



HIGH MACH

Serving the World's Premier Flight Simulation Test Complex



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704th Test Group activated under AEDC

By Raquel March
AEDC Public Affairs

In a ceremony at Holloman Air Force Base, New Mexico, Dec. 6, the 96th Test Group was deactivated and the 704th Test Group was activated under the commander of AEDC.

During the ceremony, Brig. Gen. Christopher P. Azzano, Commander of the 96th Test Wing, Eglin AFB, Florida, deactivated the 96th Test Group and AEDC Commander Col. Rodney F. Todaro activated the 704th Test Group.

Additionally, Col. Andrew L. Allen, commander of the 704th TG, redesignated the 96th Test Support Squadron as the 704th TSS.

On Dec. 1, the Air Force realigned separate Air Force Test Center assets under AEDC at Arnold Air Force Base, Tenn. to include the then 704th TG, The Hypersonic Combined Test Force at Edwards AFB, California,

and the McKinley Climatic Laboratory at Eglin AFB.

The 704th TG mission is to operate world-class test facilities for high speed sled track testing, navigation and guidance system testing, radar signature measurements, weapon systems flight testing, and act as the Air Force liaison for all Air Force programs tested at White Sands Missile Range. The 704th is instrumental for testing advanced avionics, weapons development, multiple Global Positioning System integration, landing gear and high-velocity impact.

The Squadrons that conduct the various tests of the 704th TG are the 586th Flight Test Squadron, the 746th Test Squadron-Guidance/Navigation-Test and the 846th Test Squadron-Rocket Sled Tests.

The 704th Test Support Squadron oversees operational support to the 704th TG missions.



AEDC Commander Col. Rodney Todaro, center, observes while Col. Andrew L. Allen, (fourth from right), the 704th Test Group commander reveals the 704th Test Group guidon during a re-designation ceremony Dec. 6 at Holloman Air Force Base, New Mexico. The Test Group was previously the 96th Test Group under the 96th Test Wing, Eglin AFB, Florida. Also pictured left to right is flag bearer Master Sgt. Marc Berger, 96th Test Wing Commander Brig. Gen. Christopher Azzano and flag bearer Senior Master Sgt. Ian Hall. (U.S. Air Force photo/Tech. Sgt. Dejaye Herrera)

Additionally, the 704th TG has two geographically separated units: Operating Loca-

tion (OL)-AA, located at Kirtland Air Force Base, New Mexico, and OL-

Patterson Air Force Base, Ohio. OL-AA is respon-

sible for directed energy and high energy laser testing, whereas OL-AC performs landing-gear and aircraft survivability tests.



New partners, new missions

By AEDC Public Affairs

Editorial Note: This is a series of articles to provide information about the 704th TG, the Squadrons and the missions under the Air Force Test Center realignment for AEDC.

704th Test Support Squadron

The mission of the 704th Test Support Squadron, formerly the 796th Test Support Squadron, is to support the 704th Test Group test missions at Holloman AFB, New Mexico; the operating locations AA and AC at Kirtland AFB, New Mexico and Wright-Patterson AFB, Ohio; and the White Sands Missile Range, White Sands, New Mexico.

Also located at Holloman AFB, the 704th Test Support Squadron is a unit of the Arnold Engineering Development Complex, which is part of the Air Force Test Center, headquartered at Edwards AFB, California.

The 704th Test Group operates world-class test facilities for high speed sled track testing, naviga-

tion and guidance system testing, radar signature measurements, weapons systems flight testing, and act as the Air Force liaison for all Air Force programs tested at White Sands Missile Range. The 704th Test Support Squadron oversees operational support to these 704th TG missions by providing assistance in the following areas: budget and finance; plans and programs; facilities and environmental; information systems; logistics; and vehicle fleet management.

586th Flight Test Squadron

The 586th Flight Test Squadron, part of the 704th Test Group at Holloman AFB, is a unit of AEDC.

The 586th FLTS plans, analyzes, coordinates and conducts flight tests of advanced weapons and avionics systems primarily on the White Sands Missile Range.

It provides deployable operational support

See NEW PARTNERS, page 2



The 586th Flight Test Squadron, operates four highly modified Northrop AT-38C Talon, one Beechcraft C-12F and one C-12J Huron aircraft. Capabilities of the squadron's AT-38Cs include multiple format photographic coverage, including helmet-mounted video cameras. The 586th Flight Test Squadron is a unit of the Arnold Engineering Development Complex. The squadron plans, analyzes, coordinates and conducts flight tests of advanced weapons and avionics systems primarily on the White Sands Missile Range. It also provides deployable operational support for test aircraft staging out of Holloman AFB. (U.S. Air Force photo)

Asset Health Assurance program at AEDC: Working with mission areas to produce large savings

By Deidre Ortiz
AEDC Public Affairs

The efforts of those leading the Asset Health Assurance program at AEDC, who develops the long-term reliability and maintenance program for the Test Operations and Sustainment, or TOS, contract, is greatly benefiting the Complex by providing cost avoidance savings.

David Hurst, AHA program manager at AEDC, said there has already been large savings in the first four months of the TOS contract alone.

"There has been over \$300,000 of savings to the maintenance programs through preventative maintenance (PM) deferrals and waivers using predictive maintenance data collection and analysis, through

See SAVINGS, page 4



Dan Henley, infrared program lead (left), and Mike Rainey, Condition Based Maintenance outside machinist (right), take infrared temperature readings on a hydraulic unit in the Engine Test Facility A-Plant. This and other measures are taken as part of the Asset Health Assurance Program to ensure that equipment and infrastructure at AEDC are performing as needed. (AEDC photo)

In This Issue....

Traffic woes slow morning commutes

...Page 3

AEDC team members make donations to Gatlinburg Fire Victims

...Page 3

HIGH MACH

Arnold Engineering Development Complex
An Air Force Test Center
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**Core Values**

- Integrity first
- Service before self
- Excellence in all we do

**Vision**

"NAS will be integral to the success of AEDC, the U. S. Air Force's premier aerospace testing facilities, while applying the highest standards of ethics, innovation, safety, security, and quality to daily operations."

Values

- Ethics. We are uncompromising in our integrity, honesty, and fairness.
- Safety & Health. We are relentless in keeping people safe from harm, and we provide a safe and healthy work environment.
- Excellence. We thrive on challenge, accomplishment, and mission success.
- Quality. We are passionate about doing our work right the first time.
- People. We have a mission-focused, inclusive workforce who have a diverse skill set, are committed to success, demonstrate innovation and have a can do attitude.
- Culture. Our team is proud of our diversity, inclusiveness, and collaborative work environment. We are proud of what we do and how we do it.
- Relationships. We build positive, long-term business relationships through trust, respect, and collaboration.
- Innovation. We overcome challenges through creativity, perseverance, technology, and flexibility. We actively seek to continually improve.
- Sustainability. We plan and act for the long term benefit of our communities and our environment.

NEW PARTNERS from page 1

A highly modified Air Force C-12J with an inert Laser Maverick on the belly of its fuselage flies after a testing mission. The Laser Maverick is an air-to-ground missile that can seek out laser-designated targets. The 586th Flight Test Squadron at Holloman Air Force Base, New Mexico, has tested external stores on the modified C-12J, which is normally a "people mover." (U.S. Air Force photo/Airman 1st Class Joshua Turner)

for test aircraft staging out of Holloman AFB. The squadron flight tests guidance systems, laser systems, air-to-air and air-to-ground systems, long-range and stand-off weapons and live warheads, and provides target and photo and safety chase. It operates four highly modified Northrop AT-38C Talon, one Beechcraft C-12F, one Beechcraft C-12J Huron aircraft equipped to support a wide variety of flight test operations.

The 586th has access to both full-scale and sub-scale unmanned aerial targets, one of the world's most elaborate ground impact ranges, and U.S. Army helicopter test assets.

Designed from the ground up as a test and test support unit, the 586th can provide all the services needed for a test program. The aircraft, test expertise and support facilities are all in place. The 586th can execute the test, provide the support in the form of photo/safety chase or simply provide the location for you to base. The test team and aircraft are all easily deployable to your test location.

The squadron is a center of expertise for over-land air-to-air missile testing (AMRAAM, AIM-9X, etc) and the 586th is set up to conduct or support the test.

The 586th FLTS has access to both full and sub-scale unmanned targets as well as towed targets. All targets are configurable to meet customer needs.

The 586th FLTS is the Air Force liaison to WSMR and provides access to a unique set of ground targets; moving or stationary as well as austere or built up location type targets. Test priority airspace is approximately

two minutes flying time from the field.

The squadron is also located next to the Army Air Division, where the 586th can coordinate for slow speed and helicopter support to include test, test support, and transport on the WSMR.

746th Test Squadron: Guidance and Navigational Test

The 746th Test Squadron (TS), also known as the Central Inertial and GPS Test Facility (CIGTF), is the designated lead test organization for the Department of Defense chartered to test and evaluate Global Positioning System user equipment and integrated GPS based guidance and navigation systems.

The 746th also manages the tri-service GPS Test Center of Expertise which is comprised of Army, Navy and Air Force test agencies chartered to support GPS test and evaluation initiatives.

The Squadron operates testing at Holloman AFB, under the AEDC 704th Test Group as well as the White Sands Missile Range (WSMR).

For more than 40 years, the CIGTF has been a leader in inertial, GPS and blended GPS/inertial component and system testing. The CIGTF also offers customers a cost effective evaluation of guidance and navigation systems with inclusive ground,



Pictured is the Contraves Model 53Y, 3-axis table centrifuge at Holloman Air Force Base. It is capable of 720 degrees per second rotation, with an environmental chamber and can accommodate a test item weighing 100 pounds. (Holloman AFB photo)

field and flight-testing capabilities.

After an evaluation of GPS and inertial navigation system capabilities in the CIGTF laboratories and field test environments, a fully instrumented aircraft is flight tested at the WSMR. Flight tests of aircraft include the F-16 Fighting Falcon, AT-38 Talon Twin-Jet Trainer, C-12J Huron and UH-1 Huey Helicopter.

The centrifuge testing in the Inertial Laboratory at the squadron uses a multi-axis test table to simulate flight conditions in a thermally controlled environment to check inertial performance on systems prior to aircraft testing.

Other test facilities at the CIGTF include a Navigation Test and Evaluation Laboratory (NavTEL) and the Communication, Navigation and Identification (CNI) Laboratory.

NavTEL tests stand-alone GPS User Equipment and inte-

grated GPS navigation systems using real-time simulation of GPS satellite signals and simulated or hardware-in-the-loop host vehicle aiding and communication systems. The laboratory is also capable of conducting GPS Electronic Combat Testing.

CNI is designed to test systems of systems, to allow testing of highly integrated relative navigation techniques, real-time precision weapon targeting and other applications of integrated platforms.

In addition to the laboratories, the CIGTF includes an Antenna Test Range where they can conduct multi-element GPS antenna testing using multiple jammers in a controlled, open-air environment. The range covers the middle ground between laboratory and flight test capabilities and offers an additional environment to satisfy customer test requirements.

Smoking Policy

- The following revised Arnold AFB smoking policy is effective immediately and applies to all individuals on Arnold AFB.
- Traditional Tobacco products (e.g. cigars and cigarettes):**
 - Smoking is permitted solely in Designated Tobacco Areas (DTAs) identified by designated signage. If no signage exists, smoking is not permitted in that area. It is the responsibility of all smokers to keep DTAs clean of cigarette butts.
 - Tobacco use on the Arnold AFB Golf Course is permitted, but discouraged based on the health hazards of tobacco use and secondhand smoke. No smoking is permitted within 50 feet of golf course buildings except in the approved DTA.
 - Smoking in government-owned/leased vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time; however, at no time will personnel discard cigarette butts outside their vehicle.
 - For government employees, the fact that a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the current supervisory and personnel policies that afford all employees the same break opportunities consistent with good work practices and accomplishment of the mission.
- Smokeless tobacco products (e.g. snuff and dip):** Smokeless tobacco products are not to be restricted to DTAs. Smokeless tobacco use will be permitted in all workplace areas (inside and out) subject to reasonable safety and sanitary conditions. Specifically, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet.
- Electronic Cigarettes (also known as "e-cigs"):** Pursuant to Air Force Instruction (AFI) 40-102, Tobacco Free Living, e-cigs are considered to be equivalent to tobacco products; however, e-cigs are not restricted to DTAs and are allowed to be used outdoors at a minimum distance of 25 feet from building entry/egress points. (This policy is dated July 27, 2016)

Action Line**Team AEDC**

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests. They can access the Action Line via the AEDC intranet home page and by calling 454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Rodney Todaro
AEDC Commander

Traffic woes slow morning commutes

By Jason Austin
AEDC Public Affairs

If you are the type of person who stewards their personal time, you likely know exactly how long it takes to commute from your front door to your worksite. Lately, even with the little buffer we put into our routine, traffic at the gates

has increased and may at times throw things off schedule.

There are several contributing factors to morning backups according to Col. Eric Leshinsky, Test Support Division chief, among them are more test customers, more outside contractors, guard training, and a purposely varied security posture.

Akima Support Operation (ASO) guards have processes in place to accommodate greater inflows of traffic; however, those processes must remain flexible to ensure an agile emergent response posture.

In fact, you may have already noticed increased proficiencies already due to some procedural alterations. Also,

recent changes in traffic patterns, new speed zones and enhanced barriers at our gates are indicators AEDC leadership takes an active role in securing the base and ensuring safe and efficient traffic flow.

"Traffic congestion and safety are a concern we must take seriously," Leshinsky said. "This was a prime reason

for the 40 mph flashing lights and improved road markings to better inform drivers on traffic patterns and lane changes.

"As part of their active role, ASO and TSD will continue to monitor these issues and adjust procedures and gate opening times to assist with flow of entry to the installation."

NAS gives to United Way with employee campaign

By Alicia Bell
United Way of Coffee and Moore Counties

On Dec. 7, National Aerospace Solutions gave \$5,000 to United Way of Coffee and Moore Counties.

This gift matched the first \$5,000 of pledges that NAS employees made in the contractor's first United Way campaign. Employees pledged to give more than \$8,000 in 2017. In total, NAS will give \$13,000 to United Way of Coffee and Moore Counties.

Cynthia Rivera, the NAS general manager, called this "the beginning of a new relationship" that she hopes to grow over time.

The United Way Executive Director, Alicia Bell, said, "We are thrilled to start a relationship with NAS. AEDC is the foundation of this community. Their proactive, dedicated support to United Way will change the capacity of our nonprofit sector. Lives will change because of this relationship. United Way, our partner nonprofits, and our community is thankful for the NAS team."

Employees could designate their gift or take advantage of United Way's advanced allocation process that directs funds to our community's most prevalent needs. Undesignated donations support local United Way programs and their 12 local nonprofit partners.

To learn more about these programs and partners, visit unitedwaycmc.org.



Alicia Bell, third from the left with the United Way of Coffee and Moore Counties (UWCMC), receives \$13,000 in contributions from Cynthia Rivera, fifth from left, the general manager of National Aerospace Solutions, LLC (NAS). The contributions were given through a United Way employee campaign of giving. Also pictured, left to right, is NAS Deputy General Manager Doug Pearson, UWCMC Board Member Hayden Hamilton, Tullahoma Mayor Lane Curlee, Tullahoma Alderman Jackie Duncan and Tullahoma Alderman Ray Knowis. (Courtesy photo)



Team AEDC gives to Angel Tree program

AEDC team members (left to right) Senior Master Sgt. Charles Hoyt, Artious Walker and Tech. Sgt. Kristopher Boal organize gifts Dec. 13 for the Angel Tree program which were donated by AEDC team members. The drive was sponsored by the AEDC Air Force Sergeants Association and the collected items are provided to children in need in Bedford, Coffee, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry and Wayne counties. (U.S. Air Force photo/Jacqueline Cowan)



AEDC team members make donations to Gatlinburg Fire Victims

Kevin Brown, Propulsion Wind Tunnel mechanical system engineer, collects donations in the Administration and Engineering building at Arnold Engineering Development Complex Dec. 8 for Sevier County officials, to help the Gatlinburg fire victims. Donations that were requested included items such as baby supplies, personal hygiene, food, clothes, medicine and other miscellaneous items. Donations were delivered to the Sevier County University of Tennessee Extension Office Dec. 10. (U.S. Air Force photo/Jacqueline Cowan)

Remembrance Walk

Remember!
Celebrate!
Act!
... A Day On, Not a Day Off

The African American Heritage Committee will host a Remembrance Walk at Arnold AFB as a tribute to Martin Luther King Jr. and many others who made sacrifices for equality and fairness, opening the door for many opportunities and freedoms we have today. Please join us as we pay homage to the past and show a united present.

January 12, 2017
11 a.m.-12 p.m.
Front of the A&E Bldg.

Remember! Celebrate! Act! A Day On, Not A Day Off!



34th AMU Airmen train on refueling procedures

Airmen assigned to the 34th Aircraft Maintenance Unit and 75th Logistics Readiness Squadron perform hot refueling operations on an F-35 Lightning II Nov. 8 at Hill Air Force Base, Utah. F-35s are flown and maintained by Hill Airmen assigned to the active-duty 388th Fighter Wing and its Reserve component, the 419th FW. (U.S. Air Force photo/Todd Cromar)

AFMC encourages sober driving during holiday season



(U.S. Air Force graphic)

By Air Force Materiel Command Health & Wellness Team

WRIGHT-PATTERSON AIR FORCE BASE, Ohio – The holiday season is a time of year for family gatherings, office parties, and socializing with friends, but the holiday season is also known for being the deadliest season when it comes to buzzed driving. A driver's license mixed with a few alcoholic beverages is dangerous. No one intends for alcohol-impaired accidents to happen, but they do.

According to the National Highway Traffic Administration, 10,265 people were killed in alcohol-impaired crashes in 2015. Drunk driving affects not only the person driving, but everyone

in the vehicle, as well as the innocent victims in the driver's path. It is up to each of us to do our part to prevent alcohol-impaired driving fatalities.

The NHTSA offers the following tips to stay safe and drive sober:

- Designate a driver who drinks no alcohol before the party begins; plan a way for everyone to get home safely at the end of the night.
- Be responsible. If someone you know is drinking, do not let that person get behind the wheel.
- If you see someone driving impaired, contact law enforcement with a vehicle description when it is safe to do so. It is your business. Getting drunk drivers off the road saves lives.

Walking while alcohol-impaired can be just as dangerous as drunk driving. Designate a sober friend to walk you home.

If you have been drinking, there is always another way to get home safely. You can call a taxi, phone a sober friend or family member, or call your local free ride program.

Airmen Against Drunk Driving was formed to eliminate DUIs/DWIs on Air Force bases and in surrounding communities. The goal of AADD is to safely return all military members and Department of Defense civilians to a residence if they are unable to drive themselves. Individuals that choose to drink should plan ahead for a designated sober driver or ride home.



DON'T FORGET TO FEED THE BIN!



SAVINGS from page 1

changes to the procurement program via the item configuration management effort and through the PM optimization work with system engineers to extend PM intervals," he said.

Hurst added the success of the program is a result of the different parts of this effort working together.

"The first part is expanding the Predictive Maintenance Program by incorporating technologies such as infrared, ultrasound, vibration analysis and oil testing to reduce the need for intrusive preventative maintenance," he said. "This will reduce the cost of the maintenance program by reducing the number of traditional or intrusive preventative maintenances and reducing the opportunity for failures. The second part is Preventative Maintenance Optimization or using maintenance data analysis, predictive technology data, and failure data analysis, which will right-size the preventative maintenance



Casey Schewe, Oil Analysis/Processing Program lead, examines a sample of oil taken from a hydraulic unit. Preventative maintenance efforts like this are part of the Asset Health Assurance program at AEDC, which is a long-term reliability and maintenance program for the Test Operations and Sustainment contract. (AEDC photo)

program. For example, performing the preventative maintenance when needed driven by the equipment and not the calendar.

"Third is Item Configuration Management, and this part of the effort will work with our spare parts program, vendors and purchasing to update the bill of materials for critical assets and to make

sure the asset data in the Computerized Maintenance Management System is accurate. Essentially, this effort's goal is to make sure we have the right parts available when needed and to know where we can get these parts as needed and that correct asset data is available in order to properly manage the equipment."

Part of the AHA program also includes having reliability engineering managers assigned to each mission area at Arnold AFB: Flight, Propulsion, Space and Missiles and Utilities.

"The purpose is to give each area a point of contact for their maintenance program and to make sure that the reliability and maintenance program is consistent across the facilities," Hurst said. "They are the 'change agents' for each area, interfacing with the mission area's management and engineers to help change the way we look at reliability and maintenance."

According to Hurst, as TOS continues with this effort, the savings will continue to grow.

NASA remembers American legend John Glenn

By Bob Jacobs
NASA Headquarters

The following is a statement from NASA Administrator Charles Bolden on the passing of Sen. John Glenn:

"Today, the first American to orbit the Earth, NASA astronaut and Ohio Senator John Glenn, passed away. We mourn this tremendous loss for our nation and the world. As one of NASA's original Mercury 7 astronauts, Glenn's riveting flight aboard Friendship 7 on Feb. 20, 1962, united our nation, launched America to the forefront of the space race, and secured for him a unique place in the annals of history.

"While that first orbit was the experience of a lifetime, Glenn, who also had flown combat missions in both World War II and the Korean War as a Marine aviator, continued to serve his country as a four-term Senator from Ohio, as a trusted statesman, and an educator. In 1998, at the age of 77, he became the oldest human to venture into space as a crew member on the Discovery space shuttle – once again advancing our understanding of living and working in space.

"He earned many honors for both his military and public service achievements. In 2012, President Obama awarded him the Presidential Medal of Freedom, the highest civilian honor the country can bestow, and he also received the Congressional Gold Medal.

"Glenn's extraordinary courage, intellect, patriotism and humanity were the hallmarks of a life of greatness. His missions have helped make possible everything our space program has since achieved and the human missions to an asteroid and Mars that we are striving toward now.

"With all his accomplishments, he was always focused on the young people of today, who would soon lead the world. 'The most important thing we can do is inspire young minds and advance the kind of science, math and technology education that will help youngsters take us to the next phase of space travel,' he said. 'To me, there is no greater calling ... If I can inspire young people to dedicate themselves to the good of mankind, I've accomplished something.'

"Senator Glenn's legacy is one of risk and accomplishment, of history created and duty to country carried out under great pressure with the whole world watching. The entire NASA Family will be forever grateful for his outstanding service, commitment and friendship. Personally, I shall miss him greatly. As a fellow Marine and aviator, he was a mentor, role model and, most importantly, a dear friend. My prayers go out to his lovely and devoted wife, Annie, and the entire Glenn family at this time of their great loss."

For more information about Glenn's NASA career, and his agency biography, visit: <http://www.nasa.gov/johnglenn>



President Barack Obama presents former United States Marine Corps pilot, astronaut and United States Senator John Glenn with a Medal of Freedom May 29, 2012, during a ceremony at the White House in Washington. (Credits: NASA/Bill Ingalls)

75 years later, memories of Pearl Harbor attacks still vivid

By Sean Kimmons
Army News Service

WASHINGTON (AFNS) – A loud explosion jolted Jay C. Groff Jr., a 19-year-old Army Air Corps member, out of bed inside a barracks building at Hickam Field, Hawaii, on the morning of Dec. 7, 1941.

He glanced outside the window of his third-floor room and saw a Japanese fighter aircraft roar by at eye level. The attacks on Pearl Harbor and other military sites on the Hawaiian island of Oahu had begun.

"The only reason we recognized it as a Japanese (aircraft) was because of a big red ball (on its tail)," said Groff, 94, of Springfield, Virginia.

He and others rushed out of the building to a nearby armament shop, where they grabbed machine guns and placed 10 of them across the street on a baseball diamond, lined up between third base and home plate.

"While we were setting up the guns, there was one or two planes that flew over and strafed us," he recalled. "We were close enough that we could recognize the guy in the backseat with the machine gun."

Groff then raced over to a boathouse at the entrance of Pearl Harbor, where he worked for the Army Air Corps' rescue boat service. He was told to head to the top of the workshop and man a .50-caliber machine gun.

Around that time, bombs rained down on the baseball field, killing those he had helped shortly before.

"The ballfield during the second attack was devastated by bombs. All of those people on that gun position I was on were killed in one of the explosions," the retired chief warrant officer said before a Pearl Harbor remembrance ceremony Dec. 7 at

the World War II Memorial in Washington, D.C.

The attacks on that day eventually left more than 2,400 dead and almost 1,200 wounded, catapulting the U.S. into the war.

Schofield Barracks

About 20 miles to the northwest, William Flatters was walking across his quad to open up a library at Schofield Barracks when a Japanese fighter fired bullets near him. One of those bullets, he said, ricocheted and brushed by his uniform.

"It took a button off my shirt; it was that close," said Flatters, 95, of Brownsville, Texas.

He looked up at the low-flying aircraft and saw the pilot wearing his helmet with a scarf around his neck flapping in the wind.

"I just stood still," he said. "And about that time, the loud speaker system there said, 'Return to barracks immediately, we're at war!'"

Close calls would continue for him months later when he was deployed with the 25th Infantry Division to the Battle of Guadalcanal, where about 7,100 American and Allied troops died and many more were injured.

"We were on board a

ship for about two months until they made up their mind where they wanted to put us," Flatters said. "That's when I wound up at Guadalcanal."

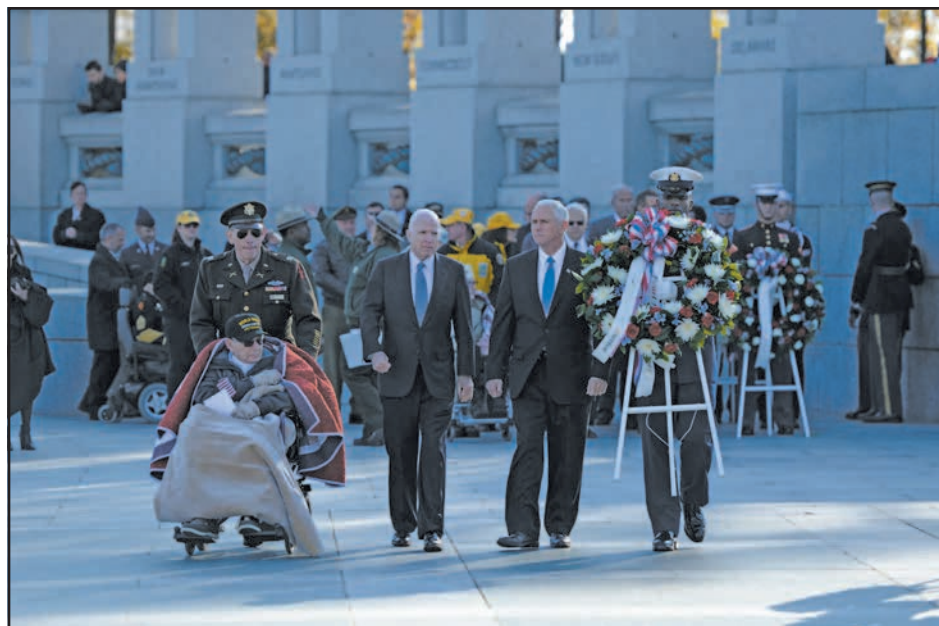
During that battle, shrapnel tore three puncture holes in his left leg and he had to be evacuated, he added.

WWII Memorial Ceremony

The ceremony's keynote speaker, Arizona Sen. John McCain, also knows about being wounded in combat. He suffered serious injuries when his Navy jet was shot down in 1967 while on a mission over Hanoi, Vietnam.

Now the chairman of the Senate Committee on Armed Services, McCain reflected on Pearl Harbor and how its memory still serves as an example of perseverance.

"They fought the first battle and set the first example in the long campaign of America's enlightened leadership of the free world," he said. "Many battles followed and many challenges were offered and met. With our allies, we defeated our enemies in the Pacific and Europe, we defeated our Cold War adversary and we will prevail over the challenges we face today."



World War II veteran William Flatters, U.S. Sen. John McCain and Vice President-elect Mike Pence walk toward the location they will be laying a wreath during the 2016 Pearl Harbor Remembrance Day 75th Anniversary Commemoration at the World War II Memorial in Washington, D.C., Dec. 7. (U.S. Army photo/Sgt. Jose A. Torres Jr.)

2016
December

Information subject to change. Please call to verify.
 ALC – Arnold Lakeside Center, 454-3350
 Café – Café 100, A&E, 454-5885
 ODR/ITT – Outdoor Recreation, 454-6084
 RRRP – Recycling, 454-6068
 Marketing/Sponsorship – 454-3128
 Barber Shop – 454-6987

GC – Arnold Golf Course, 454-GOLF
 MG – Mulligan's Grill, GC, 454-FOOD
 FC – Fitness Center, 454-6440
 WI – Wingo Inn, lodging, 454-3051
 Resource Management – 454-7425
 Admin – 454-7779



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat.
	5	6		1		3
	12			8		9
	19		21	14		
				20	27	23
			28			31
			<p>Grab an entry in all Services facilities by showing your current club card! Must be present to win! One entry per Club Card per facility per day.</p>			

MY STRENGTH IS FOR DEFENDING
AEDC Victim Advocates Hotline:
(931) 581-7494
 Preventing Sexual Assault is part of our duty

New SBIRS Block 10 Ground System achieves operational acceptance

By Los Angeles Air Force Base Public Affairs

LOS ANGELES AIR FORCE BASE, Calif. (AFNS) – Air Force Space Command's Space and Missile Systems Center and the 460th Space Wing successfully achieved operational acceptance of the Space-Based Infrared Systems (SBIRS) Block 10 ground system Dec. 2.

The new ground system consolidates legacy Defense Support Program, SBIRS Highly Elliptical Orbit, and SBIRS Geosynchronous Earth Orbit satellite ground systems from three locations into one primary location and a backup. The consolidation provides a significant reduction in manpower requirements, allows for improvements in mission processing capabilities, and significantly increases performance capability across the four SBIRS mission areas of missile warning, missile defense, battlespace awareness and technical intelligence.

The primary location of the consolidated ground system is the Mission Control Station at Buckley Air Force Base, Colorado. The backup system, known as the Mission Control Station Backup is located at Schriever AFB, Colorado. Both stations are manned by operators from the 460th SW.

"In the past 45 years, we have built a reputation of operating the most capable infrared missile warning system in the world," said Col. David Miller Jr., the 460th SW commander. "With the consolidation of three infrared satellite constellations into a single operations center, we expect

to see substantial improvements in our warning, surveillance and battlespace awareness support to combatant commanders across the globe and I couldn't be prouder of the SMC and 460th SW team that helped get us here."

The consolidated SBIRS Block 10 ground system has numerous advantages over the three legacy ground systems it has replaced. By releasing event messages quicker, reducing event error to include starrer sensor data, and consolidating processing of all sensor types at a single facility, it advances capabilities in all four SBIRS mission areas.

"Providing persistent global surveillance for the U.S. and our allies is our business and there is simply no one better at what we do," Miller said. "Our Airmen look forward to exploiting this capability to the maximum extent possible to ensure we maintain that competitive advantage well into the future."

SBIRS Block 10 also improves cueing data for missile defense systems and allows for command, control, and mission planning of taskable sensors, as well as real-time and offline raw sensor data processing for technical intelligence used by the intelligence community.

"In addition to the considerable advantages of this new ground system is the fact that it provides new sensor capabilities of the GEO Starrer to the warfighter," said Col. Shannon Begeman, a SBIRS Ground senior materiel leader. "This speaks to years of tireless work that our combined military, civilian, and contractor teams have accomplished, and it has been

an incredible privilege to be part of the SBIRS Ground team as we achieve operational acceptance."

The Remote Sensing Systems Directorate at the Air Force Space and Missile Systems Center manages the SBIRS Block 10 development program. Lockheed Martin Space Systems Company in Sunnyvale, California, is the SBIRS prime contractor, and Northrop Grumman Electronic Systems in Azusa, California, is the payload integrator. The 460th SW operates the SBIRS system.

"The Block 10 ground system can be considered a living system, and will be continually improved through additional cybersecurity measures as well as hardware and software upgrades," added Brig. Gen. Guetlein, the Remote Sensing Systems director. "The success of this fully consolidated SBIRS ground system is due in large part to the dedicated efforts of the development, test, and operational communities, and I am very proud of what our people, past and present, have done."

The SBIRS program delivers timely, reliable and accurate missile warning and infrared surveillance information to the president of the United States, the secretary of defense, combatant commanders, the intelligence community and other key decision makers. The system enhances global missile launch detection capability, supports the nation's ballistic missile defense system, expands the country's technical intelligence gathering capacity and bolsters situational awareness for warfighters on the battlefield.

Inside look: A sensor operator's first weapons strike

By Senior Airman
Christian Clausen

432nd Wing/432nd

Air Expeditionary Wing
Public Affairs

CREECH AIR FORCE BASE, Nev. (AFNS) – The feelings experienced during combat missions can be intense for many aircrew members. For Airman 1st Class Matthew, a 20-year-old 15th Attack Squadron MQ-1 Predator sensor operator, his first air strike was an event he will never forget.

He became cold and his hands shook nervously as he moved the crosshairs over the target. Time dragged on inside the dark air-conditioned ground control station as he waited for the missile to explode on one of his many screens.

Matthew recalls the experience, clearly, as the day he was suddenly thrown into his first weapons employment, a day he had been trained for, but didn't expect so early in his career.

"We got the call from a joint terminal attack controller for a short-notice airstrike," Matthew said. "We were tasked to hit moving vehicles. One was a motorcycle and the other was a vehicle-borne [improvised explosive de-



Airman 1st Class Matthew, a 15th Attack Squadron MQ-1 Predator sensor operator, follows a moving target alongside an MQ-1 pilot during a training mission Dec. 5 at Creech Air Force Base, Nev. Despite the remotely piloted aircraft stigma that operators don't feel anything when conducting weapons strikes, Matthew explained he felt nervous, cold, and his heart raced during his first weapons strike in support of ground forces. (U.S. Air Force photo/Senior Airman Christian Clausen)

vice]."

At his age, most individuals would be anxious about a job interview, college exam or a first date. Not Matthew. He was worried about supporting troops on the ground from

an MQ-1 Predator, operating the Multi-Spectral Targeting System while tucked away in a ground control station in the Nevada desert.

"Matthew had to follow the moving vehicles

with a laser in order to guide the weapons while determining the escape velocity of the target," said Master Sgt. Jesse, the 15th ATKS operations superintendent. "He would weaponize the missile im-

pact in order to neutralize the target and the cannon mounted in the truck."

All of this had to be done while dealing with a one and a half second delay.

"I was really nervous and got cold all of a sudden," Matthew said. "I didn't want anything to go wrong or to disappoint the supporting unit or squadron. I wanted to prove myself and I had to rely on what I had been taught and practiced."

Jesse said there are so many different variables to each weapons employment that, as sensor operators, there is a constant need to remember all of their training. Once the weapon is away, however, the entire shot comes down to the sensor operator to maintain the crosshairs and keep the weapon on target to achieve the ground commander's objective.

The pressure was on. If he missed the target, the enemy would reach an area where coalition forces were bedded down for the night.

Despite the pounding in his chest, Matthew's training paid off and he successfully guided the weapons to the target, saving the ground forces and boosting his confidence sky high.

"It was a great shot and he's had a couple more since then," Jesse said. "It's awesome to see. I'm glad things went well as this is what we train so hard to do."

Providing precision at-

tack and dominant reconnaissance capabilities to the combatant commanders wasn't what he thought he would be doing after high school.

"My brother was my recruiter and after looking at what I qualified for, sensor operator sounded the most exciting," Matthew said. "I still wasn't 100 percent sure what I'd be doing but I had no idea I'd be taking bad guys off the battlefield for a living."

Matthew went on to say it's unreal that he lives up to the military image of neutralizing enemies every day.

"This job is awesome, but stressful, yet very crucial to the military," he said. "The information and strikes we provide are amazing. It's those things most people don't see or hear about that we do every day that keeps people safe."

While close-air support is a big part of the mission, there are other sensor operator opportunities such as raid support, intelligence gathering and combat search and rescue.

After a long day of these and other mission sets, Jesse likes that he's still able to see his family after his combat shift. "What other precision strike platform can say that," he said.

"No other aircraft can stay aloft overhead as long as we can, let alone be as consistently precise with a (AGM-114) Hellfire," Jesse said. "This weapons system has truly changed the way we fight wars."



Airman 1st Class Matthew, a 15th Attack Squadron MQ-1 Predator sensor operator, destroys a simulated target during a training mission Dec. 5 at Creech Air Force Base, Nev. Shortly after completing his extensive sensor operator training at age 20, Matthew successfully completed his first weapons strike. (U.S. Air Force photo/Senior Airman Christian Clausen)

2016 AEDC CHILDREN'S CHRISTMAS PARTY

(Courtesy photos/ Emily Howell)



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Christmas Eve – OPEN;
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Follow Us

AEDC Woman's Club shows generosity during a season of giving

By Barbara McGuire
AEDC Woman's Club

The Dec. 1 meeting of the AEDC Woman's Club featured food items to purchase and then articles to bid on for the Christmas Boutique purchases.

Many ladies brought Toys for Tots donations for Capt. Jeff Smith of the Tullahoma Fire Department. The table donations of \$200 also went to the Toys for Tots program.

The program entertainment for December was presented by the Lyric Ladies directed by Amy Cooley. This group made history last year by being the first-ever homeschool show choir to be accepted to compete in a national show choir competition. The Lyric Ladies won the

overall People's Choice award at the 20th Annual Music City Show Shoppe Competition at Belmont University.

The next meeting of the AEDC Woman's Club will be held Jan. 5, 2017.

Jane Lovett from Falls Mill in Belvidere, Tenn., will be the featured speaker.

Jane and her husband developed the Museum of Power and Industry, Inc. to trace the history of Falls Mill through working exhibits. The museum, housed in the water-powered mill on Factory Creek in Franklin County, features exhibits on the early textile industry, the cotton gin era, wood working shop and the grain milling period.

Jane has a degree in

anthropology from the University of Tennessee, Chattanooga. Jane's talk will feature highlights in the restoration of the mill and development of exhibits on the property. She will also demonstrate hand spinning and bring a pot of cheese grits to share with the members.

Table donations at the January meeting will go to United Way of Coffee County.

The January meeting is open to the public and provides the opportunity to meet the AEDCWC members and become a member. You don't need to have military connections or be involved with Arnold Air Force Base to visit and become a member.

For information about



Capt. Jeff Smith (fifth from the left), with the Tullahoma Fire Department, collects gifts provided by the AEDC Woman's Club for the Toys for Tots program. Also pictured is Anne-Marie Pender, Beverly Smith, Vicky Porter, Dawn Hayner, Suzette McCrorey, Wanda Gobbell and Kitty Ball. (Courtesy photo)

the AEDCWC call 455-10 a.m. 3569.

The social hour of the meeting starts at 9:30 a.m., with the business meeting and program beginning at

10 a.m. Reservations must be made no later than noon, Dec. 29. Make reservations by calling 931-393-2552 or 931-636-4152.

Disclaimer: This is a private organization which is not part of the Department of Defense or any of its components and has no governmental status.

Ascend FCU gives \$6.5 million back to its customers

By Greg Davis
Ascend Federal Credit Union

Ascend Federal Credit Union is returning \$6.5 million to its members.

"Those numbers – '6' and '5' – are very significant for the credit union," Ascend president and CEO Caren Gabriel said. "When we opened our doors at Arnold Air Force Base 65 years ago, our only products were consumer loans and a savings account. You couldn't write a check, and ATMs hadn't been invented.

"Today, you can deposit a check using Ascend's app. You have fee-free access to more than 50,000 ATMs worldwide. You can walk into our newest financial center in Hendersonville and interact with a teller located at our corporate headquarters in Tullahoma.

Ascend is evolving to meet the changing needs of our members, and we're growing."

Over the past 12 years, Ascend's volunteer, unpaid Board of Directors has returned more than \$66.5 million in bonus dividends and loan interest refunds.

"This year's return is our Board's way of thanking members for 65 years of loyalty," Gabriel said. "We would not be celebrating our 65th year of business, or our 12th consecutive return, without our members. The more you use Ascend – for your mortgage, vehicle, credit card, checking and savings accounts – the bigger your return."

Gabriel said the member return is never guaranteed, but it is something the credit union's Board strives for each year.

The 2016 return will appear on members' December statements.

What to know before piloting a drone

By Secretary of the Air Force staff report

WASHINGTON (AFNS) – As unmanned aerial systems, also called drones, become more popular, the Federal Aviation Administration and local bases have established policy on how and when to operate drones.

The FAA has stated that unmanned aircraft systems are aircraft, not toys, and are required to adhere to policy.

General rules:

- All UAS greater than 0.55 pounds are required to be registered, regardless of the type of operation. The operator must provide the registration certificate (paper or electronic) upon request and the

UAS must be marked with registration or serial number. UAS purchased on or after Dec. 21, 2015, and used exclusively as model aircraft must be registered prior to operating in the national airspace. UAS that have been operated in the national airspace by the current owner, and used exclusively as model aircraft prior to Dec. 21, 2015, must be registered by Feb. 19, 2016. To verify registration, contact a Law Enforcement Assistance Program agent during normal business hours or the Regional Operations Center after hours.

- Small unmanned aircraft must give way to all manned aviation activities: airplanes, gliders, parachutists, hang

gliders, the Goodyear blimp, etc. If it flies or glides, it has the right of way.

- The operator must remain within visual line of sight of the small unmanned aircraft. Operators can't control or remain clear of other aircraft when they can't see their own small unmanned aircraft.

- Small unmanned aircraft may not operate over any persons not directly involved in the operation.


The FAA divides the national airspace above us into categories: A, B, C, D, E and G.

- Class A is 18,000 to 60,000 feet above the average sea level, and operators must be com-

See **DRONE**, page 11


DRONE from page 10

municating with the FAA to operate up there. and requires two-way communications with the airport's tower, so small unmanned aircraft need to steer clear of these areas. ports (no two-way communications), but small unmanned aircraft must still remain clear by the 5 nautical miles. resource to learn what local areas are the best locations for flying unmanned aircraft.




2017 January










Friday's at Arnold Lakeside Center...



Grab an entry in all Services facilities by showing your current club card! Must be present to win! One entry per Club Card per facility per day.



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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Happy New Year!!!	2 Friends and family coming to town? Wingo Inn welcomes both military and civilians, friends and family to be our guests! 454-3051	3	4	5 ALC Closed →	6	7
8 	9	10	11	12  Café 100 National Chicken Day Special \$7 Sand Combo, \$5.50 Sand Finding Dory PG 6:30 PM @ALC  Free Family Movie Night!	13 Dine at the ALC! 5-9pm	14
15	16 Martin Luther King Jr. Day Barber Shop & Café 100 Closed Fitness Center open 8am-4pm	17	18	19 Storks PG 6:30 PM @ALC  Brushes & Bottles Arnold Lakeside Center 6 PM Register by Jan. 13 Call 931-454-3350 \$25 per person  Free Family Movie Night!	20 Dine at the ALC! 5-9pm	21 Winter Hiking Series 1-5pm Stone Door Trail Easy 2 mi trail Ages 7+ Call 931-454-6084 to register!  \$8 
22	23	24  Café 100 Celebrates National PB Day! Get a free cookie with lunch combo!	25	26  FAMILY GAME NIGHT ALC 5:30-8:30 pm Free to play board games, food for purchase. Prizes for winners. Call 454-3350 for info.	27 6 pm @ ALC TRIVIA NIGHT Dine at the ALC! 5-9pm	28 ICE SKATING WITH ODR 1pm \$15 Nashville, TN Transportation Provided, Ages 10+ 931-454-6084 
29	30 Cafe 100 Celebrates National Corn Chip Day- Get a Frito Chili Pie for only \$2 *Includes limited toppings	31	<p>Do you have New Year's fitness goals?</p> <p>Call the Fitness Center to make your appointment for your free custom fitness orientation. Our certified staff will work with you to design a plan to help you reach your goals and answer any of your fitness questions. <i>Let's get started on your path to resiliency with physical wellness!</i></p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  <p>Arnold AFB SERVICES Combat Support & Community Service</p> </div> <div style="font-size: small;"> <p>ALC – Arnold Lakeside Center, 454-3350 Café – Café 100, A&E, 454-5885 ODR/ITT – Outdoor Recreation, 454-6084 RRRP – Recycling, 454-6068 Marketing/Sponsorship – 454-3128 Barber Shop – 454-6987</p> </div> <div style="font-size: small;"> <p>GC – Arnold Golf Course, 454-GOLF MG – Mulligan's Grill, GC, 454-FOOD FC – Fitness Center, 454-6440 WI – Wingo Inn, lodging, 454-3051 Resource Management – 454-7425 Admin – 454-7779</p> </div> </div>			

Information subject to change. Please call to verify.
See the December calendar on page 6

