

August 2018

RABBIT TALES

THE OFFICIAL MAGAZINE OF THE 513TH AIR CONTROL GROUP



AWACS Maintainers at Leading Edge of 3-D Printing

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INSIDE:

From the top: a maintenance perspective // New 513th safety team

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Rabbit Tales is a production of the 513th Air Control Group Public Affairs office.

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All photographs are Air Force photographs unless otherwise indicated.

Mission: To provide combat-ready AWACS Citizen Airmen to Fly, Fight & Win

513TH UPDATE

Upcoming Events

Saturday – 1545 – 970th Lounge
Cow Bell (Hosted by ACG)

Sunday – 1500 – Fannin Hall
513th ACG Commander's Call

August 27

Moving day for ACG/OSS/AACS to Bldg 461

ARPC Expanding Hours

BUCKLEY AIR FORCE BASE, Colo. -- Effective Aug. 1, 2018, the Air Reserve Personnel Center's call center will merge with the call center at the Air Force Personnel Center at Joint Base San Antonio-Randolph, Texas. With this centralization, ARPC's more than 1.3 million customers will now have access to Total Force Service Center (TFSC) call agents 24/7, 361 days a year by calling 1-800-525-0102.

This centralization not only offers Air Force Reserve, Air National Guard and retired Airmen of all components extended hours of access, but also shorter wait times, quicker responses and a better customer service experience.

New Uniform Board Results

WASHINGTON (AFNS) -- The Air Force announced a series of uniform updates to Air Force Instruction 36-2903, Dress and Personal Appearance of Air Force Personnel, effective July 13, 2018.

"These changes stemmed from the 100th Air Force Uniform Board, which incorporated direct feedback from Airmen," said Lt. Gen. Gina Grosso, Deputy Chief of Staff, Manpower, Personnel, and Services. "There are additional Uniform Board initiatives that are ongoing and still being analyzed for consideration and implementation by senior leaders."

For the complete list of changes, Airmen should go to [e-publishing](#).

Promotions

Congrats to our August promotees!



SrA Brooks Keesee
(513th Operations Support Squadron)

SrA Cody Crabb
(513th Maintenance Squadron)



SSgt Lizbeth Kowalski
(513th Operations Support Squadron)

SSgt Misty Stratton
(513th Operations Support Squadron)



TSgt Paul Straily
(513th Aircraft Maintenance Squadron)



MSgt Jess Cox
(970th Airborne Air Control Squadron)

Fit to Fight MVPs

Capt Michael Doughty
Unit: 970 AACCS
Score: 100%



SSgt Raquel Esparza
Unit: 970 AACCS
Score: 98.6%

Vision: Experience, Expertise, Teamwork: Citizen Airmen employing diverse talents as game-raising mission partners

From the top: a maintenance perspective

By Lt. Col. Lance Winner
Deputy Commander of Maintenance

Commanders are often asked how they see their mission from a top-down perspective. These questions give a context of mission priorities and objectives that are understood at every level. The answers we give communicate where we believe our personnel should focus their best efforts -- as well as to invest their individual hopes for wisdom achieved and expectations of leadership developed.

What matters to the 513th ACG's maintenance community at this time?

In short, I would say the continued refinement of our maintenance core competencies and reinvestment in human capital is essential. The Airman today will be the NCO tomorrow and the SNCO a generation from now. A maintenance community's goal isn't just to build aircraft every day, but leaders too. Some of you are great supervisors of small shops, but will become leaders of flights and builders of teams. How you get there as an individual depends on how much you enrich the community, but when you do, what you invest is repaid to you a hundred times over. Invest now, enjoy rewards later.

Where do you see the maintainers going forward?

First, to our maintenance core competencies and pedigree: We all know, that in the beginning, our maintainers were operators. The fact is, we are inextricably linked to a single purpose then and now. I say this to express how our commitment to flying is steeped in history, but that our core competencies (as maintainers) have changed over time. We have innovated to overcome, we have become the change our nation demanded, and again, change brings opportunity to refocus on essential practice. This is an exciting time for innovation, as our institution has signaled; time, resource, and money are truly finite.

We have been asked, yet again, “Maintainers, how do we get there from here?” Maintainers have always answered with a way.

But to be forward thinking, we have to commit to reinvesting in human capital. There is no asset that takes precedence over our Airmen -- not their value, their dignity, respect, or their selfless contributions to the cause. I stayed because I had supervisors, leaders, mentors that stoked the flames of my creativity and imagination. They turned every airplane into an official canvass for me to paint on and my job became my Air Force. I became a part of this canvas, and then it became a part of me. It is time to relentlessly insist to our Airmen who they are and what they mean to our nation and invest in those Airmen who continue to shape our future.

What am I proud of most?

I feed off of energy, and I try to share too. Anyone who knows me can confirm my enthusiasm for this job and my team. Just for a moment, I want to brag on our maintainers. You tell me, where can you find an individual eating a peanut butter and jelly sandwich, in the rain, after 13 hours on the job but still smiling and joking? Our maintainers are the heartbeat and the pulse of morale, welfare, and discipline. It has always been a necessity for our maintenance unit to lift its spirits with teamwork and genuine humor. I am proud that these Air Force stalwarts let me share in their experience.

Often, I see maintainers and Airmen who are asked, “Can we do that task? Do we have the manpower and resources?” I would challenge everyone to answer with, “Sir/Ma’am, yes, but this is the empirical cost.” Respectfully tell your boss what they need to hear to ensure capability; not what you may think they “want” to hear. Always pass leaders the straightest arrow in your quiver so your boss' aim can be more true.

I appreciate everything you Airmen (with a big A) bring to the fight. It is never lost who does all the heavy lifting. Thank you for being the best.

Introducing your new 513th Safety Team Members



Staff Sgt. Germaine Graham

Staff Sgt. Graham is a veteran of the 507th Civil Engineering Squadron and, later, the 513th Maintenance Squadron Supply Flight. “I believe in keeping people safe,” said the Lawton, OK native. “I want to ensure people can do their best and return home safely to their families. It may sound cheesy, but that’s what all safety staff work for. Reinforcing the safety culture is something everyone can do and I’m happy to do my part to keep that culture moving forward.” Graham and his wife live in Oklahoma City and are expecting twins this fall.

Tech. Sgt. Erin Nitzel

Tech. Sgt. Nitzel completed 14 years of active duty as a Cardio-pulmonary Laboratory specialist before becoming a military training leader. The Calumet, OK native said taking care of people has always been a core concept of her life. “A lot of my identity is as an American Airman,” she said. “It’s more than my job; it’s been a big part of my life. My husband and I have two boys, age 3 and 4, and I want them to be proud of me and to set a good example for them.” Nitzel is currently working towards her bachelor’s degree through Southern Nazarene University.

Staff Sgt. Nick Lucas

Staff Sgt. Nick Lucas is a former communications technician from the 552nd Air Control Wing. Having served 10 years of active duty time, his civilian job is systems analyst in the OC-ALC for the AWACS E-3 Engineering Directorate. After separating from the 552 ACW, six months later, Lucas said he felt “something was missing.” “You don’t realize what you have until you see something different and feel that you’re missing out on something,” Lucas said. “I missed being part of the Air Force. It’s the foundation to build a life that matters. Six months later, I like being a Thumper.”

AWACS Maintainers at Leading Edge of 3-D Printing

By Master Sgt. Andy Stephens
513th Air Control Group Public Affairs

Imagine you're in aircraft maintenance and you've a mission that has to fly in the next 24 hours, but you need a part that hasn't been made by the manufacturer in more than 30 years. Your leadership can purchase a specially-commissioned replacement for \$15,000, but it'll take a year to get into your hands and onto the aircraft. Nervous much?

And then a technician tells you he can get you the part by the end of the day for less than \$500. When you ask him how, the answer blows your mind: he's going to *print* one out for you.

The previous was a real-world example of what maintainers for the 513th Air Control Group do every month for USAF's only reserve associate unit for America's Airborne Warning and Control System fleet. Based at Tinker AFB, OK, the AWACS maintenance community there is a blend of active-duty Airmen (from the 552nd Air Control Wing), traditional reservists, Air Reserve Technicians and civil service -- all working together to keep the parts-and-labor intensive E-3 fleet flying.

"With our 3-D printing ca-

pability, we can have 30 parts ready in hours with spares distributed into the AWACS supply system," said Staff Sgt. Christopher Ritter, Metals Tech Section Chief for the 513th Maintenance Squadron. "And the technology is simple; an Airman can become competent on the printer in 10 days, from software to machine maintenance getting signed off on the printer in the Training Business Area."

Ritter said the printers represent an added empowerment for the 21st century USAF maintainer -- if a vital part that's not under contract can't be found, the maintainer can print their own. After a thorough inspection, a zero balance issue -- parts unavailability -- can be eliminated.

Zero balance for parts is a problem across the service as aircraft age and contracts lapse. But just as 3-D printers can make prosthetic arms for children, guns for the anonymous, and even lean hamburger meat for the gourmand, the advent of 3-D printing has empowered maintainers to fill voids in the supply system. The earlier-mentioned part in question was for a cockpit seat. With 3-D printing, a \$15,000 part that would take a year can be printed in less than eight hours for less than \$500 -- and without a need for sanding

or polishing a part.

The Fortus 400mc printer AWACS maintainers use has a printing area of 16 inches x 14 inches by 16 inches and allows for spools of colored plastic to be subject to high heat, melting them through a stylus that follows a plotted pattern. A manufactured piece cools rapidly at room temperature, but then becomes as hard as most metal. Ritter demonstrated how a printed mold fixture was durable enough to bend sheet metal in a hydraulic press to create necessary brackets for the airframe -- parts that aren't made anymore. The printed plastic mold reduces an eight-hour long project to less than 90 minutes.

"The printed plastic is heavier than phenolic parts," explained Ritter, referring to a type of lightweight plastic resin used in many aircraft worldwide today. That can be a disadvantage when every pound of weight added to an aircraft means greater fuel consumption, so smaller pieces are more convenient to manufacture.

Another advantage of the 3-D printer capability is that, while it only prints plastic parts, those plastics can be up to four layers thick and be high-performance thermoplastics, static dissipating polymers, or heat-resistance



Staff Sgt. Christopher Ritter, 513th Maintenance Squadron Section Chief, and Staff Sgt. Michael Wright, 552nd Maintenance Squadron Aircraft Metals Technology, discuss the differences 3-D printing bring to the AWACS fabrications shop. The damaged part has a two-year backlog for replacement parts and requires riveted reinforcement, while the printed part has reinforcements built in and can be printed in a single day. (U.S. Air Force photo by Master Sgt. Andy Stephens)

compounds. In December 2015, the plastic met the requirements for fire and smoke safety and was approved for use. Ritter said it's for this reason that some 3-D printable parts can also be used as welding fixtures to hold metal parts while welding, whereas phenolics cannot.

"We can hold a blowtorch to a printable plastic part and, while it may turn black, it won't burn or emit any harmful vapors," he added. "Phenolics produce a toxic vapor when subject to open high heat."

Tech. Sgt. Joshua Rea, Ritter's counterpart with the 552 ACW's

Maintenance Squadron Fabrication Flight, said the printer can only be used for parts not under contract.

"All active-duty and reservist Airmen in our shop use this 3-D printer regularly," said Rea. "We give our Airmen training projects during the week to maintain their familiarity with the machine. It might be a bathroom door knob handle that's no longer made one week or a seat assembly component to keep a seat in place. The [ACG] reservists expand our fabrication capabilities and help us in designing new parts. We're glad to work

alongside them and they're valued members of Team AWACS."

Ritter said he is optimistic for the future of tomorrow's maintainer when it comes to 3-D printing capabilities. Having been an E-3 maintainer for only two years, his past maintenance experience includes F-16, F-15 and A-10 weapon systems -- all aircraft that were built before he was even born.

"If I'd had one of these 3-D printers when I started in the Air Force, it wouldn't be the same service it is today," he said. "The 3-D printer makes the maintainers' job so much easier."

July Homecomings

Josiah Fuller, age 3, gives his mother, Staff Sgt. Jasmine Fuller, 513th Maintenance Squadron, Commander Support Staff, a bouquet of roses upon her return from a six-month deployment to Southwest Asia, as Staff Sgt Fuller's father, Elvis, looks on. While deployed, Staff Sgt Fuller provided administrative support to Air Force Central Command's forward-located manpower services and personnel directorate.
(Courtesy Photo)



Chief Master Sgt. Jeremy Allen, 513th Maintenance Squadron Superintendent, is welcomed home by his wife, Adrienne, and children Madison and Mason after a six-month deployment to Kuwait on July 29. While deployed, Chief Allen supported the 386th Expeditionary Aircraft

Maintenance Squadron as Superintendent. According to Lt. Col. Kenneth Bebbe, 586 EAMXS, Chief Allen was "the linchpin that ensured our continued mission success. His aircraft maintenance expertise and ability to meld personnel from multiple units and bases into a cohesive, high-performing team have been vital to our operations." (Courtesy Photo)



Commanders and supervisors! Send us pictures of your returning Airmen so we can show them our support. (andrew.stephens.1@us.af.mil)