



10th Army Air and Missile Defense Command ANSWERS THE CALL

MAJ Justin Ruholl and LTC Rosanne Clemente

“The expertise and professionalism demonstrated by our ADLT’s has been invaluable to reassuring our Allies and Partners.”

**– BG Barnett,
10th AAMDC Commander**

When Russian forces invaded Ukraine in February 2022, Partners and Allies across Europe looked to the United States to lead the response to Russian aggression. As it became clear that the U.S. would spearhead efforts to support Ukraine with lethal aid and critical supplies through logistical transfer hubs in Poland, senior leaders recognized that these pre-staging locations would become high-value targets. To bolster confidence in the alliance, reinforce U.S. commitment to Allies and Partners, and protect equipment and personnel, U.S. European Command leaders called upon the 10th Army Air and Missile Defense Command (AAMDC) to defend key logistics and support areas from enemy air and ballistic missile threats.

Team 10 envisioned three key components critical to mission success. First, Air Defense Liaison Teams (ADLT) pushed forward into Poland, Romania, and Slovakia proved to be vital to the success of integrating air defense capability along the Eastern Flank. Second, planners from across the Joint Force and the NATO alliance estab-

lished a joint kill chain and integrated various air defense systems built upon a robust communications and data link architecture. Finally, logistics and movement control teams were instrumental in coordinating and synchronizing the movement of all equipment into multiple positions located in various NATO countries along the Eastern Flank.

Air Defense Liaison Teams

Multiple capabilities were identified as essential to establishing layered air defense protection of designated defended assets. Counter-unmanned aerial system (cUAS) systems – which have never operated in EUCOM before – and short range air defense (SHORAD) systems were integrated into the defense design to provide low level detection and engagement capability of enemy UAS and aircraft. The U.S. Patriot weapon system provided an additional layer of cruise missile and tactical ballistic missile defense. Recognizing that agreements would require a special team to adjudicate on behalf of the U.S. government, the 10th AAMDC created three Air Defense Liaison Teams (ADLT) consisting of air defense officers and planners, Judge Adjutant General (JAG) officers, and Air Force planners with expertise in air defense capabilities, policies and legal authorities, and command-and-control systems. Each team traveled to Poland, Romania, and Slovakia to connect with representatives from the host nation’s Ministry of Defense, Air Force, Army, and Civilian Aviation Authority. All teams were charged with establishing relationships and developing the policies and agreements required to deploy and operate various air and missile defense systems within their respective countries.

The ADLTs spent weeks in their respective countries working with the military, government and civilian authorities to establish the agreements that would allow the US air defense units to operate in their countries.

Team 10 faced a major challenge to deploy air and missile defense assets across NATO countries while under peacetime conditions. Russia had not directly threatened military action against any sovereign nation other than Ukraine. European political leadership cautiously assessed Russia’s next moves and did not want to risk the conflict

spilling over into NATO countries. Partner nation engagement and planning required a balancing act of deploying both US and host nation military assets along the Eastern Flank while simultaneously operating under each country’s peacetime laws and civilian control. As in most countries, laws and regulations for civilian air control authorities are not postured to support military operations. Host nation civil laws severely restrict the use of UAS and often fail to address the use of kinetic and non-kinetic cUAS capabilities. Additionally, host nation civilian air authorities do not have the processes or means to divide the air space to support military Airspace Control Measures (ACM) or clear airspace promptly to enable air defense engagements. The initial and most pressing objective of the ADLT was to coordinate with U.S. Embassy and host nation civilian and military authorities to develop bilateral agreements to allow the deployment and operation of U.S. cUAS and air defense systems. These bilateral agreements included the use of host nation land for U.S. unit positions, identification and engagement authorities, use of military capabilities in civilian airspace, rules of engagement (ROE) to include self-defense, reporting requirements, the host nation’s responsibilities to support U.S. units, and the development of a shared common air picture to coordinate engagements.

Implementing a Joint Kill Chain and a Data Link Architecture

As NATO forces rushed to the flank, air defense planners led efforts to build the joint kill chain for each country hosting any air and missile defense systems. Significant efforts went into establishing the voice and digital means by which an air defense unit coordinates the identification of an unknown track and receives the command to engage a target as a part of the joint kill chain. Furthermore, planners needed to develop military air space control measures inside civilian apportioned airspace to clear, de-conflict, and coordinate potential aerial engagements. As the conflict in Ukraine progressed, U.S. planners and NATO Allies confronted challenges in new and creative ways by working through each country’s distinctive policies and authorities. Some countries deployed air defense capabilities under a NATO command and control structure like in Slovakia while others

established multilateral agreements as was done in Poland between U.S., U.K., and Polish air defense units. If rules of engagement were more restrictive in certain countries, the authorities for an engagement were held at a higher level and lengthened the time to communicate and adjudicate a track within the established joint kill chain.

Overall, the efforts of the ADLTs established a new standard for deploying to Ally and Partner nations and develop bilateral and multi-lateral agreements enabling air defense operations. Ultimately, the teams established technical and procedural interoperability, reporting procedures, and command chains to provide tactical units the guidance they needed to conduct operations. Throughout the deployment, ADLTs continued to work with Polish, Romanian, and Slovakian leaders to further refine how the U.S. units defend critical assets within their countries.

A secure and reliable data link and communications architecture is critical to creating a shared air picture and providing early warning to all NATO Allies and Partners. Team 10's tactical data link experts and G6 personnel tirelessly worked alongside U.S. Army Europe – Africa (USAREUR–AF) communication professionals to tackle the link architecture problem resident in all three locations. Technical solutions were unique to the different countries. Data link subject matter experts worked to identify options for connecting various systems within each country and establish the means of making all the systems “talk,” eventually leading to a robust network that created a combined Common Operational Picture (COP) for all organizations.

The 10th AAMDC G6 worked closely with USAREUR–AF G6 and the 2nd Theater Signal Brigade (TSB) to establish redundant communications plans for subordinate units positioned along the Eastern Flank. Team 10 leaned heavily on external communications support and self-procured communications systems to ensure data was shared among a multitude of systems and sensors while effectively managing spectrum frequencies to deliver the air picture to all participants. As the communications architecture matured, the Signal community introduced a direct commercial fiber optic connection for units in Poland which

significantly improved track quality and expanded bandwidth on the deployed data link and communications network.

Tactical Data Link and Communications professionals also focused on spectrum management due to the heavy use of frequencies for radars and air defense communications equipment. Host nations must ultimately approve and provide these frequencies at the international level. The 10th AAMDC G6 Spectrum Management Office (SMO), with support from USAREUR–AF G6 SMO, was able to request and provide over 200 radio and radar frequencies to support operations on the Eastern Flank. During a stressful period of high operational tempo to push units into position along the flank, the collaborative efforts of the Signal Community ensured consistent and reliable communications throughout the deployment and continues today over a year later.

Logistics and Sustainment

In order to maintain operations, transportation of equipment and personnel was crucial to success. 10th AAMDC logistics and sustainment elements played a vital role in the short-notice deployment of air defense assets to protect key logistics hubs and command and control nodes along the flank. The G4 Mobility team worked with higher echelons to secure 24 strategic airlifts for the Patriot Minimum Engagement Packages (MEP) and four strategic airlifts for Patriot munitions within 72 hours of notification. The mission also required utilizing 483 commercial line haul assets to move 503 pieces of general cargo rolling stock, sensitive items, and HAZMAT from the point of origin to the final destination across three various countries.

Throughout all phases of the deployment, the 10th AAMDC G4 exercised numerous logistical initiatives to improve the readiness posture and standards of living for the Soldiers. In coordination with USAREUR–AF and 21st Theater Support Command, Team 10's G4 successfully deployed the 5-7 ADA Supply Support Activity (SSA) from home station to the deployment site where they served as the initial reception and transfer point of all lethal aid to Ukraine. Additionally, the SSA's forward deployed Additional Storage Lines (ASL)

drastically reduced Customer Wait Times for the Patriot units and 17 other external customers.

The last year has proven to be both historic and extraordinary for the 10th AAMDC. As U.S. European Command's theater air and missile defense leader, Team 10 answered the call to defend critical assets and protect U.S. and partner nation maneuver units against any enemy air and ballistic missile threats. The Leaders and Soldiers in the organization faced many challenges requiring professional performance in a manner outside the normal scope of their duty descriptions. While the mission along the Eastern Flank continues, the impact of the ADLTs, communications professionals, and logistics planners endures in the established policies, joint kill chain, link architecture, networks, and logistics nodes. 10th AAMDC and its units stand ready to provide the best air and missile defense capabilities to the Joint Force and the NATO Alliance – Team 10 will always Answer the Call.

“Shield of Victory”

MAJ Justin A. Ruholl is a native of Dietrich, Illinois. He attended Southern Illinois University Carbondale (SIUC) and earned a degree in Criminal Justice and commissioned in June of 2007. Since then he's been assigned to several duty stations to include, Fort Liberty, NC, with the 1-7 ADA and returning from CCC Fort Sill, Oklahoma to be with the 3-4 ADA, Fort Leonard Wood as a writer and obtained Instructor of the Year in 2017, 6-52 ADA, 35th ADA, & 10th AAMDC. MAJ Ruholl holds a Master in Military Operational Arts and Science. MAJ Ruholl's military decorations include the Meritorious Service Medal, Army Commendation Medal with 1 Oak Leaf Cluster, Army Achievement Medal, National Defense Service Medal, Global War on Terrorism Service Medal, Military Outstanding Volunteer Service Medal, Army Service Ribbon, Overseas Ribbon w/2, Meritorious Unit Citation Award, German Proficiency Badge and the Air Assault Badge.

COL Rosanna M. Clemente is a first generation Filipino-American born and raised in northern New Jersey. She graduated from the United States Military Academy in 2002 with a degree in U.S. History and was commissioned as a Second Lieutenant in the Air Defense Artillery Branch of the U.S. Army. She graduated from the U.S. Army Air Defense Artillery Officer Basic Course (SHORAD Track) at Fort Bliss, Texas in 2003. She also holds a Masters of Military Science Degree in National Security and Strategic Studies and graduated from the Maritime Advanced Warfighting School at the U.S. Naval War College in Newport, Rhode Island in 2013. In 2022, Ro graduated from the U.S. Army War College and received a Master's Degree in Strategic Studies with an area of concentration in the Advanced Strategic Art Program. Ro has held unit leadership and command assignments from the platoon to the battalion level. She was one of the first female short-range air defense officers specializing in the Avenger and STINGER missile weapons systems before transitioning to the PATRIOT missile defense system. Deployments include Iraq and Afghanistan. She has held the positions of Commander (Patriot Battery), OPs, Director C-IED, JIDO Chief and in July 2022 was assigned to the 10th Army Air and Missile Defense Command in Sembach, Germany where she currently serves as the Assistant Chief of Staff for G3-Operations.

