



The Military Air Transport Service

THE Military Air Transport Service (MATS) had a packed calendar the past year. These are some of the highlights:

- Expanded worldwide mission responsibilities.
- Organizational changes to cope with new responsibilities.
- Increased emphasis on combat airlift exercises and training, including history's fastest and largest transoceanic troop deployment.
- Continuing progress in modernization of equipment to meet modern defense needs.
- A new emphasis on space and space-related activities with one eye on present requirements and another on defense needs of the future.

MATS closed the year with preparations for the retirement of Gen. Joe W. Kelly, the commander who piloted MATS into the jet age, and assumption of command by Gen. Howell M. Estes, Jr., youngest four-star general in today's Air Force.

Operations to sustain the MATS mission—to provide D-day-ready airlift, aeromedical evacuation, and Air Weather, Air Rescue, and Air Photographic and Charting services to American combat forces on a global scale—were expanded in several areas.

In the European area, airlift responsibilities within



Gen. Howell M. Estes, Jr., assumed command of MATS in July 1964. His prior post was Vice Commander, AFSC. Born in Georgia and a 1936 West Point graduate, he won his Air Force wings in 1940. During his AF career he has served as a pilot instructor, bomber pilot, airbase commander, and R&D staff officer. He flew 25 combat missions during the Korean War.

US Air Forces in Europe (USAFE) were taken over by MATS and consolidated under the 322d Air Division. These activities, including the USAFE aeromedical evacuation mission, are responsive to both MATS and USAFE requirements.

In the Pacific, while there was no corresponding consolidation of functions, the size of the theater-based airlift force was reduced and plans were being completed for extending MATS channel traffic to Kimpo, Korea; Marcus Island; and Iwo Jima to offset the loss in theater capability. MATS also added regular logistic missions to Australia and to Christchurch, New Zealand, in support of defense and scientific activities in those areas.

Consolidation of the European aeromedical evacuation system, which reaches from the British Isles eastward to Pakistan and ties in with MATS C-135 jet air-evac flights from Europe to the US, marked just part of MATS's aeromed evacuation growth. In the US, the domestic aeromedical evacuation system was reorganized under the 1405th Aeromedical Transport Wing with headquarters at Scott AFB, Ill., also headquarters for MATS's worldwide activities. The new concept includes central aeromed airlift control and maintenance at Scott.

The two military airlift missions that paced MATS activities during the year were Big Lift, in which the command airlifted the personnel and much of the equipment of an entire armored division from the US to Europe in sixty-three hours and five minutes; and



One of the Military Air Transport Service's significant efforts in past year was Exercise Delawar in which STRICOM troops were airlifted through unpredictable weather and over unfamiliar terrain from US to Iran. Above, 101st Airborne soldiers board MATS C-135 at Ft. Campbell, Ky., for Iran.

Delaware, a joint/combined exercise in Iran that marked several important "firsts" in airlift utilization. These exercises reflect MATS's top-priority responsibility: developing, testing, improving, and refining—in cooperation with other Air Force and Department of Defense agencies—the global mobility techniques needed to meet threats to the security of the US, anywhere in the world at any time.

Other exercises during the year that typified this type of MATS activity were:

- **Quick Release**—A combined airlift-sealift mobility exercise, a new concept for deploying Army task forces that involved aerial delivery of troops coordinated with sea delivery of heavy equipment.

- **Desert Strike**—The largest joint Army/Air Force maneuver in this country since World War II. MATS airlifted 10,481 troops and 7,260.4 tons of cargo to the Mojave Desert battle area.

- **Swift Strike III**—A significant event in this USSTRICOM maneuver was the first use of MATS C-130 Hercules aircraft for assault airdrop-airland of troops during an exercise.

- **Polar Siege**—Air Force/Army cold-weather, combat-training maneuver of USSTRICOM forces.

Emphasis during the past year was on techniques of combat airlift, including deployment and airdrop/assault landing of troops and equipment in combat areas. Big Lift and Delaware provided outstanding examples.

It was a clear, breezy midnight at Bergstrom AFB, Tex., that preceded the morning of October 22, 1963, and launched Big Lift toward Europe, where heavy equipment for an armored division had been pre-positioned. Two hundred thirty-six missions later, 206 jet and piston aircraft of the MATS airlift force had transferred to Europe 15,377 men of the 2d Armored

Division, nearly a million pounds of additional equipment, and 387 support personnel of a TAC strike force. The time lapse, block to block, was sixty-three hours, five minutes. The problems of planning, routing, alternate routing, maintenance and operations support, interservice coordination, international clearances, weather, and available facilities were manifold. But they were anticipated and overcome, and Big Lift proved the capability of the airlift force to complete such an operation—to the satisfaction of military experts and the public, on both sides of the Iron Curtain.

April's Delaware exercise was a US-Iranian joint/combined military and naval effort that involved some 200 sorties over unfamiliar terrain with limited navigational aids and in almost totally unpredictable weather. It was conducted by USSTRICOM under auspices of the Central Treaty Organization in an area south of Tehran, and involved assault airlift of troops and equipment from more than 1,000 miles away in Turkey. It marked the first joint overseas employment of MATS and TAC assault airlift; the first large-scale exercise in which MATS used jet and propjet aircraft exclusively; the longest and largest night assault airlift formation ever executed over allied territory; the first large-scale overseas exercise in which MATS's heavy equipment drop aircraft were assault-loaded in the US; and the first use of special airlift operational procedures and instructions designed specifically for the exercise.

These exercises were only a portion of MATS operations that during the year moved more than one million passengers and more than 190,000 tons of cargo in support of DoD activities around the world. And, in addition to formal exercises, MATS aircrews flew about 7,500 hours in formation and aerial delivery

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MILITARY AIR TRANSPORT SERVICE

Headquarters, Scott AFB, Ill.

Commander
Gen. Howell M. Estes, Jr.

Western Transport Air Force
(WESTAF)
Hq., Travis AFB, Calif.
Maj. Gen. George B. Dany
Commander

Eastern Transport Air Force
(EASTAF)
Hq., McGuire AFB, N. J.
Maj. Gen. George S. Brown
Commander

Air Rescue Service (ARS)
Hq., Orlando AFB, Fla.
Brig. Gen. Adriel N. Williams
Commander

Air Weather Service
Hq., Scott AFB, Ill.
Brig. Gen. Roy W. Nelson, Jr.
Commander

Air Photographic and Charting Service (APCS)
Hq., Orlando AFB, Fla.
Brig. Gen. Robert W. Hall
Commander

1254th Air Transport Wing
Washington, D. C.

1707th Air Transport Wing
Tinker AFB, Okla.

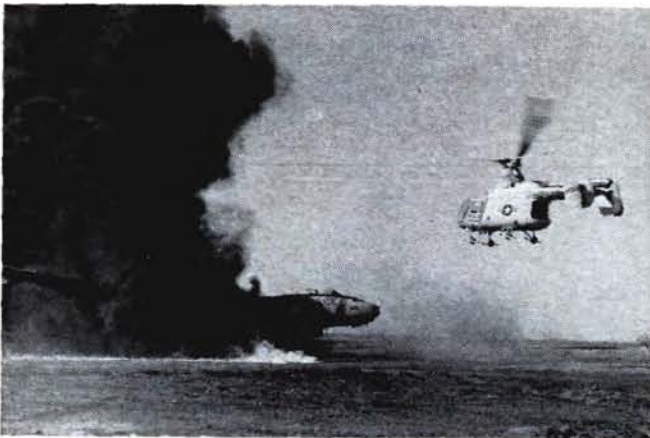
1405th Aeromedical Transport Wing
Scott AFB, Ill.



MATS C-130 Hercules transports deliver supplies to McMurdo Sound, Antarctica, chief US facility in the frozen south. Hercules service brings faster, more efficient airlift for Navy's Operation Deep Freeze Task Force which, with National Science Foundation, runs US Antarctic ice exploration.

training—preparation for being able to deliver when, where, and in the precise manner dictated by any emergency. This training included airdrop of more than 70,000 Army paratroopers and 700 tons of cargo.

Other types of airlift, such as special assignment, movement of outsize and sensitive cargo, Antarctic operations, and humanitarian missions were important activities of the airlift force. Special assignments included missions flown by the 1254th Air Transport Wing at Andrews AFB, Md., in Air Force One and other aircraft to transport the President of the US and other top government officials on special or urgent government business. It was on Air Force One that Vice President Lyndon B. Johnson took the oath of office as President of the US after the assassination of President Kennedy last November. Other special assignments were rotations of Indian, Pakistani, and Ethiopian combat units of the United Nations Force to and from the Congo; airlift of missiles and ground-support equipment from manufacturers to test points and operationally ready Air Force sites; and forty-one round trips between Christchurch, New Zealand, and



At selected Air Force bases throughout the world, MATS's Air Rescue Service provides local crash rescue support. Utilizing HH-43B helicopter, rescue crews can suppress an aircraft fire and extricate the crew in a matter of minutes.

McMurdo Sound, Antarctica, as part of the Navy's joint Deep Freeze Task Force. The Antarctica missions were operated with C-130E turboprop aircraft—the first time that the Hercules was used in the Antarctica program.

Humanitarian efforts included MATS missions to relieve the suffering of flood victims in Montana's worst natural disaster and more than thirty missions for relief of victims of the Good Friday earthquake that battered Alaska.

Also, mercy supply missions aided the earthquake-shattered city of Skopje, Yugoslavia; allowed the urgent delivery of cholera serum to people of Vietnam; and provided relief for victims of forest fires in Brazil, hurricanes in the Caribbean, the Viamont Dam disaster in Italy, earthquakes in the Azores, and floods in Costa Rica.

These mercy missions were not limited to nations, states, or communities. Individuals were helped too. For example, last spring an eight-year-old Turkish girl faced apparently certain death unless she could get heart surgery not available in Turkey. There were no family funds for transportation or hospitalization. MATS, in cooperation with other US government agencies, provided space-available airlift that delivered the girl to Vanderbilt University Hospital in Nashville, Tenn. A few weeks later, the girl was back in Ankara with a sound heart—and with a very warm spot in it for a nation that could make such use of military mobility.

Nearly 90,000 people, including Air Force and Navy personnel and civilians, staff the worldwide operations of MATS, directed from headquarters at Scott AFB. The airlift force's responsibilities are split by geographical areas. Eastern Transport Air Force (EASTAF), with headquarters at McGuire AFB, N.J., operates from the eastern part of the US through the European area. Western Transport Air Force (WESTAF), from its headquarters at Travis AFB, Calif., runs airlift operations from the western part of the US through the Pacific area. Other major MATS organizations are the technical services—Air Rescue Service (ARS), with headquarters at Orlando AFB, Fla.; Air Weather Service (AWS), with headquarters at Scott; Air Photographic and Charting Service (APCS), also at Orlando.

Three other units report directly to MATS headquarters because of their special missions. They are the 1254th Air Transport Wing, Andrews AFB, Md., special transport missions; 1707th Air Transport Wing, MATS's aircrew training wing, Tinker AFB, Okla.; and 1405th Aeromedical Transport Wing, Scott.

These organizations operate some 1,000 aircraft. Approximately 500 that make up the airlift force include Boeing C-135 Jet Stratolifters, Douglas C-133 Cargomasters, Lockheed C-130 Hercules, and Douglas C-124 Globemasters and C-118 Liftmasters. The face of this force was lifted considerably during the past year with a decrease of eighty piston-powered aircraft and an increase of sixty-four turbine-powered craft. Despite the drop in numbers, this change rep-

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resents an increase in MATS's over-all transport capability as well as the flexibility required to accomplish the worldwide mission with a minimum force.

This modernization trend will get a considerable boost this fall with delivery to MATS of the first C-141 StarLifter, the all-new jet transport designed specifically for the types of jobs MATS must do. By the end of the decade, the StarLifter will have replaced most piston-engine transports and will be the workhorse of the airlift force.

The airlift force is augmented daily by civil air carriers under contract to MATS, members of the Civil Air Reserve Fleet (CRAF), which carried seventy percent of the passengers and twenty-five percent of the cargo on MATS logistical routes during the past year. CRAF includes civil carriers whose aircraft and crews, under terms of their contracts, would be available to DoD as augmentation airlift in emergency situations. CRAF membership varies. As of June 30, 1964, it included twenty-two US airlines with a total of 349 passenger and cargo aircraft available for contingencies. DoD and USAF contractual policies, implemented by MATS, have encouraged modernization of this CRAF fleet so that there were 165 turbine-powered aircraft available for passenger or cargo movements, with additional turbine-powered aircraft scheduled to enter CRAF this year.

Further emergency backup for MATS forces is provided by an Air Force Reserve-Air National Guard augmentation force, some 46,000 strong, and hundreds of aircraft. These units with wartime assignments in MATS include fifty-nine Air Reserve troop carrier, rescue, air terminal, air evac, and casualty-staging units. There are 194 ANG air transport, air evac, and weather units. MATS also has more than 12,000 authorized mobilization-day assignees—individual Reservists assigned for training at active-duty offices of MATS organizations in the US. These individuals are used throughout the year, and each M-day Reservist has a specific assignment in MATS to which he will report in case of a national emergency. The ANG and Air Force Reserve aircrews fly MATS missions and routes, getting realistic training for their roles in the event airlift augmentation is needed.

Directing an airlift force as large, as active, and as widespread as the MATS system, and at the same time maintaining instant readiness to meet contingencies, provides a complicated command-and-control challenge. To meet this challenge MATS uses equipment developed under the USAF 473L command-and-control system, refined to meet special MATS needs. Last December MATS launched the operational training phase of an automated command-control system, the first phase of a schedule set up to develop a completely automated system with instant reaction. In addition to 473L capabilities, other computer applications have been developed and are being developed to provide instant, automated planning for contingencies.

The technical services, although integral to MATS, also serve other elements of the defense establishment. Air Rescue Service, in addition to providing all facilities available for assistance in any rescue situation,



Jet mobility for the jet age: In-flight photo of MATS's new Lockheed C-141 StarLifter, the current ultimate in rapid air transport of men and equipment to trouble spots around the world. Huge plane will join MATS fleet in June 1965.

civil or military, is charged with retrieving men and equipment involved in space activities. In Project Mercury manned spaceflights, ARS developed increasingly effective retrieving techniques including use of pararescue specialists. MATS is proud to note that ARS during the past year won the annual MATS Trophy for Safety in Aviation—a trophy made especially significant by award of the Daedalian Trophy to MATS as the safest flying command in the Air Force during the year.

One of the busiest MATS units in the USAF space program was the Air Photographic and Charting Service (APCS), manager of the Air Force portion of the Project Anna geodetic-satellite program. Management of Anna made APCS the first unit outside Air Force Systems Command to have operational control of an orbiting satellite. Early last year APCS began a worldwide gravity-research program which two years from now will provide information vital to space vehicle reentry and atmospheric operations. Meanwhile, APCS cameramen provided invaluable engineering photography on Air Force missile tests and site locations. APCS photographers provided combat cov-

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The C-141 can carry practically anything, as witness this demonstration at Lockheed-Georgia facility, in which forty-foot-long trailer van is moved directly aboard a StarLifter, using straight-in rear loading.



Aeromedical evacuation has been reorganized, with provision for centralized control and maintenance at Scott AFB, Ill., headquarters of Military Air Transport Service, under new 1405th Aeromedical Transport Wing. MATS's 1405th directs both domestic and overseas medical evac missions.

erage in Vietnam and photographed TAC weapons-effectiveness tests, while the command continued important photo-mapping and aerial-survey projects to provide accurate charts of Ethiopia and Brazil.

Air Weather Service (AWS), the largest of MATS's technical services, has 11,000 people—more than 7,000 of them assigned to small detachments around the globe—and operates a global network of weather facilities. Its mission: To provide environmental support to the Air Force and Army through weather centrals, forecast centers, base weather stations, observation sites, and worldwide weather-reconnaissance and atmospheric-sampling missions.

Support of the space program has brought new responsibilities to AWS, which helps evaluate and test data from the nation's weather-satellite program and provides weather information required for the conduct of space missions. AWS is the Department of Defense single manager for all atmospheric sampling. AWS scientists already are working on forecasting solar flares and proton showers to provide information for timing manned spaceflights. And AWS is working toward the eventual forecasting capability for landings on other planets.

Despite these complex operations around the globe, using facilities ranging from the best in the world to none at all, MATS during 1963 won three top Air Force awards—two for safety and one for maintenance. In addition to the Daedalian Flying Safety Trophy, won for the fourth time by MATS, the command was awarded the Daedalian Weapons System Maintenance Trophy and the Tokyo Raiders Traffic Safety Award for the outstanding Air Force accomplishment in control of motor-vehicle accidents. It was the first time a single major air command had captured all three trophies.

MATS also concentrated considerable efforts during the year on looking to the future. By 1969 it is expected that MATS's airlift force airframe inventory will be reduced by nearly 150. At the same time the command expects to double its airlift ton-mile capability. The C-141, with its long range, jet speed, and

combat adaptability, will provide most of this increase in capability. For instance, a C-141 force could have flown Exercise Big Lift in forty hours instead of sixty-three, using 100 aircraft instead of 206.

In line with force modernization, MATS also considered possible route revisions to provide for savings in transportation costs and reduced in-transit times from source to user. These revisions involve a source-to-user concept made possible through use of inland aerial ports. The concept has been studied by DoD agencies and entered a MATS test phase on July 1, 1964.

As noted above, addition of the C-141 to the MATS inventory eventually will double the airlift force's capability. There remains, however, a requirement for an aircraft that can economically haul even heavier, more bulky loads. Such an aircraft would enable MATS to meet its goal of reducing drastically the ton-mile cost of air cargo—to the point where a far greater number of items in the DoD inventory would be eligible for airlift. This, in turn, would offer even greater dollar savings for all DoD airlift users in terms of further decreases in supply pipeline time and stockpile requirements throughout the defense inventory.

The Air Force proposal around which this extension of airlift economy revolves is the CX-HLS (Cargo Experimental-Heavy Logistics System), a giant jet transport now under study by DoD, the Air Force, and the aircraft industry. The performance expected of this big jet would greatly expand the entire economic range of air logistics. Such an aircraft also would better support our space and missile programs and provide new, more effective mobility for the nation's ground fighting forces. It would be the first aircraft capable of airlifting any combat item in the Army's inventory.

DoD is expected to make a decision soon on development of the CX-HLS. Meanwhile MATS is continuing to stress development toward perfection of the nation's mobility preparedness to meet any situation in any area of the world with the right combination of forces at the right time.—END



Aiding space program in an airlift way, MATS C-133 transport arrives at Cape Kennedy carrying the Atlas which later boosted Mercury astronaut Maj. L. Gordon Cooper, Jr., into orbit. Space vehicle was airlifted to Cape from the San Diego, Calif., facility of General Dynamics/Astronautics.