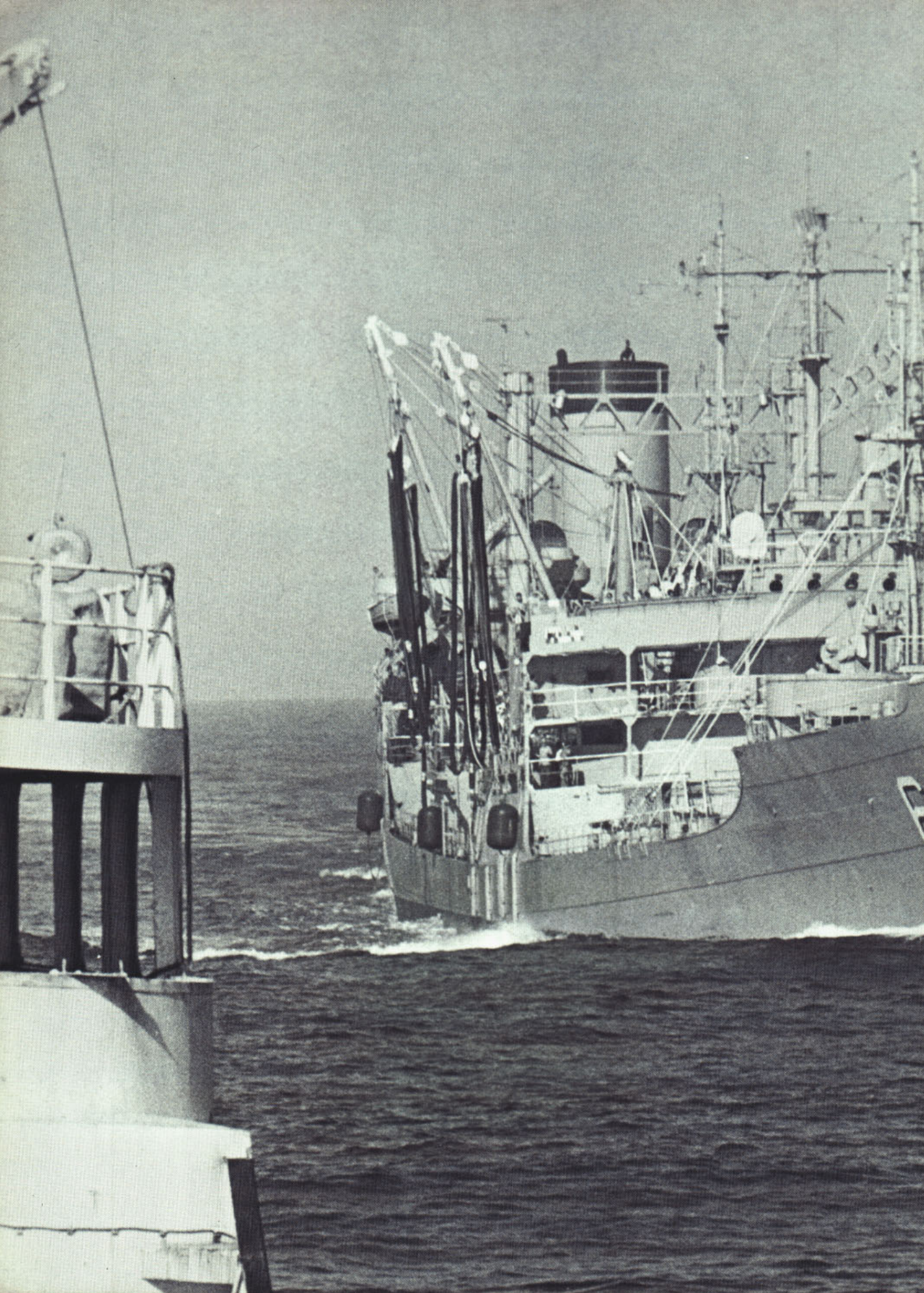
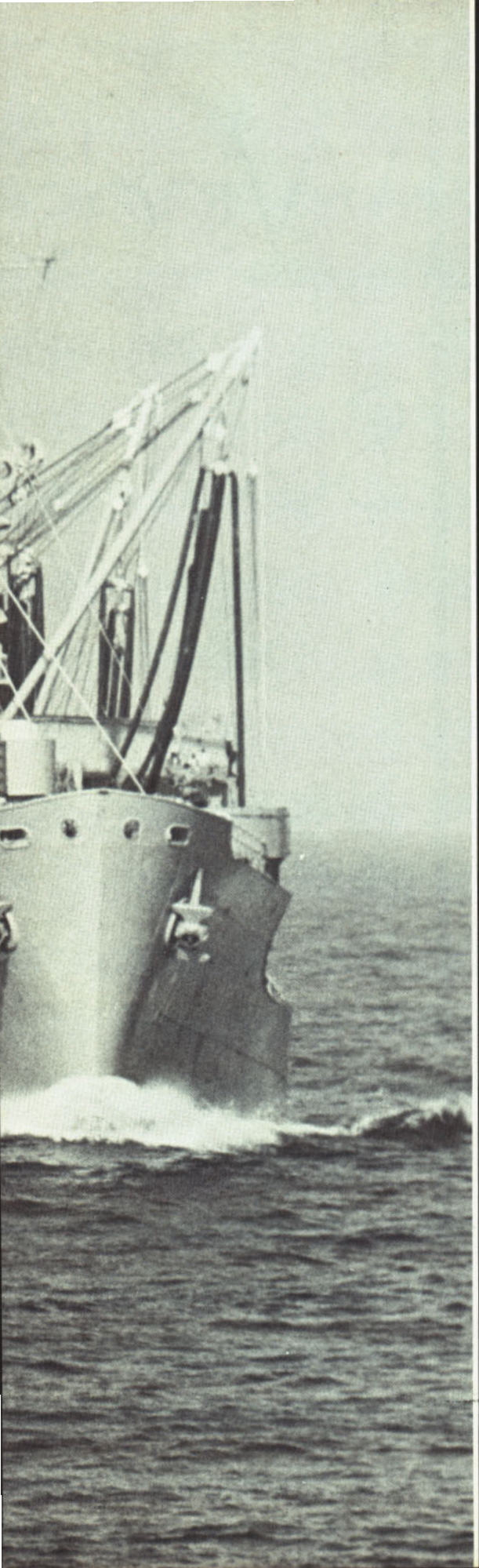
ALL HANDS



NAVAL RESEARCH LABORATORY
CAMERA SHOOTS THE SUN

JUNE 1974





ALL HANDS

MAGAZINE OF THE U. S. NAVY — 51st YEAR OF PUBLICATION

JUNE 1974 NUMBER 689

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FRONT COVER: Large eruption of the sun's atmosphere taken by Skylab astronauts using a special instrument devised by Naval Research Laboratory scientists known as a spectroheliograph. This color isophote was electronically processed from the original black and white (taken in the light of ionized helium) which can only be taken in space. For the story of NRL's role in solar research see the article on page 30.

BACK COVER: Photo of huge solar eruption taken by Skylab astronauts with NRL's Extreme Ultraviolet Coronal Spectroheliograph.

AT LEFT: The oiler USS Severn (AO 61) comes alongside the commercial tanker SS Erna Elizabeth to take on fuel. Photo by PH2 T.L. Vann.

Fair Winds & Following Seas

Admiral Zumwalt Retires As Chief of Naval Operations

Admiral Elmo R. Zumwalt, Jr., the 19th Chief of Naval Operations, will leave that post this month. He took over on 1 Jul 1970 from Admiral Thomas H. Moorer, who was appointed Chairman of the Joint Chiefs of Staff. At 49, ADM Zumwalt was the youngest officer ever to hold the CNO post. Law prohibits reappointment and he will retire from the Navy after more than three decades of dedicated service.

During his tour as CNO, ADM Zumwalt has devoted his energies in two main areas so that the Navy can meet its commitments to the free world today and in the future. He has consistently advocated the development and construction of new and modern ships, aircraft and weapons. And, he has placed equal emphasis on recruiting and retaining qualified personnel needed to operate this modern Navy. In order to achieve these goals he has brought about numerous changes in the naval establishment. For a rundown on his efforts to bring about improvements in the operating fleet, in technical equipment and innovative programs for their maintenance, see the report on the highlights of the last four years which appears on the following pages.

The other main problem facing CNO as he started in his new assignment was to continue to maintain the Navy at its required manpower strength.

Shortly after becoming CNO, ADM Zumwalt began expressing his personnel objectives in a series of Navywide messages, nicknamed Z-Grams. In Z-2, he stated, "No other problem concerns me as deeply as reversing the downward trend of Navy retention rates. I am committing myself to improving the quality of Navy life in all respects and restoring the fun and zest of going to sea."

He added that he intended to "expand the avenues through which young officers and enlisted men and women can express their views and to guarantee consideration of these views at the highest level."

Communication with people was to be the name of the game, and that undoubtedly became his most effective, and most popular, means for improving Navy life and retention figures. A steady flow of some 120 Z-Grams, numerous pilot programs and Retention Study Groups built up a strong communication link with Navy commands around the world.

A most prolific generator of change has been the Retention Study Groups (RSGs) initated also in Z-2 (see ALL HANDS, Aug 1972). These informal discussion groups of Navy men and women from all parts of the Fleet represent certain cross-sections and special interest areas. They continue to meet for one-week periods in Washington, D. C., working to uncover specific problems and arriving at possible, though detailed, solutions. The findings of each of the on-going RSGs are presented to CNO himself, and other senior flag officers, usually in hour-long briefings.

ADM Zumwalt has insisted that *all* RSG recommendations be carefully considered, no matter how trivial some of the recommendations might appear. After review and consideration, the briefings are followed by action, often in the form of pilot programs. Generally, study group recommendations are sent to cognizant offices and bureaus for full consideration and a plan of action.

The first Retention Study Group, begun on 20 Jul 1970, was comprised of aviation officers and was to be simply the first of six study groups drawn from major type commands. It created so much interest in the Fleet that more groups were planned for enlisted men and women. Beginning with the sixth RSG, ADM

Zumwalt invited the wives of participants to join and they were included as actual participants in several RSGs.

Over 30 RSGs have been held to date, including groups for submarine officers; service force enlisted members; minorities; critical enlisted ratings (such as BTs and MMs); and destroyer and mine force personnel. These have produced hundreds of recommendations, some 65 per cent of which have been adopted. Among them:

- Ships returning from extended deployment are to go "cold iron" for 30 days (Z-50), and not less than 50 per cent of the crew of ships returning from overseas are to be granted liberty during this stand-down period.
- Z-9 established a meritorious advancement system to PO1 and CPO.
- Most ships are in six-section watches in port (Z-25).
- All hands are permitted to have civilian clothes on board (Z-68, 92).
- Many education programs were established or expanded, for example: Project BOOST is now available to an increasing number of enlisted personnel with officer career potential, ADCOP billets increased, new NROTC units established at several more universitities to reach a broader segment of the population, the CNO Fellowship and the CNO Scholarship programs for officers were initiated.

Not only the active Navy man and woman are beneficiaries; Navy wives and dependents have also gained from RSG suggestions. For example:

- The Dependent Charter Flight Program was undertaken (Z-6) as an interim measure.
- A wives' ombudsman is now established at every base, allowing wives to present complaints, air their viewpoints and submit suggestions to COs for improving Navy family life (Z-24).
- Navy wives can attend classes at the Naval Postgraduate School on a space-available basis.
- Wives now provide input on preliminary design of Navy housing.

It was in Z-57 that ADM Zumwalt called for the elimination of certain abrasive and demeaning restrictions in such areas as hair grooming; he authorized the wearing of neat working uniforms to and from work and in commissaries, exchanges, dispensaries, etc.; and the granting of overnight liberty. At the same time, he emphasized the need for all hands to demonstrate maturity and judgment in retaining high standards of appearance.

A most popular method of communicating with

commands and with people has been through close contact, that is, by ADM Zumwalt's many personal visits to bases and deployed ships around the world. These tours, "general indoctrination and on-site inspection of current operational procedures," have clearly allowed ADM Zumwalt to meet eyeball to eyeball with men and women, officers and enlisted, and hear them out firsthand.

A typical visit made to WestPac in 1972 lasted three days and involved 17 ships and at least 20,000 men. Visits of this kind helped boost communication in the Fleet, making the new program work.

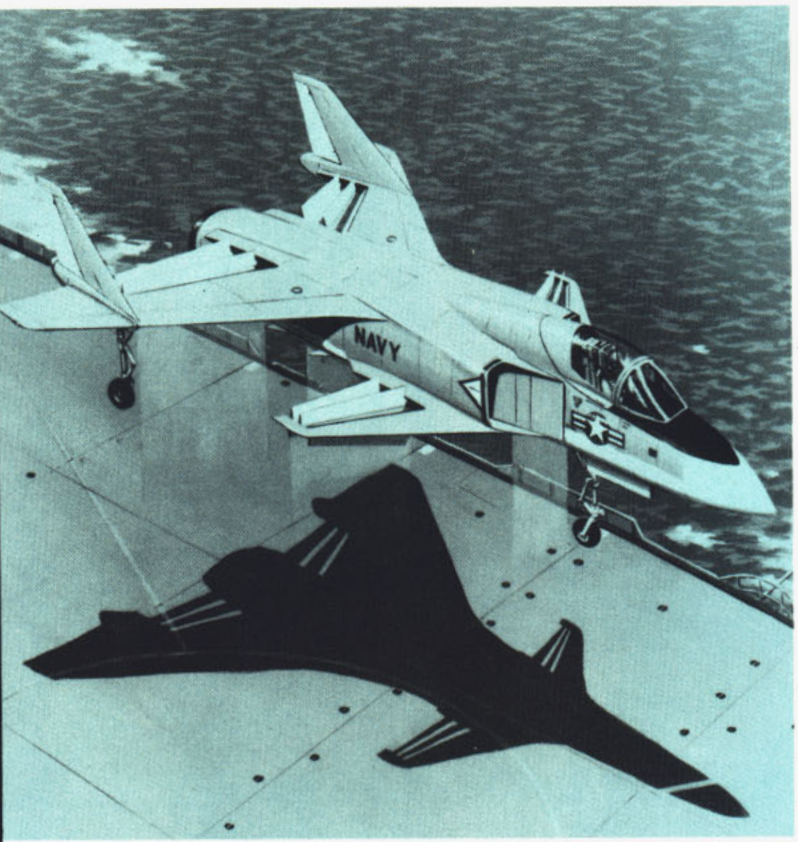
Recognizing the tremendous reservoir of knowledge and experience among chief petty officers, Z-23, in September 1970, announced the establishment of the CPO Advisory Board to the CNO, to serve as a sounding board for ideas and proposals of interest to enlisted men and women. It was followed one year later by the Master Chief Petty Officer of the Command (MCPOC) Program (see ALL HANDS, Sep 1971). Z-95 established MCPOCs at 23 Fleet, force and major commands and, in conjunction with already-established Senior Enlisted Advisors at smaller commands, further strengthened the line of communications.

In the process, a CNO Master Chief Petty Officer Advisory Board was created. It consists of the Master Chief Petty Officer of the Navy and the MCPOCs; the latter have recently been redesignated MCPOFs— Master Chief Petty Officers of the Force or Fleet. This board meets whenever the CNO calls them together, generally about every six months.

Better communications also prompted Z-48 in October 1970 — this initially created the office of the Navy Ombudsman within the Bureau of Naval Personnel. All Navy people can turn to this office for help on matters concerning conditions of service and personal affairs. The Ombudsman office also provides data, based on its contact with Navy people, which serves to initiate programs or modify existing ones.

A corollary of CNO's concern for retention and improvement of Navy life has been the rights of individuals. This concern led to the so-called "People programs." The basic objective, he said in Z-93, is ". . . to instill at all levels an attitude which clearly recognizes the dignity and worth of each individual and creates an environment in which every officer and enlisted man will be treated with respect and accorded the trust, confidence and recognition each human being wants and deserves."

This statement is demonstrated in the many programs he initiated for junior officers and petty officers. Among them:



• LCDRs now act as CO or XO of certain aviation squadrons (Z-37) and in some cases department head billets are lowered.

• Line officers in the grade of LCDR and below are eligible to compete in annual shiphandling contests (Z-31).

• Junior officers are permitted to apply for early augmentation (Z-79) and maximum below-zone promotion limits to LCDR through CAPT were increased to 15 per cent (Z-19).

• Petty officers are permitted to hold certain collateral duties previously given only to officers (Z-14).

• Warrant officers and senior petty officers are authorized to handle the afloat responsibilities of communications watch officer and registered publications custodian (Z-61).

• Encouragement to assign warrant officers and senior petty officers as quarterdeck watch officers in port was given in Z-72.

• The warrant officer program was opened to enlisted men in the top four pay grades by Z-81.

Another important aspect of the people programs deals with race relations and equal opportunity. In November 1970, ADM Zumwalt appointed a Black officer to his staff as Minority Affairs Officer (see ALL HANDS, Apr 1971). In addition, he met with minority officers, enlisted men and their wives.

"Prior to these meetings," ADM Zumwalt said, "I was convinced that, compared with the civilian community, we had relatively few racial problems in the Navy. However, after exploring the matter in some depth . . . I have discovered that . . . we do have problems.

"What struck me more than anything else," he said at that time, "was the depth of feeling of our Black personnel."

The admiral came away convinced the keys to the problem were, first, in opening new avenues of communication with all minority groups to learn what and where the areas of friction are. Second, development of a greater sensitivity to the problems of minority groups by everyone in the Navy in order to more effectively solve them.

A result of the November 1970 meeting with minority personnel was Z-66, "Equal Opportunity in the Navy," which was issued the next month. It instigated several minority-related changes and programs aimed at putting the key solutions into practice. It also created, at the local command level, a Special Assistant for Minority Affairs at every base, station, aircraft squadron and ship. These have since been replaced by Human Relations Councils, which were modeled after

the time-tested Recreation Councils.

The spirit of ADM Zumwalt's minority affairs program was set down in Z-66: "Ours must be a Navy family that recognizes no artificial barriers of race, color or religion. There is no Black Navy, no White Navy — just one Navy — the United States Navy."

Significant action was also taken in January 1971 when ADM Zumwalt established, additionally, an Advisory Committe for Race Relations and Minority Affairs. Its purpose is to help develop and monitor actions in minority-affairs areas. A most noticeable accomplishment of this group was the preparation of the Navy's Charter on Race Relations and Equal Oportunity. It set forth five basic goals to achieve an efficient naval organization and true, equitable treatment for all members of the naval community and it also identified specific tasks for relevant Navy agencies.

One Program, UPWARD (Understanding Personal Worth and Racial Dignity), is designed to allow each of the 10 to 15 seminar participants to learn, discuss and exchange ideas about racial, cultural, social and economic differences between people. Each group is made up of officers and enlisted men and women of every background. Everyone in the Navy will eventually attend a race relations seminar.

ADM Zumwalt has also worked to give Navy women greater opportunity by opening all enlisted ratings and staff corps branches, including the Chaplain, JAG, Medical and Civil Engineering Corps, to them. During the past four years, the number of women in the Navy has risen from 6,000 to over 15,000. (For more on women in the Navy, see the special issue of ALL HANDS devoted entirely to this subject, July 1972.)

Looking at the future as far as ships and material are concerned, ADM Zumwalt said recently, "Current programs, if carried to fruition, will result in a gradual increase in ship force levels and . . . we will begin to enter the ascending portion of the assessment curves and finally realize the payback we envisioned when the modernization program was begun."

How successful have ADM Zumwalt's personnel and material changes been? The highlights of innovations in the operating force have been covered on the preceding pages. In the past few years the U. S. Navy has been revitalized with new and modern equipment in order to better meet its commitments to the free world. And, in a recent address to U. S. Naval Institute members, ADM Zumwalt noted that today the Navy is meeting its recruiting quotas and that first-term reenlistments have jumped from 10 to 23 per cent. "This is what the changes were all about," he said.

ADM Zumwalt congratulates Wife of the Year.

Changes in The

Artist concept of new design.

In his four years as CNO, Admiral Zumwalt has promoted many changes in an effort to modernize the Navy's operational forces and hardware. here are highlights of what he has done in this area.

During the first 60 days as CNO he conducted a detailed study to assess the Navy's strategic position, for presentation to the Secretaries of the Navy and Defense. "Project Sixty," as it was called, looked at trends in international politics and economics, world trade, sources of critical raw materials and defense fiscal expectations. It also identified critical deficiencies which effected the balance of naval power between the U.S. and the Soviet Union.

An important result of the Project Sixty Study was the emphasis placed on the Navy's four basic and interrelated missions:

- Strategic Deterrence
- Projection of Power
- Sea Control
- Overseas Presence

Another result of Project Sixty has been a massive modernization of Navy ships, aircraft and weapons. Basically, the program has taken three forms: (1) The speed-up of research and development in order to find new weapons. (2) Laying-up of old ships in order to save operating and overhaul costs, and putting this money into new construction. (3) The "Hi-Low balanced mix" concept, that is, purchasing a few highly effective ships and aircraft (such as CVNs, SSNs and the F-14 aircraft) while at the same time developing new classes of low cost ships (such as the patrol frigate and sea control ship).

A few of ADM Zumwalt's modernization changes are:

• *CVN-70.* He has successfully supported construction of CVN-70 (the Navy's fourth nuclear powered carrier) by stressing the need for nuclear powered carrier task forces brought on by reduced carrier force levels. CVN-70 will be part of the nuclear task forces that will be the core of the Navy's tactical air capability for the remainder of this century.

• *CV Conversions.* Due to the reduction in CVA/CVS levels he emphasized development of the concept of providing carriers with both tactical air and ASW capabilities. The concept was proved successful aboard USS *Saratoga* and, consequently, a program to convert all attack carriers to the multipurpose CV configuration was initiated.

• *LAMPS.* Recognizing the need for greater helicopter capabilities in destroyers, he directed modification of 10 H-2 utility helicopters to the Light Airborne Multi-Purpose System (LAMPS) configuration and the conversion of 10 guided missile frigates to test them (see ALL HANDS, June 1972, p. 46). These tests showed that the ships' ASW/surveillance capability was significantly improved and the LAMPS modification was extended to include many more ships and aircraft.

• *VSTOL.* CNO encouraged development of new technology in Vertical-Short Take-Off and landing (VSTOL) aircraft which resulted in the Thrust Augmented Wing (TAW) prototype program. VSTOL offers the possibility of a breakthrough because of its great flexibility and its ability to operate from several types of ships.

• *Surface Effect Ship (SES).* Under ADM Zumwalt's guidance, two 100-ton SESs are now being tested. The SES, riding on a cushion of air at more than 80 knots, may revolutionize naval warfare.

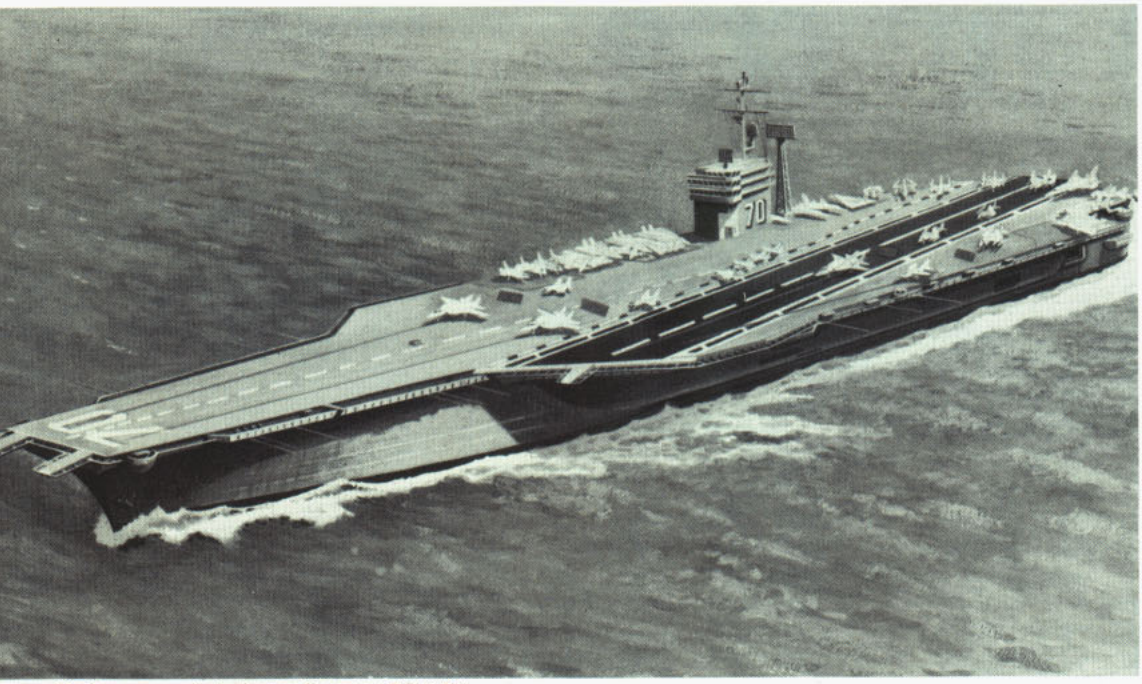
• *Guided Missile Hydrofoil Patrol Craft (PHM).* A cooperative NATO program, the PHM was designed to free heavier, more capable destroyers for other duties at sea.

In a further effort to improve "the quality of Navy life," ADM Zumwalt created several programs in the operational forces aimed at reducing sea tours and thus family separations, while meeting operational commitments.

In late December 1970 he approved a plan to expand the program for homeporting ships and carrier task forces overseas. This move reduces family separations in two ways. First, by allowing Navy dependents to move overseas with their sponsor. Second, by-freeing more CONUS ships from long overseas deployments. Other benefits of overseas homeporting are decreased recruiting efforts through increased retention, and helping the Navy meet its international obligations with greatly reduced forces, at lower cost.

The Fleet Maintenance Assistance Group (FMAG) concept was also initiated by ADM Zumwalt to reduce family separations. Basically, it improves sea-shore rotation for critical ratings by creating almost 7000 billets ashore for them. The knowledge, experience and skills of personnel in these billets are used in support of Fleet maintenance and readiness.

Operational Forces



Nuclear-powered attack aircraft carrier (CVAN 70).

The length of sea tours in general has been reduced also. In February 1971 Z-75 announced a maximum sea tour of six years for all enlisted personnel. They have since been reduced to a maximum of four years and will eventually be down to a rotation pattern of three years ashore and three at sea.

The size and appearance of the U.S. fleet is changing. There will be a projected 508 ships in the Navy at the end of FY 75. Among those ships in the Navy of today and tomorrow will be many of the kind of ships promoted by CNO and his predecessors. The next twelve months will see the Navy gaining 19 ships, including one nuclear powered carrier; the first of the new DD-963 (*Spruance*) class destroyers; three DEs and two DLGs; a new nuclear powered DLGN (*South Carolina*); the first of an entirely new amphibious class ship (USS *Tarawa*, LHA-1); two hydrofoil patrol boats; and six nuclear powered submarines (see ALL HANDS, May 1974).

In all of the new ships, and in many existing ones, habitability has become an important consideration. Living and working spaces are being designed or reworked to increase crew comfort and morale. This includes crews' lounges, closed circuit TV on many ships, a radio tape service for all ships, more comfortable living spaces, and more and better equipped shipboard recreation facilities.

A new class of hydrofoil.

(Next month: Look for a report on the incoming Chief of Naval Operations, Admiral James L. Holloway, III, in the July issue of ALL HANDS.*)*

Navy Civilians Around the 1/3 of the Navy Team

Down through the 199 years of the Navy's long life, there has been one special ingredient that has accounted for its growth and accomplishments. That one special ingredient can be identified as teamwork. The following article is about those members of that team whom we don't cover regularly in ALL HANDS *– the civilians who work for the Navy. The report is based, in part, on an interview with the Director of Civilian Manpower Management in the Department of the Navy, Lloyd Grable, who has chalked up more than two decades of work for the Navy in his civil service career, and is now charged with the overall management of the Navy Department's civilian personnel system under the Assistant Secretary of the Navy for Manpower and Reserve Affairs. More information, plus photographs, came from activities and commands at numerous geographic locations where the Navy's military/civilian team is on the job. Here's our report.*

Lloyd Grable, Director of Civilian Manpower Management in the Department of the Navy.

The Navy team consists of considerably more than 11 men on a football field. It is, in fact, 921,000 men and women of whom roughly about one-third are civilians. Why have a combined military-civilian team to carry out the Navy's mission? The answer is the same one that accounts for a championship football team: the combined efforts of each of the members produces results which exceed the total effect the players could have achieved by working separately.

This is hardly news. The effectiveness of such an arrangement has been demonstrated since the days of the privateers (privately owned ships) in the American Revolution which teamed up with George Washington's Navy to harass British shipping on the high seas. After Congress provided, in 1794, for the construction of six frigates for the newly established Navy, it was Joshua Humphreys, the first "Naval constructor" who was to oversee their construction. For many years subsequent to 1794, much of the Navy's shipbuilding was done in government Navy yards by

World

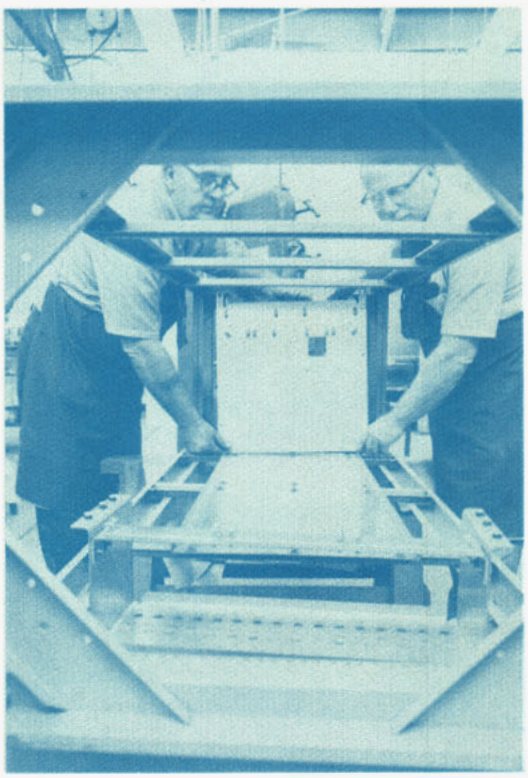
Clockwise from far left: A worker at the Mothball Fleet, James River Reserve Area; some jobs at Norfolk Naval Base call for fancy footwork; welder at the San Diego Navy Public Works Center; electronics technician at Point Mugu; Navy chief seems to be pleased with the work of this civilian employee.

government civilian employees. They were managed by technically trained officers of the Naval Construction Corps who had practical experience in their field.

The occupations of the civilian team members, however, have changed in recent years. The craftsman and laborers who once formed the larger part of the civilian work force are now a minority. (Navy ships are now built in commercial shipyards.) An increasing portion of the Navy's civilians are now professional and technical workers. About 10 per cent, in fact, fall into two categories — engineering and sciences.

How does this military-civilian combination work? The Department of the Navy consists of: (1) the Operating Forces of ships, aircraft and Marine combat units — which make up the seagoing component, and (2) the supporting Shore Establishment. The sole mission of the latter is to support the former — that is, *to support the Fleet.* The Operating Forces are practically 100 per cent military manned, to carry out the Navy's mission in support of national defense.

In the Shore Establishment, top management (under the Secretary of the Navy) is military. Other



positions in the Shore Establishment are military for purposes of sea-shore rotation, for training, to ensure combat readiness, to provide a required military background, and to man positions at remote locations where civilians are not readily available. The rest of the Shore Establishment is made up of the civilian members of the Navy team. In addition, some manpower requirements are met under private contract.

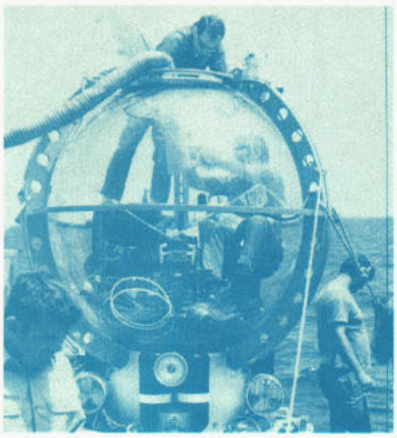
For example, some 60,000 civilian shipyard workers do the majority of our ship overhaul and repair work. These Navy shipyards provide a direct response to Fleet needs in ships.

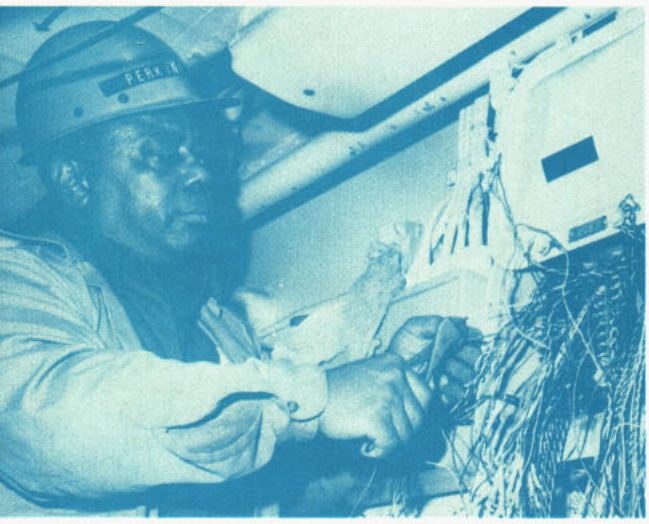
Here are some more facts that should be of interest to you:

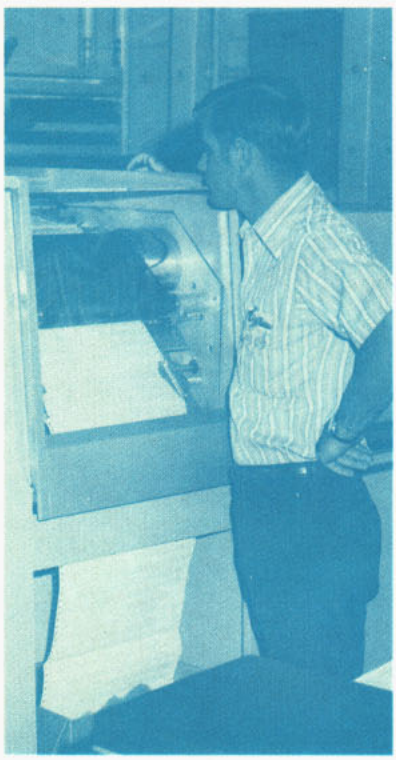
• Approximately one-half of the Navy's civilian workers have served at one time or other on active duty in the armed forces. They know, therefore, what it means to stand watch and to be on call even during off hours.

• The office of Naval Research, the Naval Ordnance Laboratory, the Naval Research Laboratory, the Naval Electronics Laboratory and similarly oriented scientific and technical shore installations are overwhelmingly staffed by civilians as are several major commands. (The Naval Material Command is about 95 per cent civilian.) While their primary mission is to keep the Navy abreast of modern technology, their work frequently is given applications which improve everyday living, and has an impact on the whole world community.

• With civilians serving as a large percentage of the work force, our Naval Air Rework Facilities overhaul and update our aircraft; our various type of ordnance and weapons stations do work on guns, ammunition, and other weapons systems components; and our Public Works Centers perform maintenance on real property and associated equipment. A similar situation exists in our supply warehouses, stock control points,







Clockwise from above: Plumbers and pipefitters at the San Diego Navy Public Works Center; Hunters Point Shipyard worker installs wiring for USS Ranger's 500 telephones; computer programmer at Point Mugu; employees work on cabinet to house electronic components at San Diego Public Works; scene of Norfolk Naval Base with Navy's 80-ton diesel engines in foreground; engineers at Naval Civil Engineering Laboratory, Port Hueneme.

computer complexes, and other nonindustrial activities.

• Many who chart the seas are civilians. There are civilian education specialists on the Navy team, and even civilians engaged in Navy recruiting. You will also find them in telecommunications, meteorology, oceanography, and medicine, to name but a few.

• A small number of civilian employees even go to sea for short periods in Navy ships. They are assigned to evaluate systems with which the ship is equipped, or to serve as members of indoctrination teams on new equipment or technology. The crews that man the USNS ships of the Military Sealift Command are "civil marine personnel" who receive their paychecks from the government.

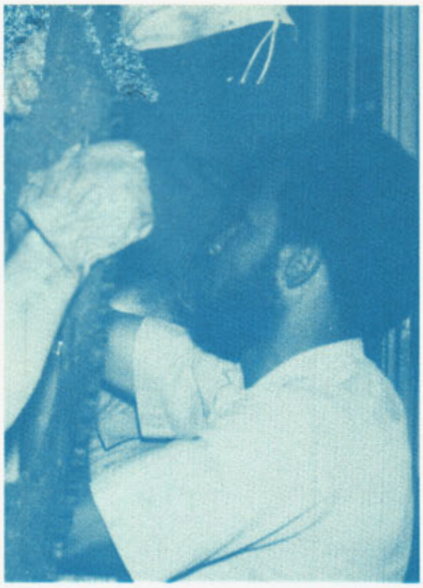
Some of the members of the civilian work force have jobs that take them into areas well outside the confines of an office or the laboratory or the shipyard.

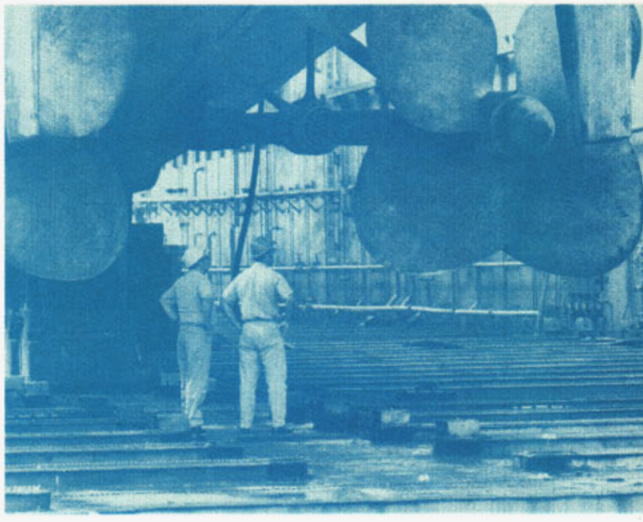
• For example, the first man on the moon was a civil service employee. Although he was employed by NASA, the Navy takes pride in the fact that he received his initial training on active duty as a naval aviator.

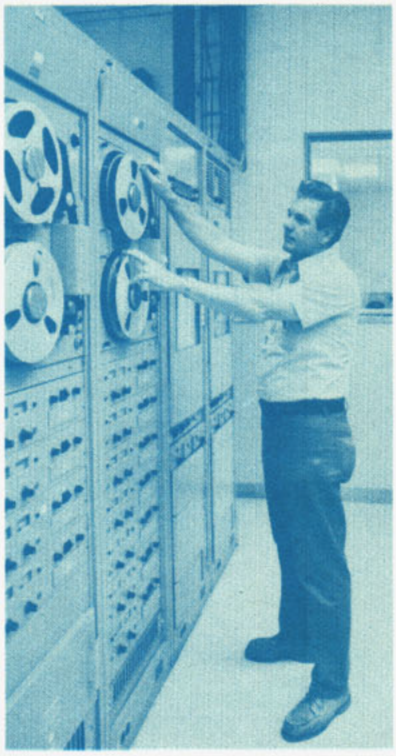
• Two of the prisoners-of-war who returned from Vietnam last year were civilian employees of the Navy, who were held prisoner for several years.

• Other civilians played leading parts in the Sealab experiments and one civilian aquanaut lost his life during preliminary operations of Sealab III.

These are only a few of the positions civilians have played on the Navy team and, although many of those mentioned are scientific and professional workers who







Clockwise from above: PWC team readies equipment to be shipped to Keflavik, Iceland; testing weld on float with soap and water at San Diego Public Works Center; astronomer at the Naval Observatory, Washington, D.C.; administrative employee at Norfolk training session; communications controller at Headquarters, Pacific Missile Range; inspecting work during overhaul at a Navy shipyard.

make up a sizable percentage, skilled craftsman are still very much in evidence.

This is how Navy civilian workers were grouped, according to percentages, in 1972:

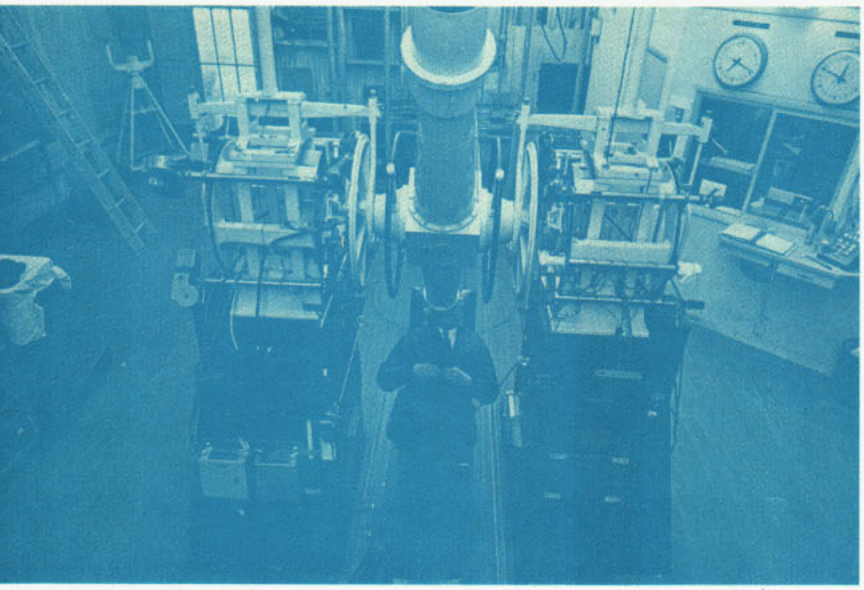
Craftsmen and operatives	**46.2 per cent**
Professional, technical and scientific	**25 per cent**
Clerical	**18.4 per cent**
Managerial and administrative	**4.9 per cent**
Service	**3 per cent**
Laborers	**2.5 per cent**

The nature of the Navy's civilian work force has changed over the years from a preponderance of industrial workers to a "mix" that reflects a transition similar to and in some cases paralleling the labor force in the United States as a whole. It is a result of increasing technological change in American life. Technological advances have had their effect on the Operating Forces in the Navy as well.

Like the size of the Navy, the numbers in the civilian work force have also fluctuated. In 1963, for example, civilian employment was dropping, but later zoomed upward in the Vietnam era to peak in 1968. By 1972, however, Navy civilian employment had again dropped. Today it is about the same as in 1963 and it continues to decrease. The most recent figures show some 321,000 civilian employees.

The Navy is still one of the country's biggest employers, ranking in the top 10, and its influence is in proportion to its size, making its influence felt throughout the nation. Navy management has been an important factor in establishing important sociological trends in the national labor market.

The Navy has been one of the leaders in providing



equal opportunity for all. Civilian employment of minorities and of women by the Navy has at least equaled that of other major employers in this country and surpassed most. However, while tremendous progress has been made in providing equal opportunity for everyone over the past decade, the Navy has no intention of resting on its laurels. It continues to strive for improvement in an already noteworthy record.

Like the men and women joining the Navy's military team, the civilian work force today is better educated than ever. For example, 50 years ago, only eight per cent of the entire U. S. population attended college. Most who went to work before World War II began looking for jobs immediately after their school graduation. Today, 80 per cent of the population has graduated from high school and 45 per cent go on to higher education. The educational level of today's Navy military/civilian team reflects this improvement.

Civilians, therefore provide continuity and special expertise, on the one hand, while the military provides broad knowledge of the operating Navy and liaison between the Shore Establishment and the Operating Forces.

What accounts for its success is that this veteran team has been abuilding over a period of nearly 200 years. Just before leaving the Navy to head the nation's Bicentennial Commission, then Secretary of the Navy John W. Warner was asked for his impression of the caliber of civilian personnel compared with those he had encountered in his other endeavors. "I have found in my four years of government quality coequal with that on the outside in every respect — be it on the technical side, the law side or the management side," he said. "The citizens of the United States are very fortunate to have such high-caliber people pursuing these careers"

— Robert Neil

YN2 Herman Leo

SAMOAN CHIEF - NAVY STYLE

It's not unlikely that tidings of feasts, momentous events, celebrations and other vital news of home could be brought at some future date to one member of Carrier Group Three's staff by the exotic pounding of native drums. Certainly, it is necessary for 35-year-old Yeoman 2nd Class Herman Sogimaletavai Leo, now stationed aboard USS *Ranger* (CVA 61), to keep abreast of matters in his native land. For Leo recently was the central figure at his coronation as Family Chief, an important title on the island of Samoa which he calls home.

Many Samoans live within a traditional social system based on the Aiga, an extended family group headed by a Matai or Chief. The title of Matai is conferred with the common consent of the Aiga. Any family member is eligible, including women. There are well over 300 members in the group over which "Matai" Leo presides.

The Matai is responsible for directing the use of family lands and other assets, and for the general welfare of the Aiga. He also represents the Aiga in the village and district Fono, or Chiefs' council.

Most Samoans actively support the Matai system, pointing out that while they owe respect and obedience to their Matai in family and communal affairs, the Matai in turn has well-defined responsibilities toward his family.

In a formal ceremony replete with traditional costumes, feasting and dancing, the family approved Leo as their new Matai — the position was passed to him by his father. Following the ancient traditions, Leo, dressed in a lava lava and adorned with family gifts, drank kava, a special chief's beverage made from the kava root. Thus, in the bright sunlight and gentle Pacific breeze of a warm Samoan beach, a new high chief of American Samoa arose.

Petty Oficer Leo — or Matai Leo — was born in Alao, Tutuila, American Samoa. At the age of 18 he moved with his parents, seven sisters and three brothers to Tacoma, Wash. They later moved to Seattle and, in 1958, Leo enlisted in the Regular Navy there.

Following boot camp in San Diego he was assigned to USS *Lawrence County* (LST 887) for two years. From there he was transferred to the Pacific Reserve Fleet Units with the Columbia River Group, Astoria, Ore., and later the Bremerton Group at the Puget Sound Naval Shipyard. While serving with the Bremerton Group he was advanced to yeoman 3rd class.

In June 1962 Leo returned to the Pacific islands as a member of Patrol Squadron Four at NAF Naha, Okinawa. While there he contributed to the efforts which won the squadron the 1962 Pacific Fleet Battle Efficiency Pennant, the 1962 Captain Arnold Jay Isbell Trophy for excellence in antisubmarine warfare and the Pacific Fleet Aviation Safety Awards for FY 62 and 63.

Leo returned to the States for shore duty at the U. S. Naval Hospital in Philadelphia at the end of 1963. January 1967 saw him back in the Pacific when, after two weeks' training at the Naval Amphibious School, Little Creek, Va., he reported to the Naval Support Activity, Da Nang. While in Vietnam he was promoted to YN2.

Toward the end of the tour, his younger brother, Seaman Apprentice Lealofi T. Leo, had just joined the Navy and was serving on board USS *King* (DLG 10). Apparently already imbued with the spirit of the Matai's responsibility, Leo asked for duty aboard the

Facing page: YN2 Herman S. Leo as Chief of his Samoan family. Left, top: USS Constellation in which YN2 Leo has served. Left, bottom: USS Ranger, his present duty assignment. Above: Leo and his wife Utumoe participate in ancient Chief's ritual.

same ship so they could serve together, but there was no yeoman billet for Leo available on the DLG at that time.

Following his first Vietnam duty he served in USS *Constellation* (CVA 64) and later at NAS Moffett Field, Calif.

In July 1972 Leo reported to Commander Carrier Group Three, his present command, He serves there as Officer Records Yeoman and Flag Office Supervisor, normally an E-8 billet. The staff deploys in Pacific Fleet carriers and, during his time in them, Leo found himself again in Vietnam.

During one WestPac cruise with the staff in USS *Ranger* (CVA 61) he earned a Letter of Commendation from the Commander Seventh Fleet for "outstanding performance of duty . . . . As flag office supervisor (he) demonstrated great perseverance and selflessness by assisting the staff operations department in the preparation of message traffic and correspondence germane to the combat effort. In spite of long hours spent at this task, he continued to carry out his normal duties in an exemplary manner. His skill and judgment contributed significantly and directly to the successful accomplishment of the ship's mission and to the United States' effort in the Western Pacific."

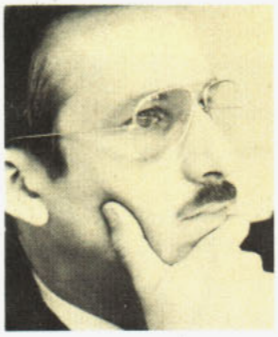
This is typical of Leo. His overall performance has always been in the superior top level, as reflected in his performance evaluations and in the fact that he has been highly recommended for meritorious advancement. Rear Admiral W. L. McDonald, Commander Carrier Group Three, has written of him: "His duties cover broad areas involving manifold daily contingencies and requiring sound decision-making ability and excellent general knowledge. Petty Officer Leo has been unwavering in carrying out these new duties. His management ability has been outstanding and his fair and impartial leadership has earned him the respect of all members of the staff." The new Matai appears to be eminently qualified to handle the job.

Beyond his normal duties, Leo also serves as senior member of the staff recreation committee, as recreation council enlisted advisor and as a human relations council member. When not deployed he is a counselor for the Samoan Community Youths in the city of San Jose, Calif.

Leo is dedicated to his Navy job, but in the event of some vital emergency in Samoa he might be required to seek humanitarian leave, if the emergency arose in his Aiga. As he nears the end of his "Navy career," he is well prepared from the standpoint of leadership to take on the new responsibilities that will be his in Samoa as Matai.

Leo and his wife Utumoe reside in Campbell, Calif. He is due to retire from the Navy in three years, and they will return to Samoa then so that he can devote all his time to the Aiga's affairs.

Thus, as Matai, Herman Sogimaletavai Leo recently became "Chief and Godfather" for his vast "family." Already he is making important decisions affecting many Samoans. In the Navy he has earned the reputation of an outstanding petty officer, and on the Island of Samoa he is, in reality, a chief. — **JO3 Don Ennis**



THE LONE WARRIOR

A tragic accident involving a young naval officer has helped change Navy Regulations to benefit future generations of Navy people.

It was a brief moment in the span of time that linked Lieutenant Commander Barron Nelson to an accident on the beach in the Republic of Vietnam and brought him to a crossroads in his life. It was necessary that his right leg be amputated below the knee.

LCDR Nelson's dream was and is "to drive ships — to command Navy ships of war." Because of his amputation, existing regulations required that he retire, in direct conflict with his dream. He could either follow existing regulations and change his way of life or stick

with his dream and make it become reality.

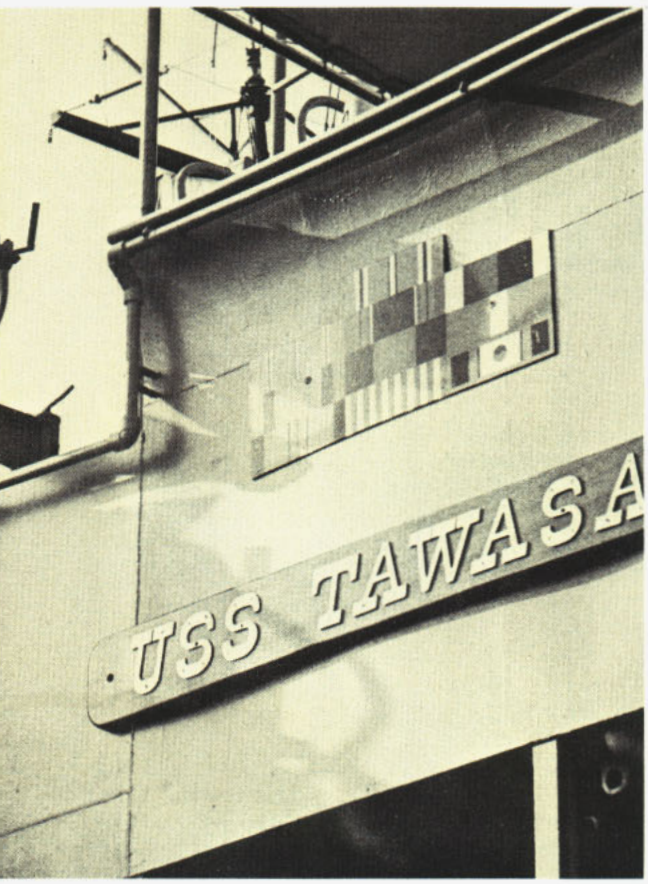
Following his accident, LCDR Nelson faced months of pain and suffering. Later he made his decision to fight to continue his career as an active duty naval officer. The successful end result helped bring about a change in regulations whereby a Navy man who has lost a limb or eye can stay on active duty and even command Navy ships.

In describing his effort to remain on active duty, LCDR Nelson stated that an effort of this sort may somehow appear a larger undertaking to the outsider than it does to the individual who has lost a limb.

And he got his chance. As a Navy lieutenant, Nelson was assigned as commanding officer of the Pacific Fleet Service Force fleet ocean tug USS *Tawasa* (ATF 92) as part of a program designed to provide more junior Navy officers with opportunity to command.

He commanded the ship for 16 months (he was extended beyond the normal one-year tour). A spokesman for ComServPac commented, "this trust in this officer speaks well of the professional side of the man."

Nelson was awarded the Navy Commendation Medal in recognition of his performance in command of *Tawasa*. He was promoted to lieutenant commander shortly before leaving his ship and is presently assigned in San Diego as Aide and Flag Secretary to RADM N. P. Foss, Commander Training Command, U. S. Pacific Fleet.



Nelson's statement, "You can become anything in life you wish to become if you want it badly enough," appears to be a prominent part of his makeup and his outlook on life appears to have a direct tie to his future.

His dreams for the future include earning the right to command destroyers and larger Navy ships.

Nelson is a young man who seems to have a deep-seated love for people. He is the son of Air Force veteran John Nelson. He explains his earlier life: "It's not always easy for a youngster growing up when he's a member of a military family. I lived in 56 places in 24 years and attended 17 different schools."

Upon graduation from Trinity University, San Antonio, Tex., in 1964, he earned his commission as an ensign. In discussing his early intent regarding a Navy career, LCDR Nelson stated, "I had read 'Moby Dick' and 'Two Years Before the Mast,' but when I first entered the Navy I had no great love for the sea. My intent was to spend three years on active duty before finding my place in the future scheme of things." However, he became another landsman to fall under the magic spell of the sea. Like countless others before him he felt the tug of the sea that has beckoned man since his creation. This transformation happened during his first underway period.

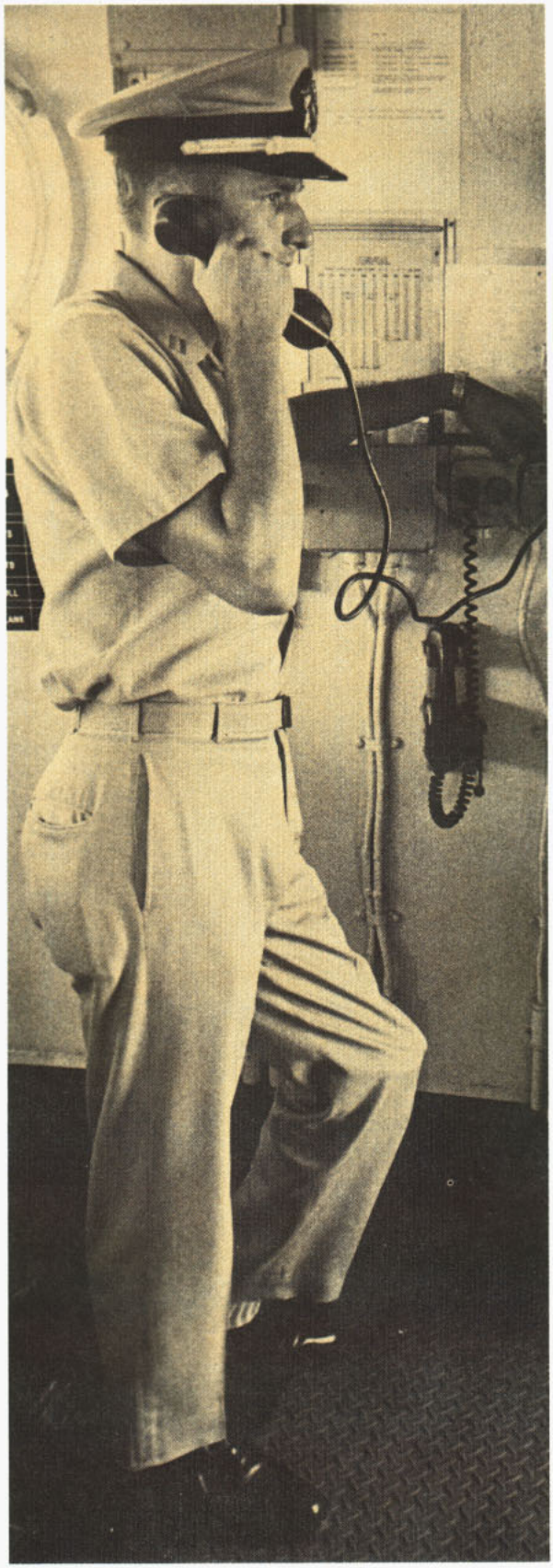
"All lines were cast off and we were getting underway. I had the midwatch (2400 to 0400). A bright moon was reflected across the water and I was alone on the bridge, away from the city lights and at peace with the world. It was then that I knew my future would be linked to the Navy, including the future ambition of driving ships, commanding Navy ships of war," Nelson said.

The year young Barron Nelson earned his commission also was the year of the death of Admiral John M. Hoskins. Living in two different times, they share a niche in the annals of the Navy. They are believed to be the only two amputees to have commanded Navy ships.

ADM Hoskins lost his right foot in 1944 during the second Battle of the Philippine Sea. In 1945, he assumed command of the aircraft carrier USS *Princeton*. The decision to retain then Captain Hoskins was prompted by the fact that the United States was involved in a major war and the Navy needed his experience. For Nelson, the odds against his commanding a ship, or even remaining in the Navy, were overwhelming. But he not only beat the odds, he also payed a role in the revision of an old and "permanent" policy.

On the night of 18 May 1969, then Lieutenant Nelson was assigned as Weapons Officer aboard the destroyer USS *Higbee* anchored off the coast of Vietnam. During the nighttime hours the ship had provided illumination fire for the Army engaging enemy troops ashore. Later, when *Higbee* officers met with members of the Army ashore, it was necessary to beach the ship's motor whaleboat, since there was no pier.

When the Navymen prepared to return to their ship, boat crewmen attempted to pull the boat from the beach to deeper water where the boat's propeller could take over. Navymen were positioned along both sides. LT Nelson stationed himself in a strategic position alongside. "so no one would get hurt." The men pulled on the boat and the operator accidentally put the engine in gear. Nelson, standing in soft sand, lost his balance. In reflex action, he grabbed the side of the boat; his right leg came into contact with the prop.



"I experienced a rather sharp pain, followed by a numbing sensation. I looked down and saw my foot float to the surface. I realized what had happened to my leg," Nelson said. Within minutes, he was in the hands of Army surgeons ashore.

"The first 20 minutes I was in the hospital I recall telling the doctors not to remove the bone from the knee or I wouldn't be able to stay in the Navy. During those first hours it was an almost unreal world. There was the ever-present pain, waking and sleeping, medication for pain."

These early comments evidence the strength of this individual's deep-seated needs and plans for a career with the Navy. His stronger feelings surfaced more sharply during later periods, but it was clear he intended his future association with the naval service to be solely in the role of a fully functioning individual.

He is also the first to admit that recovery of the whole man was closely linked to the concern and help of other people in his behalf, "In the early stages, every person who suffers the loss of a vital body organ or function feels sorry for himself. It's most evident when you're alone and easier to accept in a group. It's also quickly apparent that no matter how serious your condition, there always appears to be someone else worse off; this makes it easier to accept your personal level of well-being," Nelson said.

He gives his wife the major credit for his return to normality. "There were times I would have given up the idea of staying in, but my wife knew how much my Navy career meant to me and was always ready with the proper level of encouragement."

The record is clear concerning his own stubborn drive to make his dream come true, In the early rehabilitation program involving physical exercise, doctors recalled that part of the procedure involved various angles of raising and lowering the remaining portion of Nelson's leg with a 10-pound weight attached. "Problem was, turn your back for a moment and Nelson would be up to a 27-pound weight," medical officials commented.

Just under three months after his injury, Nelson was fitted with his artificial limb. Six weeks later he walked out of the hospital.

His future appeared to be spelled out: Nelson was headed straight for retirement.

"But you make up your mind as to what you want out of life and level your guns on target to get it. A requisite to survival is to accept nothing less than the opportunity to perform as a fully functional human being," Nelson stated.

He answered the Navy's suggested retirement route with a lengthy rebuttal. He extended the chain of events in persuading medical authorities to adopt a favorable environment of acceptance in his behalf.

Nelson won part of his prize, and was granted a one-year trial on limited duty. He was still in the Navy and hopes for his future were still alive. Next came renewed efforts, designed to earn him the right to full

duty. He requested assignment to the staff of the Newport, R. I., Destroyer School. His promise to the Navy: "Give me something I can't do and I'll voluntarily retire."

During this assignment as Academic Plans Officer, a chance encounter gave Nelson a chance to state his case. The Chief of Naval Operations, Admiral Elmo R. Zumwalt, Jr., and Lieutenant Barron Nelson had a face-to-face visit.

The admiral listened and watched Nelson's performance. It was an important step in a change to Navy regulations. This change reversed earlier rules requiring automatic release of a member who becomes an amputee. The new regulation — any Navyman who loses an arm, leg, or an eye can remain in the Navy if he desires, and the right to command ships is a part of this new consideration for those who qualify. This new regulation has a direct bearing on the present and future generations of Navy people.

Lieutenant Commander Barron Nelson's dream was still alive and unchanged — to be a "ship driver," the captain of Navy ships.

He recounts his recent experience in command of *Tawasa*.

"Assuming command for the first time is a somewhat frightening situation. You kind of wait for someone to give the orders and suddenly you turn around and remember, 'I'm it.' You realize vividly that while there are guidelines, no book is available with a complete and ready list of answers to every problem. One has full realization that for any given situation, or problem, there are 20 or more solutions available. It firmly establishes a need to predict possible situations and have available solutions to problems ready in event it becomes necessary."

How does Nelson judge his career to date?

"The Navy should not be expected to be soft in its approach to an individual with a handicap. There's a set job to do and if an individual in this category can do the job as well as or better than others, he should be given the opportunity."

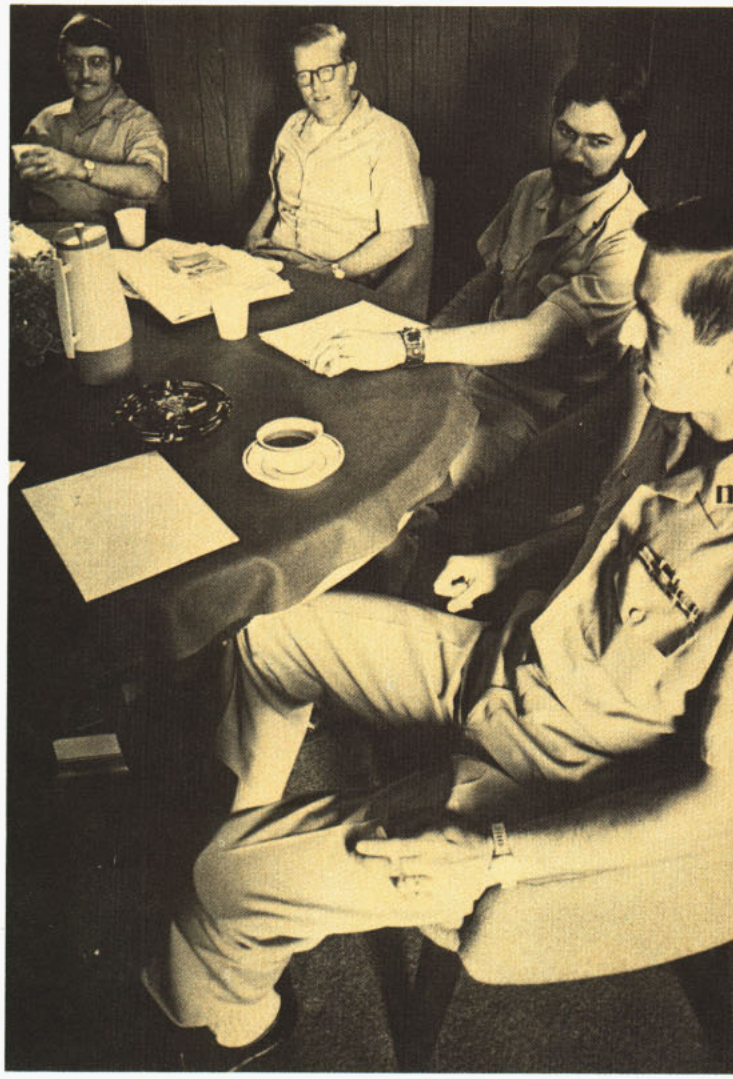
Some of his former crewmen aboard *Tawasa* admit it was six weeks after he became their captain that they realized he had an artificial leg. This kind of praise appears to indicate Captain Nelson had to work twice as hard as his brother skippers to prove himself.

"Today, I'm getting back the feeling that I'm able to compete on an equal basis and that my fellow officers consider me equal with other Navy lieutenant commanders. As for the future, I'll try for command of destroyers and larger ships. To me, the Navy is its ships and ships at sea are where it's at," Nelson said.

In summary, tragedy in the life of Lieutenant Commander Barron Nelson, combined with a deep-seated personal dream and the need to make it come true, are factors that have helped change regulations to benefit today's Navymen and Navymen of the future. Nelson's story is also the story of today's Navy and its readiness to utilize fully its most valuable resource — its people.

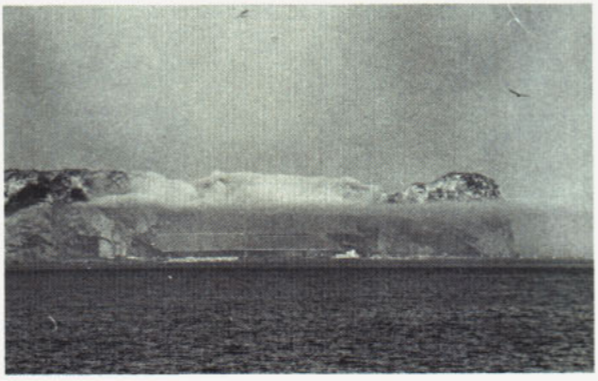
If a strong belief in one's personal and total capabilities and the ambitious drive to succeed are representative characteristics here, then Lieutenant Commander Barron Nelson may one day become a Chief of Naval Operations. In this writer's opinion, exacting and exceptional capabilities are the mark of the man and he's a man named Barron Nelson, a leader of men and captain of his ship.

— Story by Gerald R. Boling
— Photographs by Tom Garner and Sam Bass



Left: As captain of the fleet ocean tug USS Tawasa, then-LT Barron Nelson takes care of ship's business. Above: Then-LT Nelson meets with USS Tawasa officers.

THE 'ROCK'



Many Navy ships have dependents' cruises, but none can combine a look at shipboard life with a Mediterranean cruise such as USS *Little Rock* (CLG 4), flagship for Commander U. S. Sixth Fleet, homeported in Gaeta, Italy, did recently. Wives met *Little Rock* in Rota, Spain, to join their husbands for a cruise to Tangier, Morocco, and then to Malaga, Spain, during part of the ship's annual western swing of the Med.

The "Rock's" dependents' cruise offered the wives a chance to get a behind-the-scenes look at their husbands' jobs and the many facets of life in the Fleet.

While under way for Tangier, dependents were treated to a demonstration of the ship's *Talos* missile system during the morning hours and a tour of the ship, including the bridge, main deck and combat information center. They then had lunch and some time in which to relax before arriving in Tangier that afternoon.

Tangier had an air of excitement and mystery for the crew and dependents alike. There were many attractions, one of which was the opportunity of shopping in Soco Chico, the center of the Kasbah district, for many wares such as Moroccan leather goods, items of pottery and indigenous clothing at low prices.

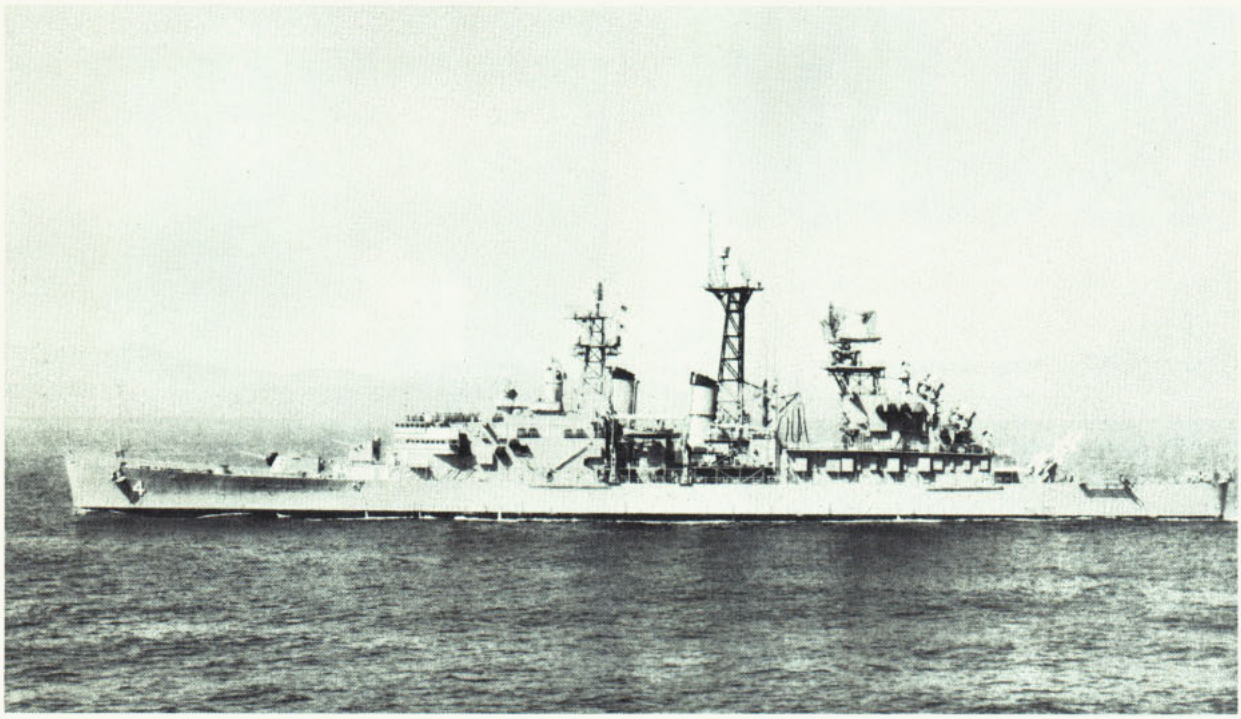
Other attractions within the city were the many palaces and adorned temples, the main one being the Alcazaba Palace, former home of the Moroccan lineage of sultans, now a museum and tourist attraction. Truly, this ancient city of Tangier offered the crew and wives an authentic taste of North African life.

Under way for Malaga, Spain, *Little Rock* held General Quarters in the morning in order that the wives might observe their husbands' battle stations. Demonstrations were given on the messdecks and in the wardroom on battle dressing and first aid as well as a presentation on the different methods of firefighting and damage control procedures aboard ship.

The crew was in for a surprise that afternoon as the Commanding Officer, Captain P. K. Cullins, USN, ordered all watchstanders off the bridge because the women were taking over.

The girls, many of whom had never even seen the bridge of a fighting ship, did an outstanding job of running the ship through its paces, while the crew looked on, joking as to whether they would ever get their prescribed jobs back. The girls took their new jobs seriously as they manned (or wo-manned) the helm, lee helm, quartermaster of the watch and, of

RIDES THE MED



Left, top to bottom: Gibraltar, Gateway to the Mediterranean; western Mediterranean natives; rug merchant in Tangier, Morocco. Above: USS Little Rock (CLG 4). Below: Malaga, Spain. Right and below: Lisbon, Portugal.

course, the Officer of the Deck, as the light cruiser cut through the blue water, responding to their every command.

Later in the afternoon, stewards and commissarymen gave a presentation in the wardroom on cake decorating and how to make a few culinary treasures, Navy-style, to the visiting wives.

Then came more time for relaxation and a chance to lend an ear to "Crowleg" — the ship's rock band — which played a few numbers while the ship made its entrance to Malaga.

Together, the men and their wives had time to take advantage of the sights in Malaga, including the famous churches, and to shop for many handmade goods. Among the many fine buys found there were suede and other leather goods, porcelain, artwork and brass items of fine craftsmanship.

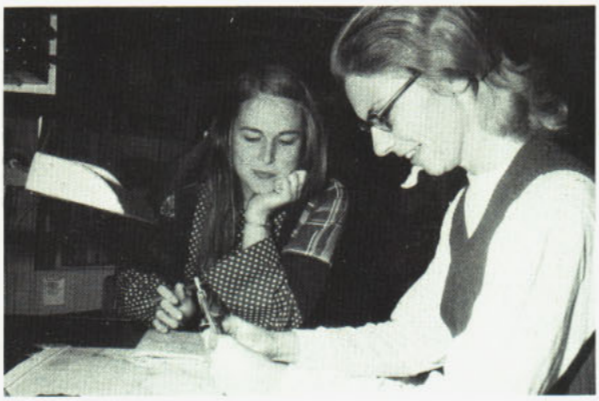
Some of the glory that was old Spain could be seen above the city in the ancient battlements, or one could go to Torremolinos, the sunshine haven of the jet set, where there is an international atmosphere.

But, all good things must come to an end, and the husbands and wives had to say "Adios" for a few days until they could rejoin in Gaeta.

Little Rock's western swing and dependents' cruise provided an extra dividend to the Navy's overseas homeporting program. Besides eliminating the usual time away from families on deployments, it provided a chance for families to enjoy African and European travel together.

But that's only one chapter in *Little Rock's* adventures this year. Another job kept her constantly on the move as a goodwill ambassador, furthering human relations throughout the Mediterranean. To date she has

Above: A quiet moment with a loved one. Right, top to bottom: Little Rock wives enjoy a culinary arts display; CAPT P. K. Cullins explains the ship; Mrs. Diana Peterson sings in the Sixth Fleet Music Show. Facing page, top to bottom: Wives plot the course; dependent phone-talker; Little Rock's rock band, Crowleg. Far right: Wives take over the bridge.



paid visits also to Spain, Portugal and Gibraltar, as well as Morocco.

Embarked on a one-month training cruise, she took time off to make her first stop at Gibraltar, the British Commonwealth on the threshold of the Mediterranean. There *Little Rock* found the historical warmth and hospitality of the British.

Gibraltar, situated on the eastern end of the Strait of Gibraltar, is an area of two square miles connected to the Spanish mainland. Its population is 28,000, many of whom are of Italian and Maltese descent, as well as Britishers.

Sports was on the agenda during her stay, and what better international language to bring people closer together than sports. *Little Rock* met various teams from the area and competed in bowling, skeet shooting, soccer and volleyball.

Underway again, *Little Rock* steamed to the Portuguese capital of Lisbon for a five-day anchorage on the Tagus River. Shopping and nightlife afforded two of the biggest attractions for the flagship during her stay. Among the many fine articles Lisbon offered were cork products, sweaters, china and silverware. These could be found in the shops in the city as well as other shopping areas such as Baixa and Chiado.

Nightclubs ranged from the traditional Portuguese bar where the local citizens take time to meet old friends for a glass of wine and a chat, to the very modern discotheques where many of the crew rocked to English and American sounds.

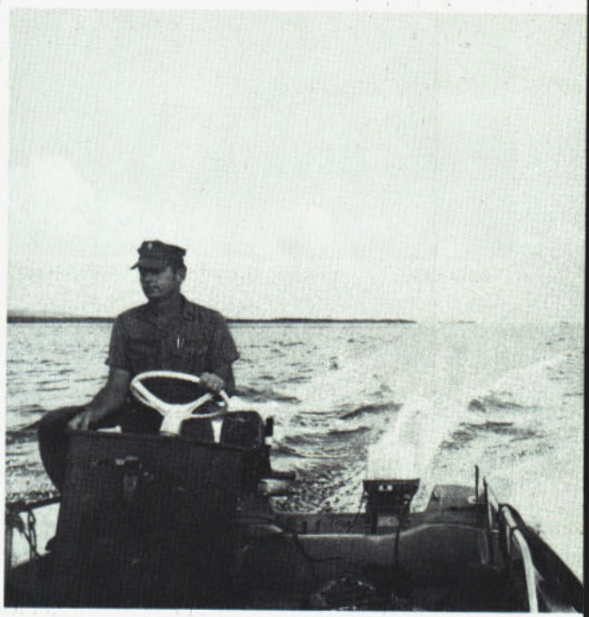
Some of the better dining spots provided folk singers, who sang "fados," the national folk songs.

The next port of call was Rota, Spain, which offered time for the crew to shop for much-needed items in the Navy Exchange and visit the city and its shops.

This is one sampling of what homeporting overseas has to offer the Navyman. It offers the opportunity to see the world — as well as the sea.

— SN Tim Hodges.

SEABEES O



N PONAPE

Clockwise from left: EOC Ron Utterback returns to Kolonia after dropping off workers; native women do their wash; Sokehs Mountain, Ponape; old Spanish church; Ponapean children keep cool.

It's early morning. The new day sun adds a warm, yellow glow to the stark ruggedness of Sokehs Mountain in the distance. While in Kolonia — population center of the Ponape District in the Trust Territory of the Pacific (TTPI) — the city dwellers sleep, "little green men" file into a room to plot their daily strategy.

They sometimes speak a strange language. "Better take the 570 over and see if you can get the 175 out," one says. Another asks, "Have you gotten the 1250s done for the 25, the D-7 and the 1150?"

No cause for alarm, there hasn't been an invasion. The "little green men" in this case are all "Bees," Seabees, members of the 13-man U. S. Navy Civic Action Team currently involved in the tropical island chain in a varied construction program.

Designated Seabee Team (SBT) 4007, the Ponape unit is on deployment from their parent unit, Mobile Construction Battalion 40; the main body is deployed to Rota, Spain.

SBT-4007 started on the job last September during a nine-month deployment. Shortly before they were scheduled to return from that tropical isle this on-the-scene report arrived concerning their activities.

At first glance it's a little difficult to tell the officer in charge, Lieutenant (jg) Jim Allen, and the assistant OIC, Chief Equipment Operator Ron Utterback, from other members of the team. Both have deep tans, indicating many long hours in the sun. Both men pitch in with the rest of the crew; they're not simply directors. As a result, they have the respect and admiration of their fellow teammates.

The lieutenant, who has a bachelor's degree in chemical engineering from Auburn, has been with MCB-40 since November 1971. Chief Utterback is an 18-year Navy veteran.

They often work long hours in the hot, blistering sun, while cussing a variety of not-exactly-new equipment that spends as much time being repaired as it does actually on the job. The "Bees" have to contend with a multitude of problems that also plague all six civic action teams in TTPI: four Navy, one Air Force and one Army. Unstable communications, transportation problems and some pretty-near-impossible engineering and construction feats are just a sampling. But they do it all, and do it well.

At present, the team is working on a net road project, requiring the hacking out of a pathway through dense jungle and mangrove swamp, then hauling in coral dredge to make a roadbed. This road will link several villages that previously could only be reached on foot over some rugged terrain or by boat. Equipment

Operator 3rd Class Mark Boggs is charged with the responsibility for this project. Another project involves a tennis court, a short distance from the team's camp in Kolonia.

Yet another project, now complete, involved work on four different bridges in Olopol.

The team's corpsman, Chief Hospital Corpsman George Butler, is not only charged with health and camp sanitation, but also has assumed additional paramedical duties at the Ponape Island Central School. The 600 students attending PICS, in particular, the 300 or so who live-in at the school, rely on "Doc" Butler for their medical needs. He spends five mornings each week there. Occasionally, he visits outlying municipalities on other islands, checking on the medical needs of all.

Construction Electrician 1st Class Greg Hallam works on an interior communications system at Community College of Micronesia, when not keeping track of team supplies or communicating with headquarters at Guam by radio. Hal has completed similar system for Ponape Island Central School.

Recreation equipment for elementary schoolchildren is being assembled by Builder 1st Class Jessie L. King, Jr., and Utilitiesman 2nd Class Kurt Barchenger has been working on small water catchment systems in a variety of locations.

If there are any unsung heroes at CAT Ponape, they must be Construction Mechanic 1st Class Perry L. (Gil) Gelnett and Constructionman Rick J. Johnston. Rick has had a number of opportunities to get out and meet the people while working in the different municipalities, but Gil is generally the man who holds

Far left: Dredging coral for use as roadbeds. Left, above: CMCN Rick Johnson. Left: Cable bridge built by CBs. Below, left: EO1 Robbie Roberts smooths out lumps in road. Below: CM1 Perry Gelnett works on engine.

down the fort. He can almost always be found around the camp, often resurrecting aging vehicles and equipment. When he does get out, it is usually to fix something on a front-end loader, or to change a tire or start a piece of equipment.

One of the team's most important phases of work deals with teaching the local men in an intensive six-month apprenticeship program. At the present time, a dozen trainees — two steelworkers, four equipment operators, three mechanics and three builders — are enrolled in the program. Graduates emerge with a rating of journeyman one — six hours per week are academic and the remainder is on-the-job training.

How the men feel about their assignment to CAT Ponape can best be answered by a former CAT Ponape Navyman, Neil H. Johnson. He's retired from the Navy and is working with a local construction firm as a maintenance supervisor. He cites the people and the pace of work as part of the reason he returned to the island. Johnson considers the equipment limitations a great challenge and adds that if he leaves Ponape, he won't be going too far.

"I will definitely stay in the islands of the Pacific," he said.

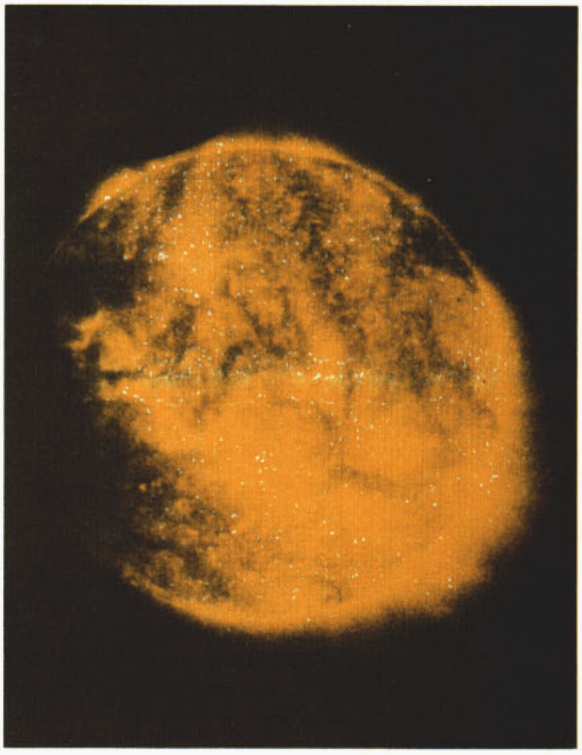
Johnson isn't the only CAT returnee. "Sam" Sneed, a former chief equipment operator, also retired from the Navy, is working with the TT government in the public works department.

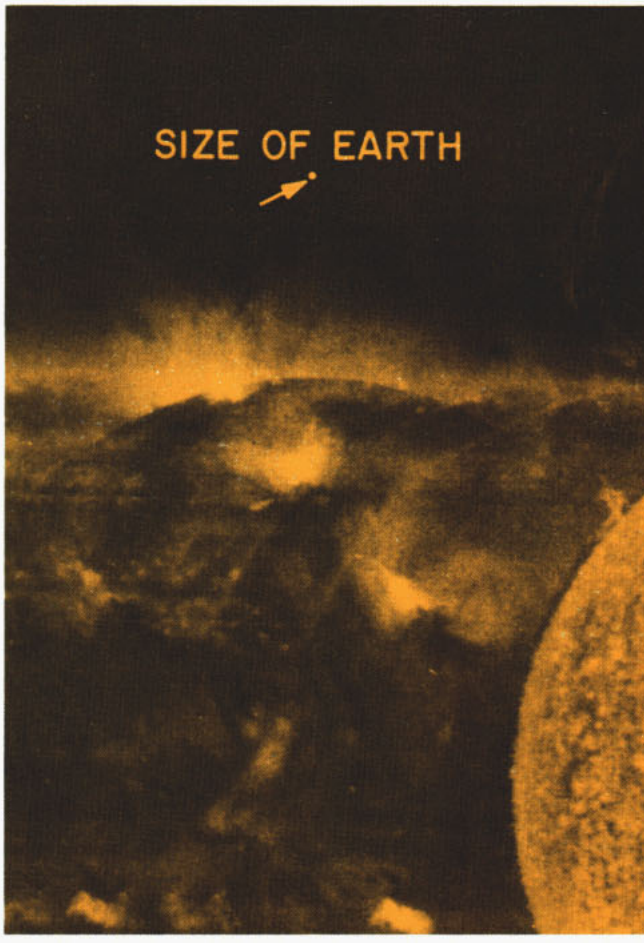
What brings these men and many other members of Civic Action Teams serving in TTPI back is a love affair with the beautiful and, at time, exotic islands of the Pacific.

— Story and photos by JOC Bill Wedertz, USN.

Below: Ruins left by little-known early inhabitants of Ponape. Below, right: HMC George Butler attends an islander. Right: BU1 Bill Schubert gives LTJG Jim Allen a haircut. Far right: Digging postholes. Above, right: CE1 Greg Hallam orders supplies from headquarters. Above, far right: BU3 Larry A. Sherwood checks out anchoring towers. Top: "Mr. Jack," an Australian living on Ponape.

SOLAR ENERGY



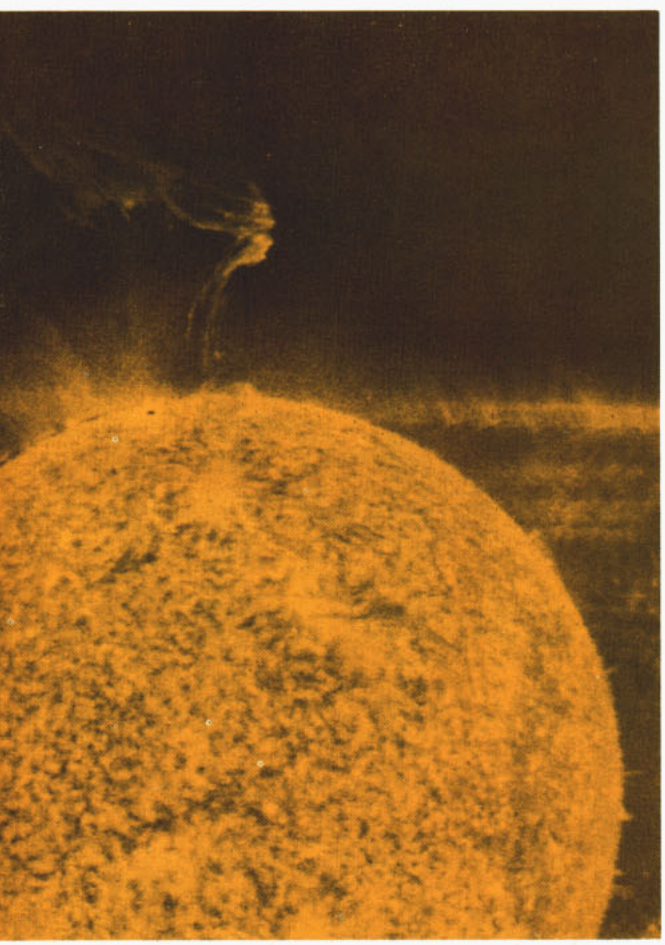


From top down: X-ray photo made by NRL scientists via an Aerobee-Hi rocket launched from the Naval Missile Test Facility, white sands, back in 1960. Above: Photo of the sun taken during early 1970s by an extreme ultraviolet TV camera prototype, mounted on a rocket. Right: Unique photo taken by Skylab III astronauts with NRL's Extreme Ultraviolet Coronal Spectroheliograph during a huge solar eruption.

SPECTACULAR

About that photo appearing on the cover of this month's ALL HANDS — take another look. It provides a great deal of food for thought. And it has a special relationship to the U.S. Navy in more ways than one.

Theoretically, if it were possible to harness the energy of the eruption represented in this one cover picture, it would have been enough to provide for all of mankind's power needs from the year 1 A.D. to the present — and perhaps for the next 2000 years, as well! In the era of the energy crisis, this is certainly something to think about.



The picture is a "color isophote" processed electronically from a photo taken by an instrument devised by scientists of the Naval Research Laboratory. The special picture-taking instrument (shown next page) is a hefty one and it carries the equally hefty name of "Extreme Ultraviolet Coronal Spectroheliograph."

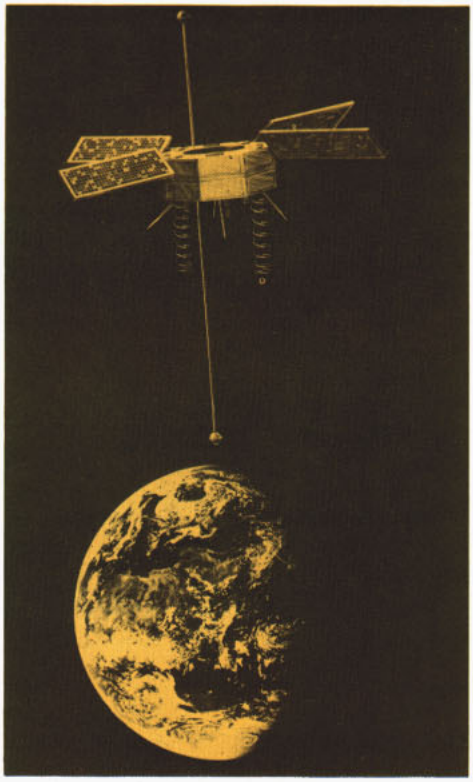
The original photo was taken last August by astronauts of Skylab II, who acquired a series of pictures of a large eruption of the sun's atmosphere. Skylab's crew who made that flight for the National Aeronautics and Space Administration (NASA) included Navy Captain Alan L. Bean, Marine Major Jack R. Lousma and scientist Dr. Owen Garriott.

One of the highlights of their highly successful journey (which was fraught with numerous troublesome problems and dangers) was a spectacular performance by the sun. It occurred on 21 August, and NASA scientists at Houston called it "the most important, dynamic and interesting event" photographed by Skylab up to that time.

What happened that day was a tremendous eruption of the sun's atmosphere — in other words, it exploded a cloud of helium gas estimated to be about three-fourths of the sun's size. Our cover view shows how far the eruption had exploded from the vast surface of the sun in just 90 minutes from the time the eruption began. Clouds of helium gas have blasted out some 350,000 miles and eventually, streamed outward at least 200,000 miles more. According to the Naval Research Lab that's a top speed of more than 3800 miles a minute!

One of the goals of the Skylab crew was to study the physics of the sun. Others were to learn more about the physiology of man in space and the resources of the earth. The crew brought back a lot of information about the sun, thanks to the aforementioned spectroheliograph and its pictures. Such pictures can only be made from space because the ultraviolet light of helium is totally absorbed by the earth's own atmosphere. Only in the last few years of space technology has man been enabled to fly long missions with photographic instruments sensitive enough to record these massive explosions for further study and analysis.

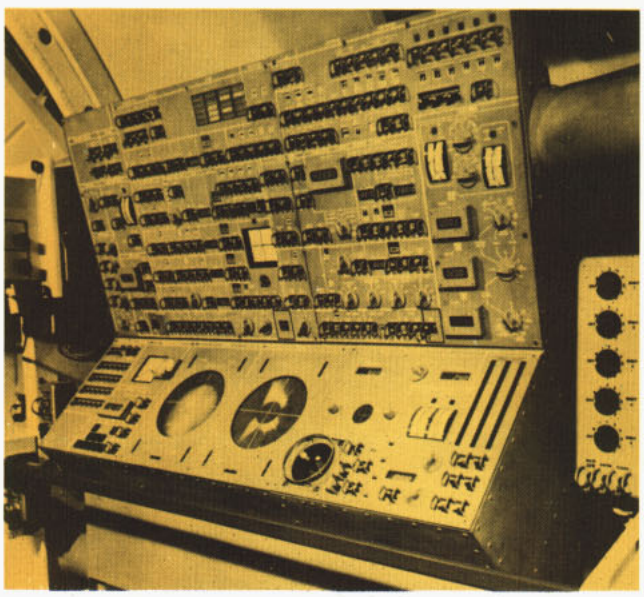
And, speaking of energy, while the temperature of the gases churning at the sun's surface is a mere 4000 degrees Centigrade, it increases up to some 3,000,000

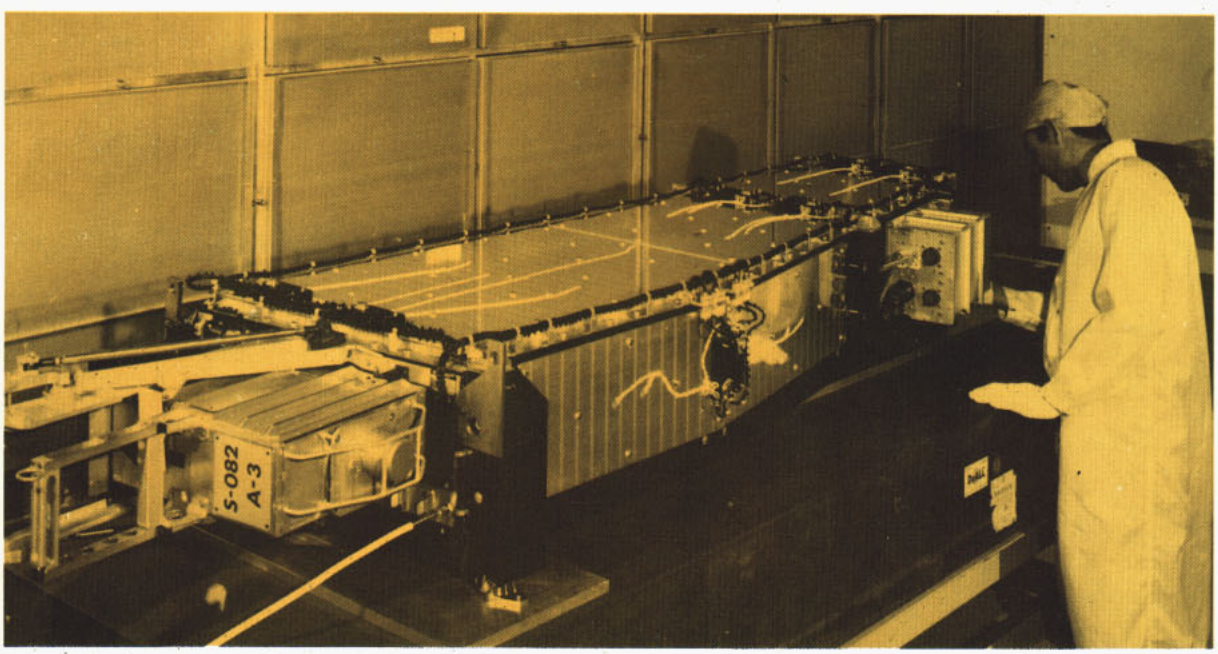


degrees in the corona (this is the black area of the picture on the cover.)

Another interesting aspect of the photography taken by the NRL instrument is that the originals are black and white photographs, and the color isophotes are processed (or translated) through electronic means to demonstrate the intensities of extreme ultraviolet radiation (known as XUV).

So, to get an idea of the extremes of XUV radiation, the red on the outermost edge is at the lower end of the scale and you move upward through yellow, green, light and dark blue, to violet and finally to white,





which is at the top of the scale of radiation intensity. To make a comparison of the sizes involved, if the earth were to appear alongside the color isophote, it would be 3/16ths of an inch in diameter.

Does a solar explosion have any direct application to the sailor at sea? It could certainly have a disrupting influence. When the energy of such an explosion heads toward the earth (taking several days to reach us), it can produce so-called geomagnetic storms that may disrupt broadcast communications and even common power transmission lines. It could cause navigational instruments to go haywire. Such storms also cause the spectacular and well-known aurora borealis, or Northern Lights.

These are some of the reasons why we want to know more about the sun, aside from its potential as a source of energy.

The spectroheliograph is designed, among other things, to provide maps of various layers in the solar atmosphere through observation of the lines of ultraviolet radiation. It also records the development of solar flares, records changes in flare temperatures, and watches the effects of the solar flares. Dr. Richard Tousey (see box) is the principal investigator for the Naval Research Laboratory in the experimental work in this area.

Navy Captain Alan Bean and his two teammates on the NASA Skylab II mission underwent some disquieting experiences before they completed their journey in the United States' first orbiting space station. It started when a leak was discovered in one of the sets of thruster rockets on the *Apollo* ferry craft which was taking them to the space station. Then there was a failure of one of the gyroscopes on the space station itself, followed by a leak in the air-conditioning system. The astronauts also ran into the problem of motion sickness during the first three days.

Preparations were even begun to outfit a rescue ship, but all problems were overcome and the crew (with its menagerie) had a successful as well as adventurous cruise in space.

The menagerie, incidentally, included six mice, two spiders, a couple of minnows and minnow eggs, plus flies and gnats. The first few days found the minnows swimming around in circles in space before adapting to their new environment. One of the spiders, named Arabella, seemed to take well to zero gravity, although she had to adjust her diet. She quickly set out to spin her web, but decided on raw meat rather than the insects she normally relished.

After 59½ days, Skylab II completed its mission, adding to the vast accumulation of knowledge about space, ranging from minutiae such as web-spinning spiders to vast explosions on the sun. The three astronauts were picked up from the Pacific Ocean by members of the crew of USS *New Orleans* (LPH 11) approximately 250 miles southwest of San Diego, Calif., on 25 Sep 1973, carrying with them the pictures from which developed the spectacular display on our front cover this month.

The Man Behind Skylab

The head of the Naval Research Laboratory's "Rocket Spectroscopy" Branch is Dr. Richard Tousey. He has been the principal investigator for four Skylab experiments in solar research which were carried out by NASA's team of astronauts.

Appropriately enough, Dr. Tousey started his Navy career as a member of NRL by initiating a program of upper atmosphere research. His first work was on brightness of the sky and the visibility of the stars. That was 33 years ago. He has been reaching farther and farther out into space ever since.

Before joining the Navy he had received his doctorate in physics at Harvard and taught physics at Harvard for two years.

During his career as a Navy scientist he has directed numerous experiments in solar research, but his work has extended also into other areas.

In 1945 Dr. Tousey received the Meritorious Civilian Service Award for the design and development of a reflector gun sight, and in 1958 he was awarded the Hulburt Award for pioneering and continuing investigations of the spectrum of the sun and the upper atmosphere by means of rocket-borne instruments

He directed the NRL program of research on the visibility of earth satellites and was a member of the Science Program Committee of Project *Vanguard*. (Incidentally, the Navy's *Vanguard* Satellite, which was launched 16 years ago, is still traveling in space. In fact, *Vanguard* has already traveled farther than any other man-made object in space and will continue to do so for the next 284 years, that is, until about the year 2258 A.D. During its expected 300-year life, it will have traveled an estimated 42,225,000,000 miles.)

As we've said elsewhere in this issue, cooperation and teamwork are the keys to success, and that teamwork comes from all segments of the population. NASA's Skylab crew consisted of a Navy captain, a Marine Major and a civilian scientist. The know-how of industry, the military-civilian team of the Department of Defense and the National Aeronautics and Space Administration, all have played significant roles in the exploration of space. NRL's Dr. Tousey, whose expertise has been developed over more than a third of a century, is one example of this contribution.

— j. a. o.

ON THE SCIENTIFIC FRONT

NAVY EXPERIMENTS WITH SOLAR ENERGY

The Naval Ammunition Depot, Hawthorne, Nev., began experimenting with solar energy about 40 years ago. In those days, however, the cost of construction couldn't compete with cheap fossil fuel.

Recently, the energy crisis renewed interest in solar heating and Hawthorne again began an experiment in harnessing Nevada's abundant sunshine.

The results were encouraging. Solar units constructed at the command appeared to provide up to 80 per cent of the heating needs for two depot families at a cost which can compete with rapidly rising propane costs. A solar unit capable of heating 1000 square feet would cost about $4000 to construct. The cost of heating a home was between $300 and $350 this year; it may rise to $500 next year.

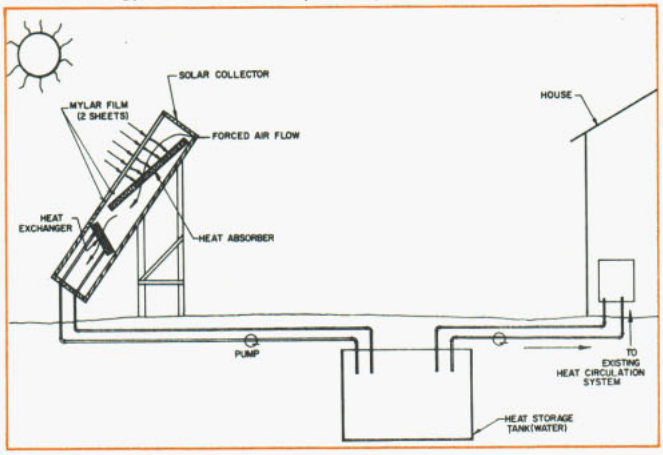
NAD's two heating units operate under simple solar energy principles which are familiar to anyone who has entered a closed car on a sunny day.

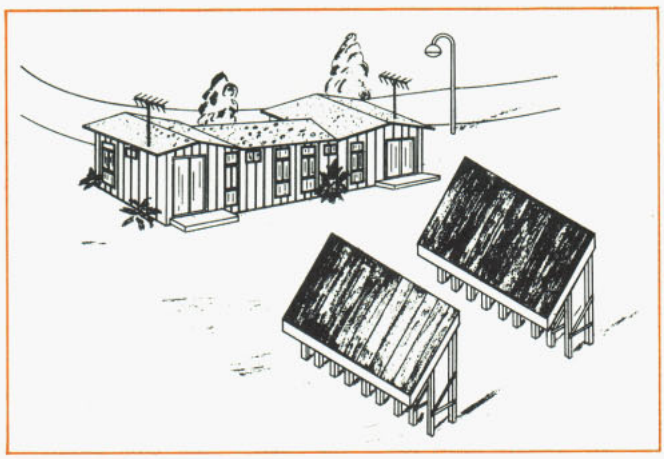
At Hawthorne, a shallow, plastic-covered box which measures 15 by 45 feet traps the sun's heat-bearing rays which are absorbed in the box's black surfaced interior. Water circulating through the box picks up the heat and carries it to a 2100-gallon underground storage tank.

Once stored as hot water, the heat can be saved for use at night or for a cloudy day. This should furnish enough heat to warm a house for a three-to five-day period without additional input.

Thorough measurements are being made of the experimental units over a period of several months to provide performance information. Comparisons will be made between the solar-heated homes and four which are heated by propane. If the solar units prove to be cost-effective, NAD Hawthorne will consider seeking funds to install other solar devices throughout the depot.

How solar energy is harnessed and is put to a practical use.





Left: Official opening of a new solar heating system to heat two family units at Naval Ammunition Depot, Hawthorne, Nev.

NRL, Using New Camera System, Studies Mid-Atlantic Ridge's Median Rift Valley

By using its Light Behind Camera (LIBEC) system, the Naval Research Laboratory recently obtained more than 5000 photographs of the sea floor inside the Median Rift Valley of the Mid-Atlantic Ridge.

The LIBEC concept permits photographs of the ocean bottom to be taken at greater ranges than heretofore possible. Consistent exposure of photographs is achieved by separating the camera from the zone of intense backscatter near the light source. Most of the light energy, therefore, is directed toward the target area's outer edges. LIBEC is deployed from NRL's research vessel USNS *Mizar* through the ship's center well and towed by means of a cable-telemetry system.

While the Mid-Atlantic Ridge, of which the Rift Valley is a part, is the most extensive surface feature on earth, relatively little is known about it. Scientists believe it is a great suture where the North American and European continents were joined 200 million years ago.

NRL investigators say it is now generally accepted that in the center of this suture (in the Median Rift Valley) new crustal material periodically wells up as molten rock to congeal along the edges of massive plates. The plates spread outward from the ridge transporting sea floor and adjacent continents at a cur-

rently measured rate of 1.3 centimeters per year.

The NRL photographs corroborate previous information that the Rift Valley is floored with pillow lava and reveal a wealth of additional detail. Many steep scarps and fissures were seen and some were correlated for up to two miles. A considerable amount of animal life was also seen in the pictures.

The photographs were taken in cooperation with the Woods Hole Oceanographic Institution and under the auspices of the National Science Foundation. The mission was part of the French-American mid-Ocean Undersea Study — the first comprehensive study of the Mid-Atlantic Ridge attempted.

Dahlgren Successfully Fires Projectile Guided by Reflected Laser Beam Energy

An eight-inch gun projectile which uses the reflected energy of a laser beam to find its target was recently tested, successfully, by the Naval Weapons Laboratory, Dahlgren, Va.

The projectile initially is aimed and fired in the same manner as a conventional gun round. It is, however, stabilized in flight by tail fins and controlled during the final phase by four small wings which fly it toward its target.

The wings are controlled by a "seeker" device which detects a laser beam trained on the target. The laser can be mounted on a ship, aircraft, artillery piece or even held by a forward artillery observer. The "seeker" unit picks up laser energy reflected from the target and steers the projectile toward it.

The projectile is being developed by the Navy as a joint-service missile for use with the eight-inch howitzer and the new MK-71 lightweight, major caliber naval gun. The system also is being developed for use with five-inch shells as well as the eight-incher used in the test.

Use of laser-guided projectiles can increase the accuracy of gunfire, consequently reducing the number of rounds needed to destroy a target.

Ordnance Laboratory Sponsors Program To Develop a Non-brittle Beryllium

A program to develop a non-brittle beryllium (one of the metallic elements) is being sponsored by the Naval Ordnance Laboratory REVMAT Program (Reentry Vehicle Materials Technology).

Beryllium has a great deal to offer as a space-age metal for advanced aerospace vehicles. It is lighter than aluminum and more rigid than steel, but it's brittle. Its atoms can't slip in enough directions to permit the individual metallic grains to deform without cracking. When a small crack occurs, it can grow rapidly and cause an entire component to fail.

Researchers believe, however, that controlling impurities and processing may correct this shortcoming. By preventing oxide particles from growing when beryllium is exposed to oxygen, investigations indicate the metal's ductility improves. If progress continues, beryllium may equal or surpass many other structural metals and alloys now used in aerospace construction. Other metals may also benefit from the research which now concentrates on beryllium.

Word Arrangement, Careful Syntax, Are Clues in Talking to Computers

Computers have come a long way but precise language still is required when talking to one. No essential part of the sentence structure may be eliminated and that detracts from the machine's speed value.

People usually get their ideas across to others even though they speak in incomplete sentences, which are ambiguously phrased. San Diego's Naval Electronics Laboratory Center technicians now want computers to know the parts of speech and the principal parts of a sentence. With such knowledge stored in a computer memory bank, an incomplete or improperly phrased question will not stop the information flow.

In addition to teaching computers to recognize cer-

tain implied words, NELC is also trying to "teach" computers to give multiple answers to questions such as, "What is the crew complement of USS *Constellation*? USS *Kitty Hawk*? USS *Enterprise*?" The computer now requires a separate question for each ship.

The Naval Electronics Laboratory Center foresees a time when small, handheld terminals will be easily tied in to a master computer system for information. When that day comes, every household will have access to computer knowledge. NELC expects to be ready for such widespread computer use by having a prototype computer within four years which can respond to less than perfectly phrased questions.

New NELC Telephone System, Using Glass Fibers, Carries Voice by Light Signals

A one-of-a-kind telephone system, carrying one's voice by light signals pulsating through glass fibers has been developed at Naval Electronics Laboratory Center at San Diego.

Designed specifically for shipboard communication, this telephone system uses the capability of a new technology called fiber optics. The new system has been installed aboard USS *Little Rock* (CLG 4), Sixth Fleet flagship.

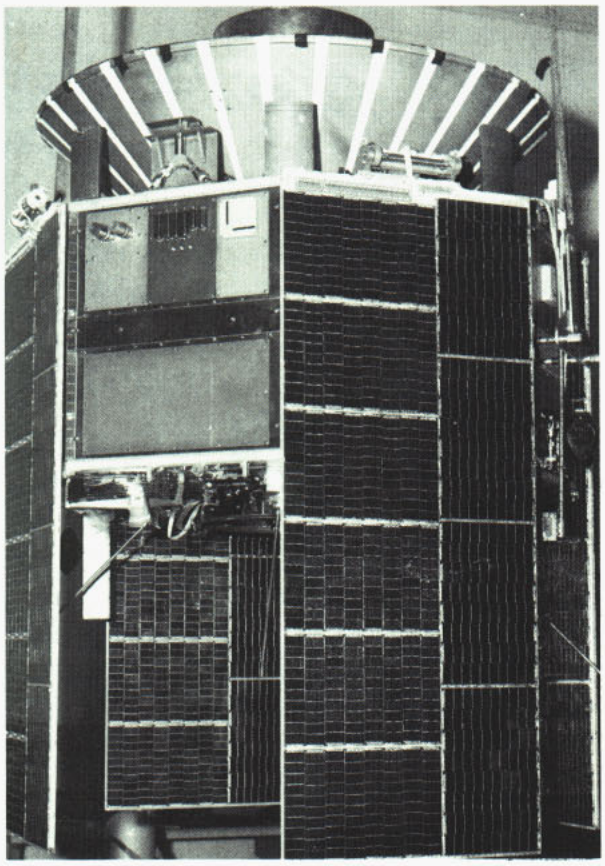
The system is secure because fiber optics cables will not emit or pick up electromagnetic radiation. This assures communication security and immunity from interference and cross-talk to a degree not possible with electrical cables used in ordinary telephones.

NELC's fiber optic telephone system is completely independent of any other communication system aboard ship. The ringing is readily distinguishable from other shipboard sounds by a pulsating, high-pitched, audible tone assuring immediate attention to the call.

Crystal Oscillators and Rubidium Atomic Clocks in Satellite Used for Global Navigation

The Naval Research Laboratory's experimental navigational technology satellite (NTS 1) is scheduled to be fired this year into a 7500-mile orbit from Vandenberg AFB aboard an Air Force Atlas F Missile. The mission of the 650-pounder is to measure the accuracy achieved by crystal oscillators and rubidium atomic clocks. These are used for an advanced system to provide precise time transfer, navigation and geodesy.

Heretofore, space radiation affected the crystal of satellites. The greater height of the NTS 1 will place it in orbit where most radiation is produced by electrons rather than by protons and will also put it into line sight for ground stations. By using improved shielding, NRL also hopes to improve the accuracy of its satellite.



Facing page: Mrs. Dana Small of the Naval Electronics Lab in San Diego hopes to develop a way to get computers to understand imperfect English. Above: NRL's new TIMATION 3 satellite designed, when in orbit, to provide an advanced system for navigation on earth.

The TIMATION Program, of which NTS 1 is a part, has, since 1964, attempted to increase precision and reliability of position fixing by pioneering development of a global navigation satellite technique named for TIMe and navigATION. Such a system would enable ships and aircraft to obtain highly accurate fixes of their position in any weather.

The TIMATION experimental system proposes employment of several satellites. A pilot or navigator would be able to make direct simultaneous measurements of ultrahigh frequency signals emitted by precision oscillators in two or more of these satellites.

In a global, triservice operational system based on the TIMATION concept, signals would be received automatically from the satellites and converted by a small computer to highly precise position elements. This allows a navigator to read his position and altitude very accurately at all times.

Plans for the system call for three phases of testing. The first would use four satellites, including an NRL satellite, NTS 2; the second phase would employ nine satellites and the final phase for the test system would raise the total to 24 satellites.

o NEW LAW REVAMPS VRB PAYMENTS

The Bonus Revision Act, recently signed by the President, will introduce a number of major and immediate changes in the awarding of reenlistment bonuses to members of the U.S. Navy. The major policy changes are listed below:

o Two-year extensions (for six-year obligor, etc.) will not establish eligibility for the Service Reenlistment Bonus (SRB). A minimum three year period will be required.

o Two or more extensions may not be combined to establish SRB eligibility. Eligibility based on an extension may not be continued by further extension(s).

o The Bonus Revision Act provides for two distinct zones of eligibility. Zone A includes reenlistments from 21 months through six years of active service. Zone B includes those with over six but less than 10 years of service. Obligated service beyond 12 years may not be credited in SRB computation.

Persons who have reenlisted or extended before SRB implementation will continue to receive earned VRB anniversary payments. More details about this new law will appear in next month's issue of ALL HANDS.

o NET-PAY-TO-BANK PROCEDURES OUTLINED

Navy members may have their net pay and allowances forwarded, within certain guidelines, to the bank of their choice. Basically, the rules which permit net pay credit to the member's individual account are as follows:

The amount to be remitted must be the full amount that would otherwise have been paid to the member.

Advice to the individual member, by deposit ticket or other means, is a matter between the member and the bank.

Application for remittance of one's check to a bank may be made through the disbursing officer on DD Form 1560. Discontinuance of payments may be made in writing at anytime by the member. Remittance authorizations are automatically canceled when a member goes on permanent change of station (PCS) or is separated. However, he or she may request a DD 1560 transfer form at the next duty station. Automatic cancellation also occurs when a member goes on temporary additional duty (TAD) and takes his pay record. On return to his permanent duty station, the member may verbally reinstate the arrangement of the DD 1560.

A notice to the bank of remittance cancellation, if required, is a matter of individual responsibility.

Net pay to bank members will be easier when the full pay Navy Joint Uniform Military Pay Systems (JUMPS) is instituted. Under full JUMPS, Navy members in PCS or TAD status will have optional rather than automatic discontinuance privileges.

o CONVENING DATES AND SCHOOLS CHANGED FOR SOME ADCOP SELECTEES

Some of the remaining 1300 Associate Degree Completion Program 1974 selectees who were not assigned to school last fall have had the convening dates for classes and school assignments changed because of funding reductions. These selectees should check BuPers Note 1500 of 24 Apr 1974 for confirmation of their

school assignments for the 1974-75 school year. School assignments have been made to achieve the best match between individual desires and the cost of the required move to college. Most selectees will receive one of their elected schools. A new list of FY 1975 ADCOP selectees is expected some time in June.

o NEW LAW EDUCATION PROGRAM FOR OFFICERS BEGINS

The Chief of Naval Operations has announced the start of a new law education program for Navy officers which will provide full PCS travel and military pay and allowances for up to 36 months of law school study. The program will replace the "excess leave" law study program.

Eligible officers must be O-3 or below and must have served on active duty at least two years but not more than six. Before applying for the program, applicants must take the Law School Admission Test or show successful completion of at least one semester of law school. Details for applying to the program can be found in OpNavNote 1520 (CNO MSG 060205Z/56 Apr 74).

o DESTROYER SQUADRON NINE SET FOR MOVE TO GUAM

A guided missile frigate and five other ships which will comprise Destroyer Squadron Nine will be transferred to Guam under the Navy's overseas homeporting program. The ships involved are USS Lockwood (DE 1064), Stein (DE 1065), Henry B. Wilson (DDG 7), and Kirk (DE 1087), all homeported in San Diego, and Preble (DLG 15) and Joseph Strauss (DDG 16), homeported in Pearl Harbor. The move will affect some 1815 military personnel, 1560 dependents and about 700 families. The ships will be phased in from March 1975 to August 1976.

o NEW SYSTEMS ENGINEERING COURSE AT PG SCHOOL

The Naval Post Graduate School at Monterey, Calif., will offer a new program of advanced studies to train systems engineers beginning in September. The new curriculum, called Weapons Systems Technology, will lead to a master of science degree in applied science and will qualify graduating naval officers for the subspecialty code 813 OP, Ordnance Engineering (General).

Curriculum includes mathematics, physics, chemistry, computer science, administrative sciences, flight dynamics, radar and lasers. The two-year program will be complemented by guest lecturers from fleet and Navy field activities, case studies and group projects. Information of these and other courses can be obtained by requesting a catalogue from the Naval Post Graduate School, Monterey, Calif. 93940.

o 19TH ALL NAVY CARTOON CONTEST READY FOR ENTRIES

The 19th annual All-Navy Cartoon Contest is now ready for your latest inspiration.

All entries to the contest must portray a Navy theme, must be drawn on white illustration board (8 in x 10-1/2 in) with black ink, and must include the name, grade/rate, social security number, duty station, mailing address with zip code or FPO, name of hometown and hometown newspaper, title or caption, and a signed release statement from the illustrator. Dependents entering the contest should include their age and name of sponsor and sponsoring

command. Top cartoons will appear in ALL HANDS Magazine.

Entries should be sent to the Chief of Naval Personnel (Pers-7211) by 1 Oct 1974. Check BuPersNote 1700 for further details.

o ARMED FORCES CHESS TOURNAMENT SET FOR 6-13 SEPT

The 15th annual Armed Forces Chess Championship Tournament will be held in Washington, D.C. on 6-13 Sep 1974. Competitors will be selected from, among others, winners of area chess tournaments; commands are urged to sponsor such tournaments under the direction of a person certified by the United States Chess Federation. Individuals should apply and nominations should be made to the Chief of Naval Personnel (Pers-7211) for places in the competition. More details can be found in BuPersNote 1700.

o ENERGY PROGRAM OFFICE ESTABLISHED BY NAVY

The Navy has opened another front in the fight to conserve energy by establishing in the Civil Engineering Laboratory (CEL) in Port Hueneme, Calif., an Energy Program Office. The office is assigned to plan and manage research and development of improved methods leading to reduction of energy consumption without impairing operational effectiveness. The office will analyze power sources, conservation of fuel and operation and maintenance procedures at naval facilities.

o MORE WOMEN TO ENTER FLIGHT TRAINING

The Chief of Naval Operations has expanded the evaluation program of women as naval aviators by approving the enrollment of a second group of eight women in flight training. Selection of the women applicants will be made in August 1974, for enrollment in the fall. BuPers says that all women officers and officer candidates who want to be considered should submit applications to the Chief of Naval Personnel (Pers-433E) before 31 Jul 1974.

Enlisted applicants may apply to Commander, Navy Recruiting Command (Code 311), also before 31 July. Details of the program and application procedures are contained in Article 6610360 of BuPers Manual and in BuPers Instruction 1120.35F.

All applicants must have earned a baccalaureate degree from an accredited college or university.

o AEGIS SYSTEM INSTALLED ON USS NORTON SOUND FOR TESTS

The Navy's advanced shipboard air defense system, Aegis Weapon System, MK 7, has been installed in USS Norton Sound (AVM 1) for at-sea testing this year. Naval Ordnance Systems Command reports that Aegis successfully completed its overall system testing milestone last November at the Aegis land-based test site at Moorestown, N. J. The Aegis is a totally integrated, fast-reaction, high fire-power, electronic-countermeasure-immune, shipboard anti-air missile syetem.

o USNS HAYES RECEIVES AWARD FOR RESCUE OF 36 IN NORTH ATLANTIC

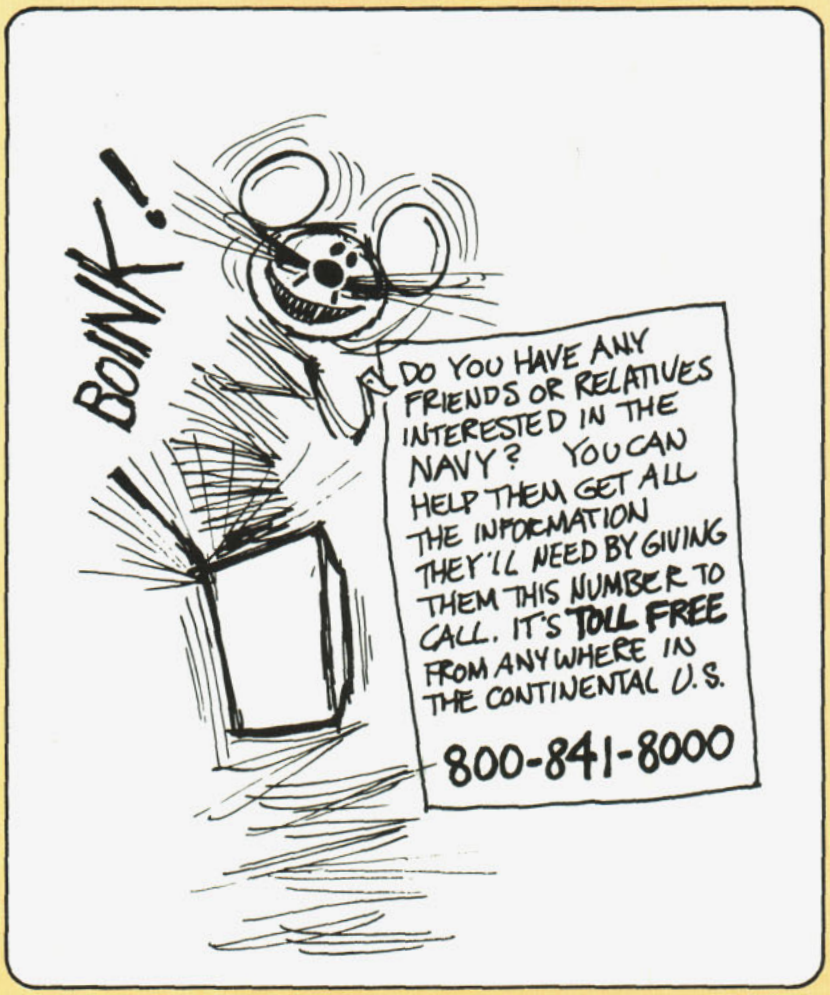
USNS Hayes, an oceanographic research ship operated by the Navy's Military Sealift Command, has won the annual Special Sea Rescue Award presen-

ted jointly by the American Institute of Merchant Shipping and the Marine Section of the National Safety Council. The award is for the rescue of 36 persons from the North Atlantic last October after they had abandoned the burning Greek freighter Eurygenes.

This marks the second consecutive year that Military Sealift Command vessels have earned the award. USNS Huntsville was honored in 1972 for the rescue of the flame-engulfed Fiona C after she had run aground on a reef off Puerto Rico.

o NEWEST OILER TO BE NAMED USS ROANOKE

The Navy's newest replenishment oiler will be named USS Roanoke (AOR 7) in honor of the city of Roanoke, Va., and the river which runs 410 miles through Virginia and North Carolina. This ship is the last AOR in the current program of seven ships. She is a member of the Wichita class and will be fitted with a helicopter platform and two UH-46 helicopters. This is the fourth ship to bear the name Roanoke.



From Washington, D.C. to the West Coast

BUPERS DETAILERS MEET THE FLEET

Over 600 of the Navy's finest young petty officers will soon be transferring to the duty station or school of their choice as a reenlistment incentive. Assignment guarantees were extended in March, when 59 detailers and seven rating assignment officers from the Bureau of Naval Personnel traveled to the West Coast and Hawaii on a detailers' trip.

The two-week whirlwind visit to ships, squadron and shore activities gave thousands of Navy men and women a chance to talk personally with the detailer for their rating. Captain Dan E. Fenn, Director of the Bureau's Enlisted Assignments Division, said he looked upon the trip as unique and very beneficial — both to the Navy and the individual.

"This trip is a little different from those we've made in the past," he said. "We've brought along the fleet commanders' requisitions in addition to enlisted assignment documents that we normally carry on detailer trips.

These documents, weighing in at more than a half-ton, provided essential background information on each person and a list of available billets, as well. The prime objective of the trip was to improve detailer/constituent relationship through face-to-face contact, and to try to solve any problems encountered. Additionally, detailers were able to discuss reassignment with personnel who were within four to six months of their PRD and to guarantee duty assignments for those eligible and recommended by COs for such a guarantee.

"Some people have an aversion to writing a formal letter to their detailer," said CAPT Fenn, "and often it is very difficult to reach the detailers by telephone.

"The BuPers detailers also gained an appreciation for some of the things that are disturbing people in the fleet.

"Not that the local career counselors aren't doing a good job;" he continued, "by and large I think they are. It's just that when you can get information straight

Above: Aviation detailers AT1 Robert B. Lutes (left) and AE1 Harold J. Woodburn bring their duties directly to the Fleet by visiting USS Constellation (CVA 64) in San Diego.

from the detailer, you can eliminate a lot of confusion."

On visits such as the West Coast trip, detailers do not bypass the chain of command. Before talking guaranteed assignment with a man, they must have a command recommendation ascertaining eligibility for reenlistment. The detailers are then in a position to extend an assignment offer from one of the requisitions published monthly by the manning control authorities, EPDOPAC, EPDOLANT and CHNAVPERS.

"There must be an authorized billet to order a man into. Sometimes we don't have the exact billet or areas the individual desires. In those cases we will usually make a counter offer from the billets we do have," CAPT Fenn said.

The billets are listed by the manning control authorities in priority order. Detailers must normally fill the billets according to this priority, but they do have some latitude.

"If a man wants to reenlist for a billet that is number 10 on the list, the detailer can go ahead and assign him," the captain pointed out.

CAPT Fenn stated there were no firm goals set for this trip. However, on trips in the past, as many as 20,000 people have been contacted individually.

"My radioman detailer stayed up through the night on three different occasions on this trip, to talk to watchstanders," he said. "Other detailers conducted evening sessions, talking with the men and their wives.

For the daily scheduled meetings, detailers made use of available working space in squadron ships or

from the desk of the Master Chief Petty Officer of the Navy

Face-to-Face Detailing: A New Approach in Communications

MCPON JOHN D. WHITTET

It is often difficult for Fleet sailors to contact their detailers. Telephone circuits in BuPers are nearly always busy and written correspondence often time-consuming.

In recent years, communications between BuPers and the Fleet have improved with better telephone service and new formats like the duty preference form currently in use. But I realize that it can still be difficult to reach your detailer.

Ideally, I suppose the best arrangement would be for Navymen and Navywomen to have the opportunity to visit with their detailers in person. Of course, it would be impossible for everyone in the Fleet to visit the Bureau of Naval Personnel, but recently a team of detailers did the next best thing . . .they visited the Fleet for the purpose of establishing direct, face-to-face communications with Fleet personnel.

During the period 3 to 17 March, a team of eight officers and 59 enlisted detailers visited the following areas: San Diego, Long Beach, Lemoore and San Francisco, Calif., Hawaii and Whidbey Island, Wash. The traveling detailers talked to Navy members from more than 650 units and individual commands. Approximately 56,000 people were contacted. The trip represented an enormous improvement in communications as literally thousands had the opportunity of discussing their duty preferences directly with individual detailers. Detailers were able to offer on-the-spot duty assignment guarantees as a reenlistment incentive for eligible personnel.

I accompanied the detailers on their trip. It was gratifying for me to watch so many sailors express their duty preferences one day and have their orders in hand the very next dav.

As might have been expected, this face-to-face, "straight scoop" approach was appreciated by all hands and proved to be extremely effective as a retention tool. It is significant that over 620 first-term reenlistment commitments were obtained and orders issued. And over 300 tentative reenlistment commitments were made, some of which have subsequently been firmed up since the group's return to Washington.

Although detailers have visited the Fleet on previous occasions, the success of this most recent trip is unprecedented, and I am pleased to learn that similar trips for other parts of the Fleet, perhaps even overseas are being considered for the future. Serious thought is being given to scheduling detailer trips on a semiannual basis.

We have come a long way in improving communications between the Fleet and BuPers since I received my first set of orders. The recent detailer trip is but one of the steps that have been implemented by the Chief of Naval Personnel toward this goal. I openly solicit your suggestions as to ways in which continued improvements in communications can be made.

on board ships. At NAS Miramar, Aviation Electrician's Mate 1st Class Harold J. Woodburn met with his fellow AEs.

"As detailers, the primary link we have with a man is the duty preference card," Woodburn told a group. "When your preferences change, you should send in a new form to let us know."

The AE detailer explained that other times a man should submit a new form are when he reports to a new duty station and *definitely* 10 months or so before his projected rotation date.

Woodburn added, "Often a man will ask why he didn't get the duty choice he put on his form. When I am able to explain to him the reason and show him the rationale behind his orders, he is usually satisfied I did the best I could for him." He said all the men in the Fleet want to know is "what's happening." It's the uncertainty that gets to them. Part of the uncertainties were overcome by meeting with the men personally. A lot of the questions were very basic and could be answered by a good, sharp petty officer in the shop.

"If your shop PO does not have the answer, then try personnel, or your career counselor. Another good source is LINK," Woodburn told the group.

He explained that most of the articles in LINK are written by the detailers. They write on subjects which they are currently getting the most questions about. LINK, published quarterly by the Chief of Naval Personnel for all hands to read, contains the names and telephone numbers of all the detailers. It also expands upon current programs and assignment opportunities.

The traveling detailers met with men and women of all ratings. They said problem areas were similar for surface, subsurface and aviation alike.

In a morning session aboard USS *Long Beach*, at the

Long Beach Naval Shipyard NCCS Robert L.Cole offered advice to men of the FT rating. Cole, although now a Navy Counselor, was an FT before converting. He understands fire control systems and the people who operate the systems. He also understands the Navy's manpower needs.

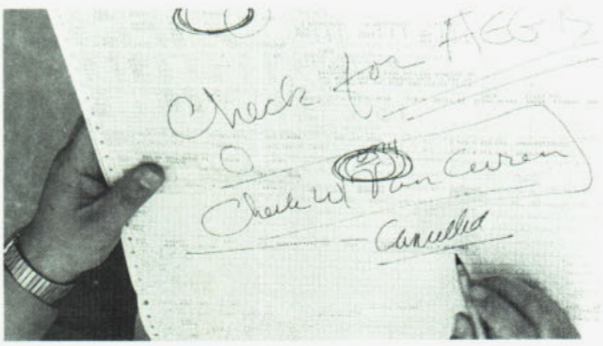
Taking a billet just to get shore duty someplace is not always the best move for a man's career, "especially," he said, "a general shore duty billet which means working out of your rating. In such a case you have to study those course books constantly. It's tough to keep on top of your rating when you're not dealing with systems on a continuing basis."

While talking with an individual in *Long Beach's* briefing room, Cole turned to the five other FTs who were there. "Some people with more time in the Navy may feel slighted by programs which give first-termers choice of duty for reenlisting." He paused then added, "I look at it like this — career men have to come from somewhere. If the first-termers don't reenlist, where will career men come from?" No one in the group disagreed with the senior chief's analysis.

After two days back in Washington, CAPT Fenn summed up the detailer trip: "When the trip started I didn't really have a feel for what to expect. I had no firm goals, but I'm extremely happy with the prospective gain of over 600 good career people for the Navy. All of these reenlistments cannot be fully attributed to the detailers however. Often the man's CO, XO, career counselor, division officer and leading petty officer had a man almost convinced to reenlist. Our arrival on the scene with an assignment guarantee was all it took for the man to come to a firm decision to reenlist."

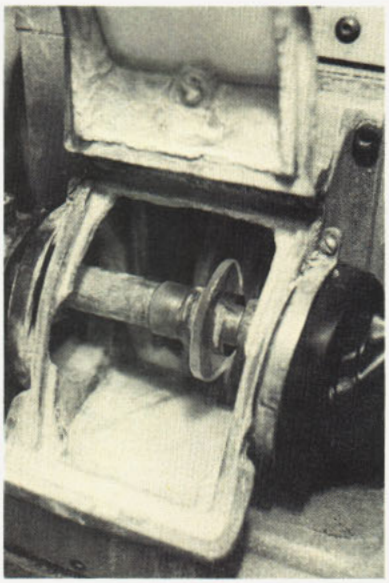
"The detailers," he added, "were not out to hold a 'fire sale' on reenlistments. Some people who wanted to take advantage of the program wanted transfer prior to their PRD, or else go to a location where no billet existed for them. These people could not be accommodated during the trip; however, the groundwork was laid for a later assignment. The detailers did not offer the men anything more than anyone, similarly eligible, can get by corresponding with his detailer."

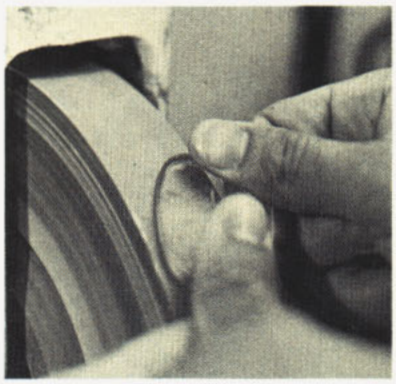
— Story and photos
by PHC Charles L. Wright, USN



Facing page: CAPT Dan E. Fenn and his detailer team arrive in San Diego (top). Despite a mistake in the "NASNI" abbreviation, the sign informs local San Diego Navy personnel of the detailers' arrival (middle). Shortly after arrival, the detailers sort through 1070 pounds of enlisted assignment documents (below). Above left: Detailer AE1 Harold J. Woodburn (center) confers with personnel of his rating in the electrical shop of VF-121. Top: Behind a maze of electrical cables aboard USS Long Beach (CGN 9), FTM1 Keith Harber listens to detailer NCCS Robert L. Cole, who makes notations on Harber's enlisted assignment document (above). Below: AE1 Woodburn also goes to the flight line of NAS Miramar to answer detailing questions personally.

A New Look at Navy's OPTICAL SERVICE —It's for Your Benefit





Far left: HM1 Keith Woebke marks off the optical center of a new pair of lenses. Left: A diamond-impregnated grindstone helps speed the shaping of the lens. Above: A water-fed grindstone is used to smooth and bevel the edges of the lens.

I knew I shouldn't have balanced my glasses on the toothbrush holder to begin with. There was time for a quick grab before they bounced off the sink. And time for another miss before they shattered against the tile of the bathroom floor.

Happily, we Navy types get a second pair of glasses each time we order them. Unhappily, this was the second pair. Now I can look forward to two weeks or more of myopic squinting.

The dispensary at the Norfolk Naval Air Station is easy to find. But, once inside, it's embarrassing to stand directly beneath a door sign to read it. It's also tough on the neck.

Finally, I'm directed to a small, detached building behind the dispensary. The Optical Shop, a tenant of the dispensary, is a branch of the Naval Ophthalmic Support and Training Activity.

"Have a seat," says Chief Hospital Corpsman Robert Norman, "I'll be right with you." It's then I notice the sign. It was obviously made for people who should be wearing glasses and aren't, because even I can read it. "GLASSES MADE WHILE YOU WAIT," proclaim big block letters.

"Maybe while someone else waits," I'm thinking, "I've got better things to do."

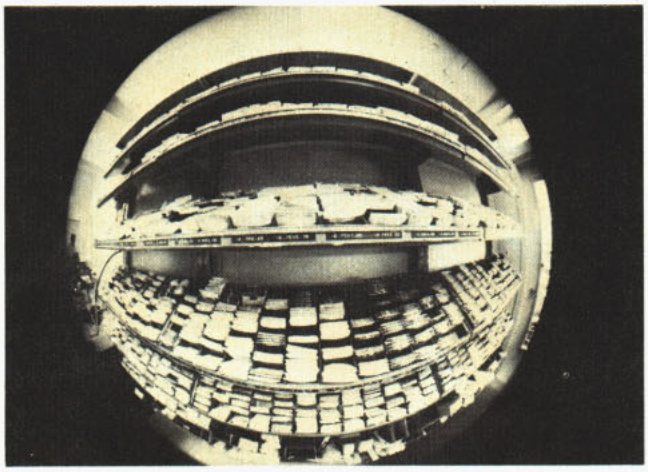
"Sorry to keep you waiting," Chief Norman apologizes as he hangs up the phone. A quick glance at my lens prescription and, "Relax for a couple of minutes and I'll have your glasses for you."

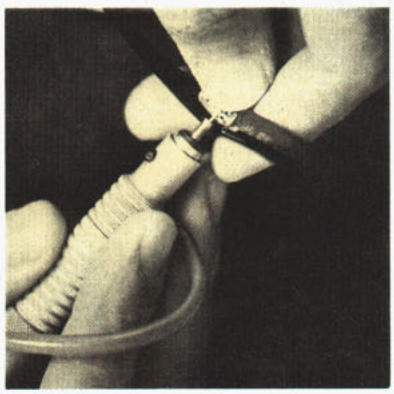
"You're kidding," is my reaction. "Nobody can make a pair of glasses in a couple of minutes."

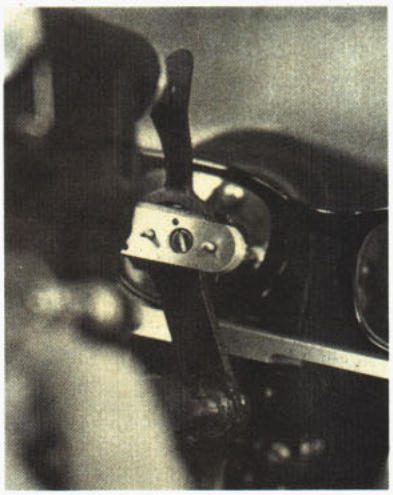
Seeing is believing, so Chief Norman lets me watch the process of building my new glasses.

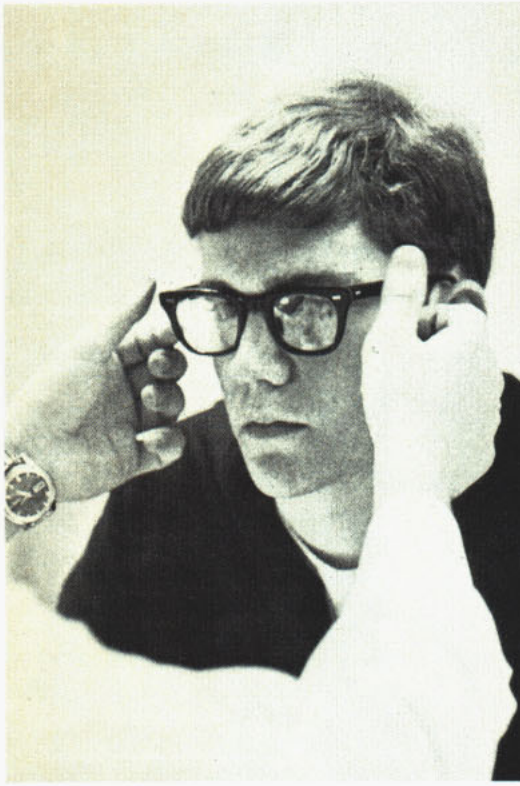
Walking over to a library of lenses, HM1 Kieth Woebke explains, "This is our supply stock of pre-ground lenses. If you had needed bifocals we'd have had to order them, but for single vision correction we can make any pair on the spot." He selects a pair of lenses which match my prescription and inserts them in a microscope-type instrument. He says something about marking off the optical center of the lens, while I nod with what I hope is an intelligent expression.

From there he moves to a simple grinding stone built into a complicated machine. As the excess lens glass is being ground away, I begin to see the familiar shape of an eyeglass lens taking form. Meanwhile, Petty Officer Woebke is explaining how the diamond-impregnated grindstone allows lens glass to be ground









Left above: The unit maintains an on-hand supply of preground, single-vision lenses. Far left: A power-driven screwdriver speeds assembly of the frames. Left: Final check of the focus. Above: Within 10 to 15 minutes, HMC Robert Norman is checking the fit of the glasses.

so much faster now than in the past.

The adjacent grindstone features a controlled drip of water which keeps the stone moist. Here, HM1 Woebke smooths and bevels the edges of the lens.

"We temper the lens next," says HM2 Philip Delphin, gently balancing my lens in a three-pronged holding device. A flip of a switch and my lenses are mechancially swallowed by a small kiln. "This heats the lens to 1300 degrees and stops short of the melting point of the glass.

The timer nudges zero and my lenses reappear, to be greeted by twin jets of cold air. This quick cooling creates an outer tension which gives the lenses their strength," says HM2 Delphin.

The next device I recognize. It's the old steel ball trick that I never really believed on television. HM1 Woebke takes a ⅝th-inch steel ball and drops it from more than four feet smack on the lenses. Just like on TV, they don't break.

Chief Norman pops my lenses into a frame, checks their focus, then hands me my glasses.

It's been nine minutes since he said, "Relax, I'll have your glasses for you in a couple of minutes." Average time for a pair is 10 to 15 minutes.

Nine minutes ago I was the only customer in the place. Now it's busy. "The three of us put out an average of 70 to 80 pairs of glasses a day," says the chief. "We're here strictly on a walk-in basis. All you need is your prescription or an old pair of lenses we can read. We'll take care of anybody, either active duty or retired."

Remembering my own surprise of a few minutes ago, I watch for the reaction of others as they're taken care of.

The younger sailors seem to accept the concept of "glasses while you wait" as perfectly normal. Most of the reaction comes from the old salts, those who have been through the weeks of waiting in the past. The crusty chiefs and four-stripers are all surprised, some to the point of downright disbelief, and all elated at the concept.

These are more than satisfied customers. As one four-striper put it, "The service is great. It's something that really works."

— Story be JOC Tom Streeter
— Photos by PHC Bill Hamilton

AUCTION

"Now what are you gonna give for this? Do I have 25 dollars? 25? 25? Who will say 20? 20?

"Fifteen!"

"I have 15, 17.50, 15, 17.50. Got 17.50, who'll go 20?"

It's local auction time once again at the Port Hueneme Construction Battalion Center (CBC) in California. Auctions of surplus government equipment are held about every other month at CBC by the Defense Property Disposal Office (DPDO), a tenant activity at CBC.

In one recent auction, 150 bidders vied for 217 lots of merchandise, containing about 700 items of surplus government equipment. About 50 per cent were successful, with bids ranging from a low of $2.50 for a power lawnmower to a high of $325 for a slightly damaged pickup truck.

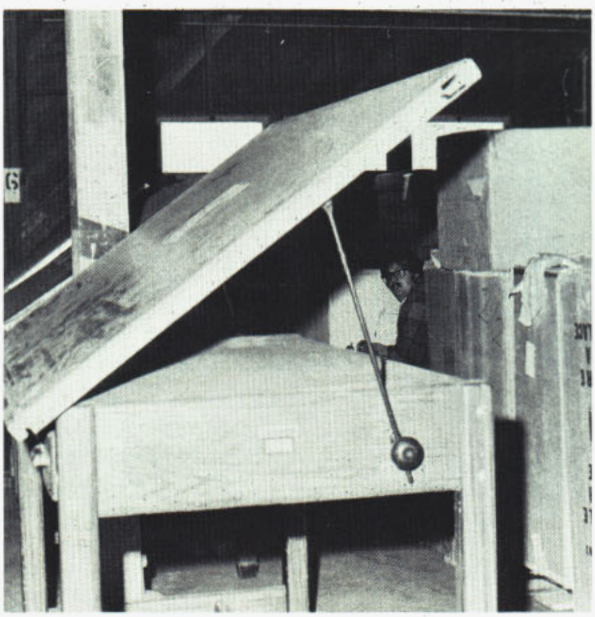
DPDO is part of the Defense Property Disposal Service in Battle Creek, Mich. This agency makes every effort to see that equipment is reused rather than sold, but when reuse isn't feasible, auctions are occasionally held so the government and American people can realize a full return from the equipment.

Other bargains picked up by the buyers from as far away as Idaho and Utah included an air-conditioner for $10; a steam generator — $20; hydraulic jacks — $130; microwave power meter — $15; and 21 wood beds which went for a total of $120.

The $10,500 realized from the auction will be returned to the Treasury through the Defense Supply Agency as has other money taken in sales at CBC. These sales are saving taxpayers many of their dollars.

Local auctions such as this one show how DPDO at the Seabee Center disposes of unneeded equipment of government activities in the Port Hueneme area. This includes Army, Air Force, Marine Corps and Navy activities within a 100-mile radius of CBC and ships in port.

James W. Eggenberger, resident DPDO, says, "Our first concern when we receive equipment for disposal is whether or not it can be used by another DOD activity or a government agency such as HEW. In this light, DSA publishes a catalog of items turned in to us. The catalog is widely distributed. If users are found in the government family, they can have the



items at no charge except for moving and handling fees."

During fiscal year 1973, DPDO redistributed several thousand pieces of unneeded or excess material to other Department of Defense activities. This has been calculated as a $9.5-million savings to the taxpayers.

If DPDO fails in its effort to find a government user, the item is put up for sale either through a local or national auction or through a sealed bid.

Through sales in FY 1973, Port Hueneme returned more than $900,000 to the Treasury. Even higher proceeds are expected in 1974 with more than $350,000 already turned in.

Items sold by DPDO have ranged from bones and suet from the CBC commissary store to a radio-space antenna from Point Mugu. The condition of sale merchandise ranges from excellent through serviceable after repairs. Stock on hand in three warehouses and a 12-acre outside storage area has a value of $16 million. Forthcoming sales will feature earthmovers, dump trucks, furniture, portable DC generators, office machines, two railroad boxcars with compressors mounted inside, and an assortment of electronic equipment.

When an auction is scheduled at CBC Port Hueneme, DPDO sends flyers to all post offices in the regional area. Prospective buyers will be mailed a prospectus covering a given sale on request. Sales are open to everyone except DPDS employes and their relatives. Purchasers are responsible for the equipment they buy and must pay for and take possession of it normally within five working days of the auction. Although cash is preferred, successful bidders can pay for their purchases by certified or personal check or by money order.

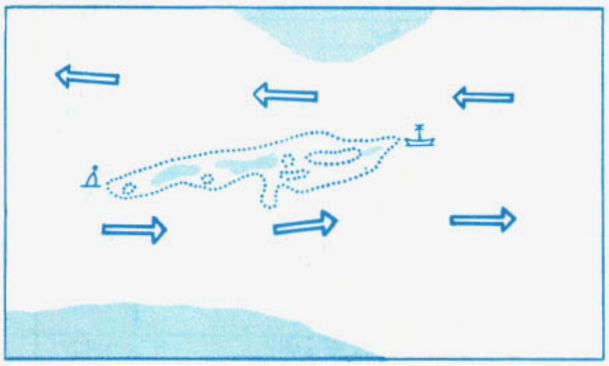
Besides the values and bargains which can be obtained, auctions like these are a lot of fun to boot. And, as a used furniture dealer from Ventura says, "Sometimes I don't buy anything, but I wouldn't miss a sale. Guess the sound of the auctioneer's voice gets in your blood."

"Now who'll give me 20 dollars, 20, 20 once, twice, sold for a 20-dollar bill."

— Story and photos by Ernest R. Sutton

TRAFFIC

Mariners who navigate the uncrowded open sea eventually must pass through congested areas of the ocean. To assist mariners in avoiding collision, routing and traffic separation schemes have been developed by an international group — the Inter-Governmental Maritime Consultative Organization. Most people refer to this organization as IMCO. The United States representative at IMCO is the Coast Guard. The organization itself is a specialized agency of the United Nations responsible for efficiency and safety of navigation and the prevention of maritime pollution by ships.



Traffic separation using natural obstacles, geographically defined objects.

"Traffic Separation" schemes are recommended by the "littoral states" — that is, by the coastal states. These recommendations are then considered by the IMCO Subcommittee on the Safety of Navigation and passed on to its Maritime Safety Committee for adoption by the IMCO assembly. There are now about 50 schemes worldwide which have been adopted by IMCO.

Traffic separation in crowded international waters is both old and new. For example, the practice of following predetermined routes originated back in 1898 when it became obvious to the companies operating passenger ships across the North Atlantic that they should take some safety measures. The regulations which were then adopted were later incorporated in international conventions covering the safety of life at sea.

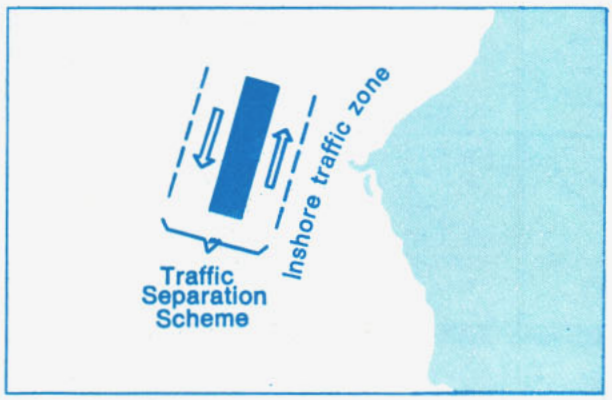
It was, however, not until 1961 (after the Safety of Life at Sea Convention of 1960) that an international study group undertook the task of separating maritime traffic in the Strait of Dover. The study was subsequently expanded to include other areas where statistics indicated a high risk of collision. The results were concrete proposals for the adoption of traffic separation in several congested areas and the development of certain basic principles as well. These were adopted by IMCO. The organization further developed these principles and the basic concept of separating opposing traffic to apply to many other areas throughout the world.

IMCO also provided the leadership needed to ensure that contracting governments fulfilled the obligation arising from the 1960 Safety Convention and that their ships followed, as far as possible, approved routes separating opposing streams of traffic.

There are a number of ways by which waterborne traffic can be separated; Here are a few:

• Separation zones or lines can be established. Ships navigating in opposite (or nearly opposite) directions keep in lanes to the right-hand side of the zone or line.

In such cases, both inner and outer limits for the traffic lanes are established. These depend on local conditions such as traffic density, prevailing hydrographic and meteorological conditions, space available for maneuvering and other factors. Whenever possible, the outer limits provide sufficient space for navigation by ships not in the traffic lanes.



Example of separation of traffic by establishing inshore traffic zones.

• A similar traffic pattern can be established by employing natural obstacles rather than buoys to separate traffic. Such obstacles could be islands, shoals, rocks or wrecks — anything which would restrict a ship's free movement and provide a natural division for opposing streams of traffic.

• Not all ships, of course, can or want to follow traffic schemes even in relatively congested areas. For such vessels, inshore traffic zones have been established. These have an adequately defined border on the traffic lanes which carry through traffic. Vessels which, for their own reasons, need latitude in their

SCHEMES

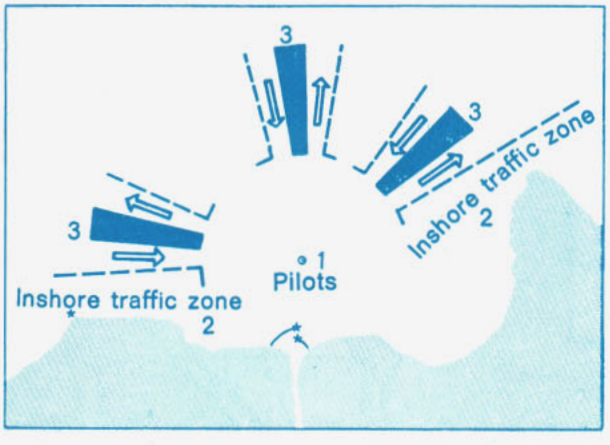
navigation, or which must stick close to the coastline, can use the inshore zone and, with vigilance, avoid ships coming from the opposite direction. Vessels not using traffic separation schemes are admonished to avoid them by as wide a margin as possible.

When ships converge on a point or a small area from various directions, sectors are usually established to avoid collisions. Such focal points include port approaches, sea pilot stations, positions where landfall buoys or light vessels are fixed, entrances to channels, canals, estuaries and other such features. The number of shipping lanes within these areas, their dimensions and directions depend mainly on the type of the local traffic.

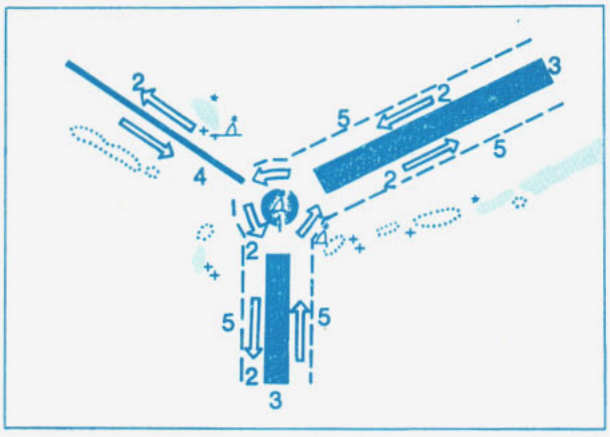
Another scheme for keeping maritime traffic untangled involves traffic circles intended to facilitate navigation at focal points where recommended routes meet. At such points, traffic is organized to correspond with rotation schemes which a motorist would recognize as a traffic precautionary area.

To facilitate navigation in such places and to comply with steering instructions in the Rules of the Road, ships are advised to move in a counterclockwise direction around a specified point or zone until they reach turning points where they join the appropriate lane. It might be noted here that the concept of steering a circular course is unacceptable in the United States because it is considered to be impractical. In some cases, circular steering would be a violation of statutory Rules of the Road.

When precautionary areas are circular, the radius of the traffic circle depends on local conditions. The circles are generally established around buoys, light vessels or geographically defined objects.



Separation of traffic by use of sectors at approaches to focal point. (1-focal point; 2-inshore zones; 3-separation schemes for main traffic.)



Separation of traffic by introduction of traffic circle or roundabout intended to facilitate navigation at focal point.

Naturally, traffic separation schemes would be for nought if ships using them didn't conform to the "International Regulations for Preventing Collisions at Sea," commonly called the "International Rules of the Road." These apply to all ships which navigate in any routing system but there are a few which apply to traffic separation in crowded waters. For example, International Rule 10, which was adopted in 1972, applies to vessels navigating in or near traffic separation schemes adopted by IMCO.

Ships navigating along lanes should keep to the right-hand side of the separation line, separation zone, or focal point at a traffic circle. Ships which join or leave traffic lanes should, whenever practicable, do so at a point where the lanes end. Ships which must join or leave the lanes from the sides should do so at as small an angle as practicable. Ships navigating within traffic lanes should ensure, so far as is practical, that their courses conform with those of lanes and avoid crossing traffic lanes. Ships crossing traffic lanes should, so far as practicable, do so at right angles.

A separation zone should be used only by crossing ships and only then to avoid immediate danger. Outside limits of traffic separation schemes and limits of inshore traffic zones should be regarded as the boundaries at which crossing or joining ships should start to maneuver.

There is no doubt that there's a certain freedom at sea which landlubbers can't appreciate. Freedom from traffic regulations, however, is not always a part of that freedom.

— Robert Neil

Ferry Boat Skipper

Who in the Navy transports approximately 1000 vehicles a day over water between two points?

Boatswain's Mate 1st Class Darwin Earl Hartman operates *Moku-Holohele* (YFB 87), the Navy's only regulation yard ferryboat. Hartman, who makes the trips between Pearl Harbor and Ford Island — home of the Navy's Third Fleet — is attached to the Naval Station Water Transportation Command in Pearl Harbor, Hawaii.

Hartman rotates on eight-hour shifts with four other crews. Each crew is made up of a craftmaster, an engineman, an electrician's mate and a seaman. Their schedule is three days on watch and two off.

"It's like being the CO of a ship," Hartman says. "You become totally responsible for everyone who crosses the ferry ramp." He became the command's instructor for the ferryboat system after his arrival in January 1970. As new personnel report aboard for duty, they are given underway training by him.

The indoctrination includes showing the individual the craft, instructing him in proper operation of all equipment aboard and how to safely load and unload the ferry. Instruction in the Inland Rules of the Road and what authority they have for various situations is especially important. One of Hartman's responsibilities is to observe all the loadings and unloadings.

As the only boatswain's mate 1st class craftmaster assigned to the twin-engine, 450-ton ferry, his job is a critical one — not only to his passengers, but to other ships entering and leaving Pearl Harbor. His orders come from the commanding officer of the naval station.

The Harbor Control Radio has to be monitored

constantly," he says. "If there are any large ships arriving, you need to know about it before you both meet in the middle of the channel."

As a career Navyman, Hartman, with almost 18 years' service, has indicated the possibility of staying for 30.

Reminiscing over his past experiences on the ferry, Hartman recalls one humurous event that he witnessed when a driver drove a car off the ramp while the ferry wasn't in the slip.

"The car came speeding down to the pier — it was a special services station wagon — and drove right off the other end," he said. "Luckily the man wasn't hurt," he said, "but we had to have a crane pull the car out."

The ferryboat skipper has made a great many dockings since his tour started here four years ago. With the 10-minute ride between islands, an approximate two-mile distance, he figures close to 13,000 dockings of the ferry.

"When I finally retire, I'd like to buy a mobile home and travel," he says. "I may even take a ride on a ferryboat."

— Story and photos by PH1 William B. Fair

Profiles of the Fleet

There's no such word as "only" in this Navy

Landing Craft To the Rescue

There's no such thing as an "only" in the U.S. Navy. Before the above piece could go to press, ALL HANDS received another report on a ferryboat operation. Here it is:

Two Charleston-based Mine Warfare Force landing craft arrived recently at Hilton Head Island off South Carolina's coast to provide emergency resupply and "ferryboat" transportation service to stranded resort islanders.

Hilton Head Island, about 90 miles south of Charleston, was cut off from the mainland recently when a heavily loaded barge struck the James F. Byrnes Bridge.

The two amphibious craft, a landing craft utility (LCU) and a landing craft mechanized (LCM), left the Mine Force piers in answer to a request for aid by the governor of South Carolina.

The LCU and the LCM carried vehicles, passengers and cargo between the isolated island and the mainland and also aided at the scene in whatever other

capacity they could be of use.

Both craft are assigned to Mine Squadron 10 which is a unit of the Mine Warfare Force at the Charleston Naval Station.

The LCU and the LCM are normally used by the Mine Force and MineRon 10 to lay and retrieve drill mines for minesweeping exercises and for other utility purposes.

The Mine Warfare Force answered the call for help at the direction of the Commander in Chief of the U.S. Atlantic Fleet.

LCU 1641 and the LCM are skippered by Senior Chief Boatswain's Mate Ralph A. Ruppert and Boatswain's Mate 2nd Class Ira G. Fisackerly, respectively.

— Story and photo by JOC John Gravat, USN

Profiles of the Fleet

He Knows What's Where and When

A young naval officer aboard the guided missile cruiser USS *Oklahoma City* (CLG 5) has a monumental job — minding the pulse of the U. S. Seventh Fleet. Lieutenant (jg) Dennis M. Ryan is constantly aware of the location and mission of 70 ships operating in 30 million square miles of the Western Pacific.

"It takes quite a bit of paperwork and it's more or less an elaborate filing system, keeping track of everyone," says Ryan. As assistant scheduling officer on the staff of the Fleet Commander, he occupies a key position in helping the command decide which ships will go where and for what purpose.

A recent month was a particularly busy one for LTJG Ryan, who participated in a week-long scheduling conference at Baguio, near Manila, in the Republic of the Philippines. Here the operating schedules for the upcoming months were laid out by the Fleet Commander and his task force commanders from all parts of the Western Pacific.

Despite long, daily conference sessions, LTJG Ryan found time to do some sightseeing and shopping with his wife, Nancy, who flew in from Japan. "Since we came to Japan in September 1971, Nancy's gotten around quite a bit," he says. "A year ago, she went on a wives' tour to Hong Kong, Bangkok, Singapore and Taiwan."

When the ship is at sea, Mrs. Ryan usually remains in Yokosuka with their two-year-old son, Casey.

USS *Oklahoma City* operates out of Yokosuka under the Navy's Overseas Family Residence Program, which reduces family separations by locating the families of crewmembers in overseas countries near a unit's operating area. The plan works out well for the Ryans.

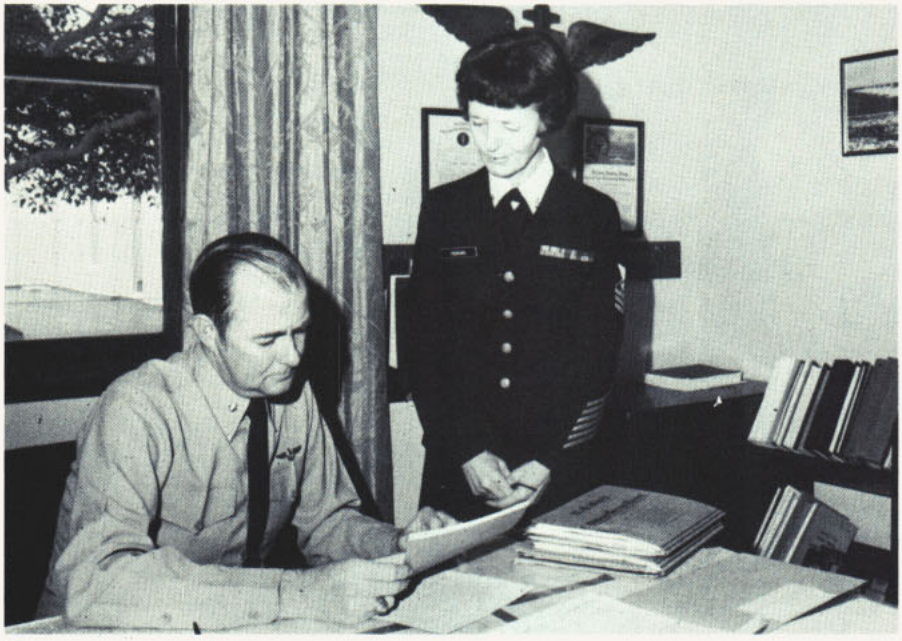
"We enjoy living in Japan very much," says Ryan. As a matter of fact, Nancy is hoping that my next tour will be another overseas station."

A 1970 graduate of the Naval Academy, LTJG Ryan spends much of his off-duty time at sports. He is a member of *Oklahoma City's* basketball team and has played against other U. S. and foreign teams in almost every friendly country in the Western Pacific. An avid jogger, too, he logs about seven miles daily, weather permitting. "It's one of the inexpensive things to do wherever you go, and it helps me stay in shape and keep my waistline down," he says.

In his present assignment LTJG Ryan is keeping more than himself in trim. The job he is doing contributes significantly to the fighting trim and combat readiness of the world's most powerful fleet.

— By PH1 Tom Geren

The Leading Chief is a Lady



Audrey Perkins is a pleasant, soft-spoken person. Her voice is quiet, her dark hair is pinned back neatly, and her clothing is immaculate. Around her, you get the impression of quiet efficiency combined with knowledge, experience and assurance.

Audrey is a chief yeoman who has performed her role during a period stretching from World War II through the Korean and Vietnam conflicts up to the present.

Her current assignment is as administrative supervisor of the military personnel office at the Naval Postgraduate School. She is responsible for a staff of nine military and civilian workers who handle all the personnel work for the school, including the records of Navy, Army, Air Force, Marine Corps, Coast Guard and foreign miltary students.

It's a heavy workload — its results determine the pay, assignments, benefits and historical records of those who are entrusted to her care.

She is "Chief Audrey" to her co-workers. "You couldn't ask for a better boss," said Ed Sablan, a petty officer 1st class, working on the staff. "She never asks people to tackle jobs she would not do herself. She is frequently working in the office until late in the evening, making sure that everything is kept up to date."

Far left: YNC Audrey Perkins confers with CDR Dale A. Meyer. Left: YNC Perkins conducts business by telephone as part of her duties as administrative supervisor of the Military Personnel Office at Monterey. Left, below: YNC Perkins discusses an incoming job. Below: Coffee break!

That's been her way of life since 1943. Audrey's graduation from Pierce Secretarial College in Boston, Mass., gave her an opening to a career in business, but during World War II, she wanted to do more than just stand by, she joined the then newly formed WAVES.

"I was qualified as a secretary, but I really wanted to be an aviation machinist's mate," she said. "After my basic training at Hunter College in New York City in 1943, they sent me to Aviation Machinist's Mate School at Memphis, Tenn. Well, I graduated in the top half of my class, and received a rating of petty officer 3rd class on graduation. But when I got to my first assignment at the Naval Auxiliary Air Station at Kingsville, Tex., I lasted exactly one-half day. It seems I was the first WAVE any of the men had ever seen. They were all shy. I went to work in the hangar, and suddenly, all the men felt they had to put their shirts on and clean up their language. It was pretty stifling for them."

She put her secretarial school experience to good use in the office of the commanding offcer.

Audrey was discharged in October of 1945 but stayed on as a member of the Naval Reserve. In 1951, during the Korean conflict, she was recalled to active duty.

Her first assignment was to work for President Truman's Airport Commission, as secretary for the naval advisor on the staff headed by Lt. Gen. James H. Doolittle. Over the years that followed, she received other equally challenging assignments, such as that of personal secretary to some of the senior military officials who helped shape America's postwar history. For several years, she served on the staffs of several commanders and deputy commanders in chief of the Pacific Fleet. (She earned the Joint Service Commendation Medal while serving as personal secretary to CincPac Admiral Harry D. Felt.)

In the meantime, she's seen a lot of the world. Her travels, sometimes on orders, sometimes on leave, have taken her to Hong Kong, Taiwan, Japan, Thailand, Okinawa, Guam, Bermuda, and all over the U. S. and parts of Canada.

Just before her assignment to the Naval Postgraduate School, she was awarded the Navy Achievement Medal for superior performance in the Office of the Chief of Naval Operations. In the not-too-distant future, after more than 30 years of active and Reserve service, she'll be heading for retirement.

"I have really been blessed by the people I've worked with," she said. "There's a new, young Navy coming up now, and it's a chance for the younger people to get some of the excitement and glory. Me? I've loved every minute of it."

— JOC Scott Hessick, USNR.

Then—LTJG Donald Burrell a decade ago.

Profiles of the Fleet

Now He's Exec of NROTC at Prairie View

ALL HANDS Looks Back 10 Years

Profiles of the Fleet

A Man of Many Words

Stand Up and Sound Off

Make 250 speaking appearances to 250 audiences during a three-year period? Sounds like a professional lecturer — right? Wrong! This record has been achieved by an active duty naval aviator.

Commander Benjamin B. Woodworth, USN, has simultaneously been assigned to operational flying billets since he began speaking for Sea Power in 1971. Since then, he has continued to speak frequently while with Fighter Squadron 126, Training Squadron 19 and Staff, Commander Training Air Wing One. He is scheduled to assume command of Training Squadron 19 this fall. His extracurricular presentations are timely, professional and thought-provoking.

He has been speaking as a member of the CNO/Commandants Sea Power Presentation Program, established to carry the word of and need for strength at sea both to personnel of the Navy and to the civilian populace of our country. CDR Woodworth has appeared before many and varied audiences, including school assemblies and classes, civic groups, men's and women's organizations, and Navy personnel of many different organizations.

Ben Woodworth is just one of nearly 1000 speakers nationwide who are associated with the program who discuss frequently various aspects of sea power and sea power as it relates to American strength in today's world. Ben's participation is out of the ordinary, for the large majority of the Sea Power speakers either are retired officers or USNR officers who earn drill credit

Just about a decade ago, ALL HANDS carried an article about a young Navymen who had joined the sea service "to see the world." It appeared in the February 1964 issue (page 35) which we happened to be perusing not long ago. Here's a follow-up item on his career.

In 1946 a young Iowan named Donald Burrell enlisted in the Navy. Travel and adventure were his major aims — and also an opportunity to get a "rest" from school and studies. It soon became apparent that the latter was not to be — because, following boot camp, he was immediately sent to eight months of electronics schools. He found he had a real aptitude, graduating near the top of his Navy classes in the last four courses. And from then on, he was on his way. As he advanced in rate, he was sent to ET-B school, then sub school, then nuclear power school and instructor school. Thirteen years after entering the Navy, he was among the early master chief petty officers in the Navy. Still ETCM(SS) Burrell opted for more knowledge — he turned down an LDO appointment in favor of the Navy Enlisted Scientific Education Program (NESEP). After four years at the University of Kansas, he graduated with a degree in electrical engineering. Officer Candidate School at Newport, R.I., followed. Then, on 22 Nov 1963, the young seaman recruit who had left Iowa to join the Navy received a commission as a lieutenant (jg.), USN.

He's seen a lot of the world and varied duty since. LTJG Burrell served as an instructor at the Nuclear Power School, Mare Island; made lieutenant; became the electronics warfare officer in USS *Oklahoma* City (CLG 6); operations officer in USS *Gridley* (DLG 21); was selected for lieutenant commander. He is once again back at school, this time as executive officer of NROTC at Prairie View A & M College in Texas.

The point is: there is equal opportunity in the Navy. LCDR Donald O. Burrell is one example of how it can be achieved.

and retirement points for their speaking activity.

Relatively few active duty officers, such as CDR Woodworth, have become members of the Sea Power Presentation Team.

Although many off-duty hours are required to organize and mount a viable speaking program, Ben cites benefits which result from his activity. As can well be imagined, appearing before many and varied audiences provides an excellent opportunity for a naval officer to expand his horizons. Then there are awards for presentations, conferred by the Chief of Naval Operations. But most important, according to Ben, is a sense of accomplishment as one sees people gaining better appreciation of the importance of sea power to our country. An aware, concerned American populace is essential if the Navy is to maintain an acceptable readiness posture and attract quality volunteers in a zero draft environment.

The CNO/Commandants Sea Power Presentation Program is seeking additional erudite, aware, Regular Navy personnel, who are interested in speaking up for sea power. They can be particularly effective speakers because they bring a firsthand aura to their presentations.

Interested personnel should contact: Chief of Naval Operations (OP-09D), Special Studies and Presentation Group, Room 718, 801 N. Randolph Street, Arlington, Va. 22203. This activity can also be reached by phone. Call (202) 692-4468/69 or Autovon 222-4468/69.

WELDERS

Welding has been a skill essential to the Navy ever since the early days of steel ships. Training competent welders is a tough and expensive job, though. The Naval Technical Training Command may have come up with a way to save the taxpayers some dollars — and provide better training for the welders at the same time.

Researchers at the Naval Personnel and Training Research Laboratory in San Diego, Calif., an activity of the Memphis-headquartered NTTC, have developed an arc welding simulator now in use at the Navy's Hull Maintenance Technician Class "A" School and the Class "C" Welding school, also in San Diego. Basically, the simulator replaces both welding rods and the high amperage arc for beginning welders besides saving materials used in practice.

But the simulator was developed as the solution for a more complex problem: providing more effective training for novice Navy welders to perfect qualities now mandatory in today's Navy.

Manipulative skill is the most important part of welding. Like an artist, the welder leaves his signature on the seam. In the past, such skills were acquired through long periods of practice and experience. Other welders queued to admire the handiwork of a master.

Five factors influence a quality weld: 1) the arc length, 2) angle of the welding rod, 3) manipulation of the puddle, 4) current to the arc, and 5) speed of travel along with continuity of the seam. All five factors must be brought together simultaneously.

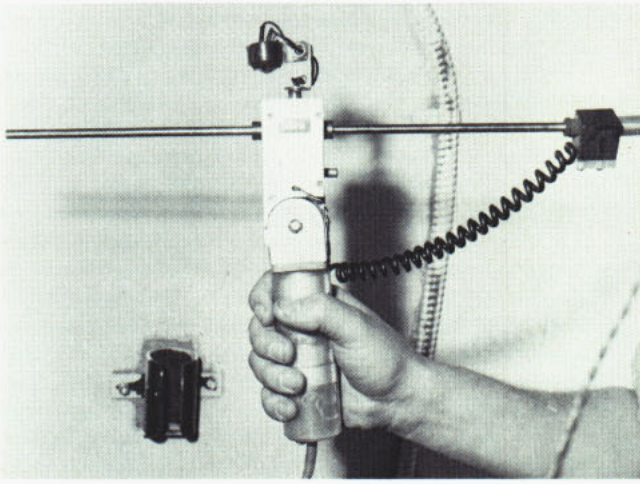
Any instructor knows that the interval between performance of a new skill and feedback about that performance affects the learning process. The quicker the student corrects his errors, the more likely he will not repeat them.

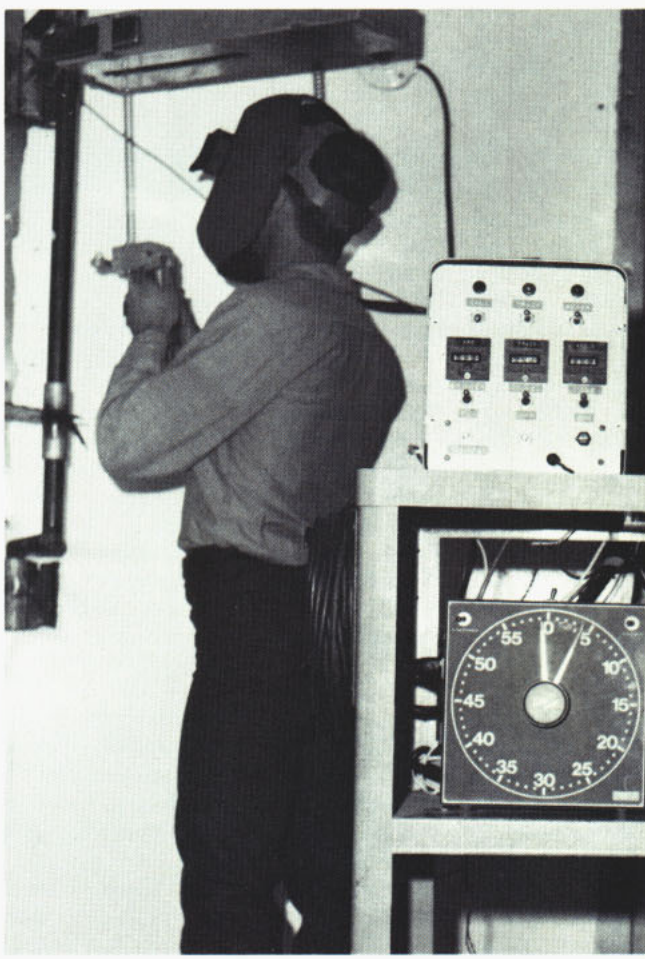
In classes, the error-correction interval has varied from minutes to several days. An instructor of 30 students cannot stand over each to note errors immediately. Even if he could, the weld might look satisfactory when examined visually but still be defective; other tests are needed.

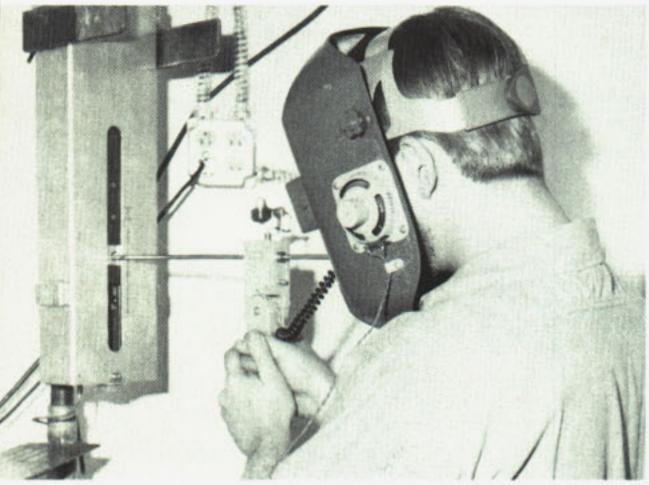
These tests, however, such as radiographic tests or X-rays, increase the interval between performance and feedback to days, lessening the effectiveness of the training. The student may have performed many other practice welds in the interim, picking up a lot of bad habits along the way.

Using the simulator, the student learns of his mistakes immediately and can correct his actions simultaneously.

The simulator is programed to respond to each of the above five factors. It senses any deviation from desired performance and signals the student when he's in error. This way, it provides automatic reinforcement for proper technique and helps the student avoid duplicating improper motion.







Above: Welders using new arc welding simulator.

The simulator is a motor-driven device duplicating both the rod holder and the welding rod. Also, a motor-driven target represents the welding path while digital recorders and error sensors provide feedback.

The simulator's plastic welding rod must be kept at the proper distance and angle from the moving target for the sensors to register a satisfactory arc. The rod also "melts" as the weld progresses. The student must keep manipulating it both downward toward the target and along the path of the seam.

Albeit, the simulator is still being evaluated by the Navy; eight of the devices are now in use at the Hull Maintenance Technician "A" School. School officials report the training period has been shortened by about 20 per cent. It is not certain, yet, that all of this savings in time can be attributed to simulator use, but its use can be partly credited.

For one thing, the simulators boost the school's enrollment capacity. With high amperage arcs eliminated, protective gear is worn only to eliminate future working conditions, and novices require less supervision. One instructor can handle more students with less interval between classes.

"Students still have to practice making actual welds," a school officer says, "but by the time they are graduated from the simulators, they know what they are doing."

For John Q. Citizen, the taxpayer, there are other dividends. Welding rod consumption has been cut by from 200 to 300 pounds a day, representing a savings of about $25,000 a year at the HT "A" School.

Evaluating the use of the initial simulators, Navy scientists reached these conclusions.

- It appears that the potential advantages of the simulator go beyond reduced training time and increased welder performance.
- Large scale use of the simulator could possibly enable welding schools to double the number of students by rotating blocks of trainees between simulator and weld-shop practice.
- It provides the means for ongoing shipboard training under conditions where actual welding practice is not feasible.
- And it could be used as a measuring device to select men with the greatest potential for success in the school.

Perhaps this last possibility is the most important. Says an instructor at the San Diego school, "Mainly, the simulator is allowing us to find the guys who just can't cut it. We're not wasting time and material on those who are just never going to be Navy welders."

As a result, what once was a 12-week course taught by conventional methods, is now being completed in an average time of nine and a half weeks by students in a self-paced program.

— LT Gary Minich

letters

Safety Goggles

SIR: As a safety professional, I was dismayed to see the photograph on page 28 of the January issue of ALL HANDS, showing a petty officer operating a burning torch with his burning goggles on his forehead rather than protecting his eyes.

Although he appears to have on dark glasses, it is doubtful that they offer industrial quality impact protection, flame retardancy or the proper shielding for the bright flame and infrared radiation. He could also benefit from leg spark protection. Likewise, page 30 displays a photograph of an enlisted man operating a reamer or drill without eye protection.

Safety of employees, both military and civilian, is a prime concern in these days of constraints. We cannot afford a lost eye or any other disability for that matter — B. L. B.

• *Thank you very much for calling our attention to the possible safety hazards. The photos in question (accompanying the "Fleet Maintenance Assistance Group" article) were posed, but your comments are correct nevertheless. We try to have photographs of Navymen at work at various machinery and equipment screened for safety violations and we try to pay particular attention to this type of photograph. – ED.*

• USS *Davis* (DD 395) — anyone interested in holding a reunion should contact David S. Fowler, 414 Turtle Street, Syracuse, N.Y. 13208.

• USS *California* — a reunion is planned for next year in Chicago, Ill. Contact Harold Bean, 220 East Pearl St., Staunton, Ill. 62088.

ALNAV WORD PUZZLE

Everyone knows that there are more ways to kill time on a midwatch (at least when it comes to telephone watches) than there are movable parts in a $10 wristwatch. Some people develop the fine art of staring into space, others set unbelievable records for coffee-drinking, while the standard operating procedure seems to be writing letters and working crossword puzzles. Those addicted to this last pastime go through puzzles at an alarming rate and fast become bored with the run-of-the-mill variety. The word puzzle is the product of one such watchstander — SKSN Theresa F. Robbins of the Naval Communication Station, Washington, D. C. — who felt that she could work up an interesting puzzle of her own — Navy style. Her effort is good and should prove interesting to those giving it a try. (After taking care of all their chores first.)

Rules for solving this puzzle are simple — just search out a word in *any* direction and circle it. Keep going till you have all the words listed in the answer section. As happens with many of these, there are other words in the puzzle not listed with the answers.So go ahead and try your skill. As with crossword puzzles, words can cross each other. Unlike crossword puzzles, words can start from the bottom and work up to the top and others travel diagonally.

R	E	W	O	P	A	E	S	Z	T	A	T	S	D	E	T	I	N	U
K	L	N	A	S	E	N	O	J	L	U	A	P	N	H	O	J	T	C
A	A	M	P	V	X	S	E	A	M	A	N	C	A	Q	Z	N	H	M
M	D	H	Y	T	E	V	N	E	M	O	I	D	A	R	E	L	V	J
I	M	E	A	L	A	H	X	N	A	V	C	O	M	M	S	T	A	E
K	I	R	S	I	P	I	S	T	O	L	C	N	H	O	A	E	N	N
A	R	X	N	U	A	P	Q	V	B	C	H	S	O	C	B	Q	C	I
Z	A	T	O	M	D	S	U	E	N	L	I	S	T	E	D	F	E	R
E	L	R	I	J	O	N	I	S	J	L	E	I	H	A	E	T	S	A
K	D	O	T	K	X	B	N	G	B	P	F	A	K	N	A	Z	E	M
B	T	L	A	W	S	K	I	A	H	W	Y	O	V	O	K	H	C	B
P	R	I	L	D	J	U	T	L	V	A	I	F	L	E	N	J	R	U
E	O	A	U	L	E	S	R	F	I	Y	H	F	U	F	E	T	O	S
C	P	S	G	X	E	R	B	V	K	T	A	I	R	C	R	A	F	T
I	E	T	E	E	L	F	S	P	E	Q	Y	C	G	A	O	Z	D	V
V	M	J	R	H	W	X	K	H	C	Y	R	E	K	H	H	V	E	A
R	O	O	D	P	G	M	I	L	I	T	A	R	Y	A	S	N	M	N
E	H	L	I	B	E	R	T	Y	V	P	E	D	O	C	A	E	R	P
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ADMIRAL
AFLOAT
AIRCRAFT
ARMED FORCES
ASHORE
BASE
CHIEF
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ENLISTED
FLAGS
FLEET
HIGH SEA
HOME PORT
JOHN PAUL JONES
KAMIKAZE
LEADERSHIP
LEAVE
LIBERTY
M A A
MILITARY
MOBILITY
NAV COMM STA
NAVY
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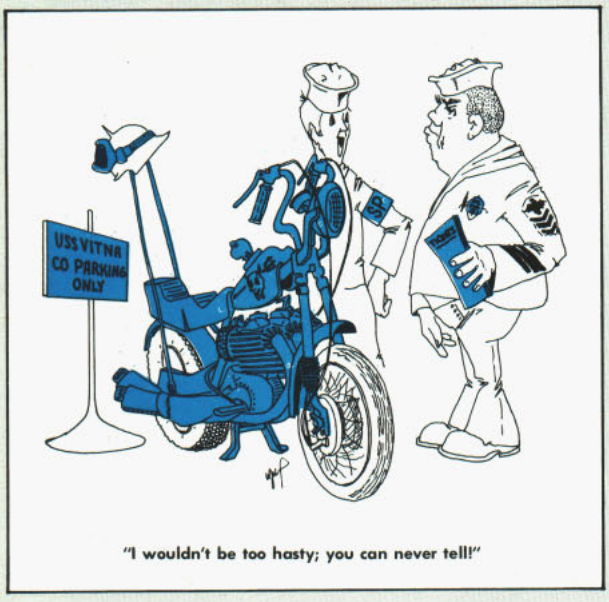
RADIOMEN
REGULATIONS
SAILOR
SEAMAN
SEAPOWER
SEC NAV
SERVICE
SHIPS
SHORE ESTABLISHMENT
SUBMARINE
SUPPLY
SURVEY
TRAINING
U C M J
UNITED STATES
VANCE*
WAVE

* A destroyer escort of some fame.

LCDR Roger M. Daily

"Go for a little swim with you? . . . Great! . . . I was afraid you guys were still sore about the seabag inspection!"

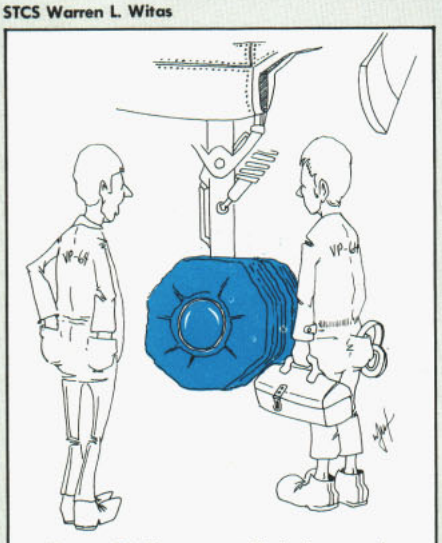
STCS Warren L. Witas



"I wouldn't be too hasty; you can never tell!"

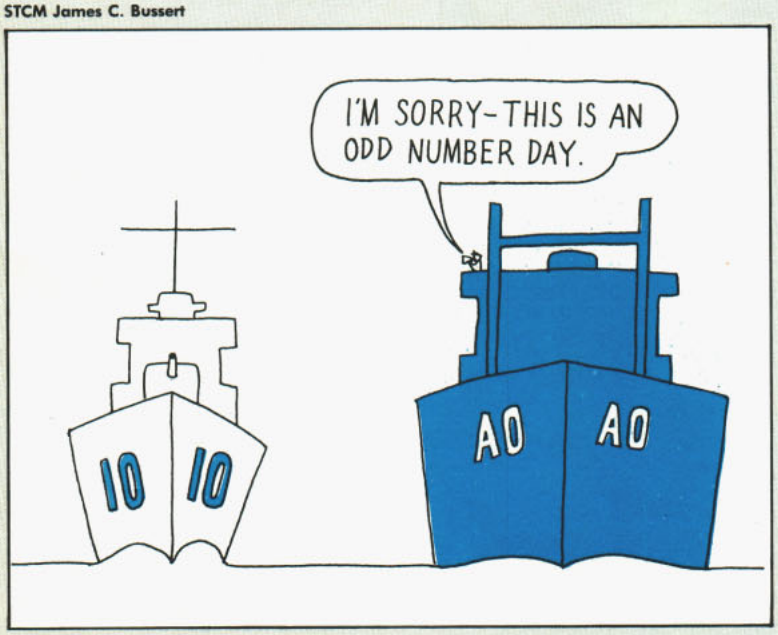
on the serious side

STCS Warren L. Witas



"I see LT Hennessy still brakes as he lands . . ."

STCM James C. Bussert



TAFFRAIL TALK

It was real news when Orville took to flight, when "Lindy" touched down in Paris, and when Glen orbited the earth.

Remember the first American manned space flights, when the launchings, missions and recoveries were made in full view of the world's TV audience? Not only did we witness the spectacular lift-offs, but also we were filled in by commentators crawling around and through mockup command modules, explaining the technical complexities of space-age wonders.

Equally, we were kept abreast of a mission's progress by use of comprehensive, animated films that described glide paths and various tasks being performed by astronauts. Later, we thrilled at viewing man walking in space, followed by his first step on the moon. To top this, all these marvelous feats ended in dramatic, breathtaking accounts of the fiery reentry into the earth's atmosphere, then to the recovery ship for on-the-scene coverage of the scorched capsule splashing into the ocean. Not so any longer.

A sizable portion of the population has become so accustomed to such magnificent feats that their significance has become matter-of-fact, judging from the return of our latest team which manned Skylab III.

For the first time since the manned space program began in the 60s, there was no "live" TV coverage of the return when they splashed into the eastern Pacific the morning of 8 February. The epic voyage, an 84-day space venture, was announced to the world by radio from the deck of USS *New Orleans* (LPH 11), recovery ship.

New Orleans was a scant three miles away from touchdown, guided by new satellite navigational gear that was brought on board for the Skylab mission. Everything about pick-up went smoothly for LCOLs Gerald P. Carr, USMC, and William R. Pogue, USAF, and civilian astronaut Dr. Edward G. Gibson, except for a three-minute period when the Skylab module floated upside down after splashdown.

From reports received, it appears Skylab III was a very impressive mission, contributing to the information needed for the joint U.S.-Soviet space link planned.

We've come a long way from the sands of Kitty Hawk and the Spirit of St. Louis but it would seem that — like all man's accomplishments — our venture into space has become commonplace, too. Not to us, it hasn't!

• • •

The challenging task of researching and writing the article in this issue (pages 2 through 9) on the Chief of Naval Operations, Admiral Elmo R. Zumwalt, Jr., was assigned to ALL HANDS staff writer Journalist 1st Class Tom Jansing. The newest member of the staff, Tom has already been recommended for an award for his recent report entitled "Signals in the Wind."

The All Hands Staff

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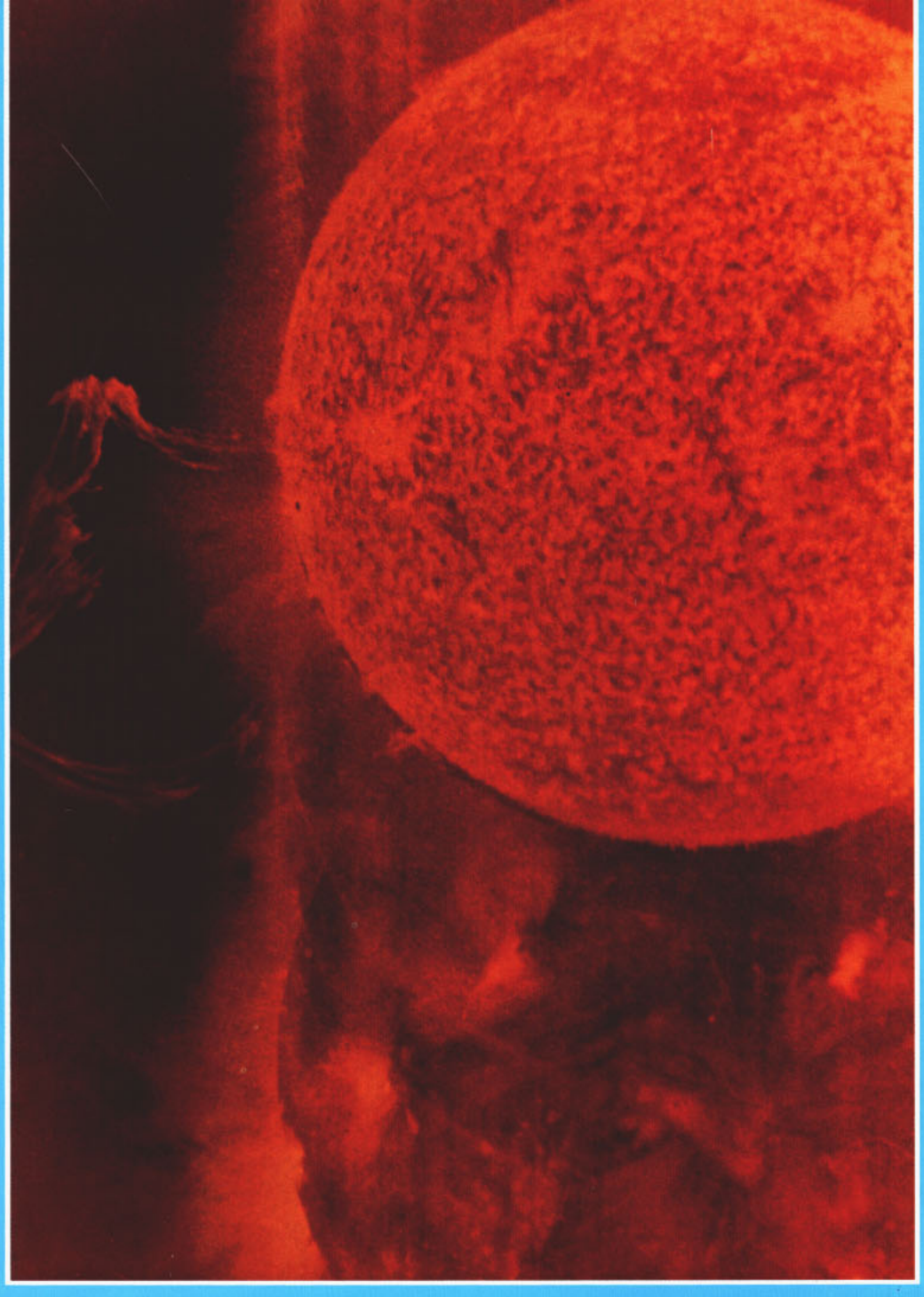
AT RIGHT: A LITTLE GOOD EXERCISE — MMC John Gourlay and students conduct a simulated exercise at the Naval Submarine Training Center, Pacific, Ford Island, Hawaii. Photo by PHC L. Bernard Moran.



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