



Lessons Learned from the Ukrainian Territorial Defense Forces: Command Post Survivability

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Center for Army Lessons Learned

The Center for Army Lessons Learned leads the Army Lessons Learned Program and delivers timely and relevant information to resolve gaps, enhance readiness, and inform modernization.



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PURPOSE

This document provides command post (CP) survivability observations and lessons learned from the Ukrainian Territorial Defense Forces (TDF). The Center for Army Lessons Learned (CALL) obtained these observations directly from TDF's manual titled *Battalion Command and Observation Posts: Practical Advice Based on War Experiences*. The TDF compiled these tactics, techniques, and procedures (TTPs) to help command and control (C2) nodes and Soldiers stay undetectable and consequently safe from Russian forces. U.S. Army leaders and Soldiers should consider these CP survival lessons and best practices to improve their ability to survive on the modern battlefield.

INTRODUCTION

A key characteristic of the Russia-Ukraine Conflict is the constant and coordinated threat from unmanned aircraft systems (UASs), indirect fire (IDF), and electronic warfare (EW). Within the Russia-Ukraine Conflict, UASs regularly fill the skies with unmanned aerial vehicles (UAVs) from which it is difficult to hide. Moreover, the proliferation and effectiveness of IDF and EW provide a warning about the vulnerability of the U.S. Army's legacy command post. For a CP to survive in large-scale combat operations (LSCO), planners must consider new TTPs for the design, placement, and camouflage of its CPs. This document does not contain descriptions of classified methods that can make CPs completely invisible or survivable to the enemy because such methods do not exist. However, the document does provide important basic rules and guidelines for CP survivability. The TDF divide their lessons on CP survivability into three key areas: establishing reliable communications, avoiding detection, and mitigating the threat from IDF.

COMMAND POST LOCATION CONSIDERATIONS

Mission, enemy, terrain and weather, troops and support available, time available, civil considerations [mission variables] (Army) (METT-TC) drive decisions on CP location. Ukrainian CPs are usually located approximately 2 to 5 kilometers from the front line with their combat trains command post (CTCP) approximately 10 kilometers from the front line. In general, the greater the distance the CTCP is from the front line, the better protected it is from detection and IDF. However, the CTCP should be located near roadways and warehouses and have delivery routes that run away from the CP location.

COMMAND POSTS LOCATED IN VILLAGES AND CITIES

Units should consider the following when placing a CP in a village or city:

- The size, quality, and quantity of nearby basements provide excellent locations for CPs. Underground facilities usually provide the most protection from enemy detection and IDF. Additionally, basements mask sources of electromagnetic emissions and do not require many additional measures. Units should organize the construction of underground earth fortifications if there are no basements nearby.
- Leaders should take precautions with the civilian population living nearby. Local civilians can intentionally or unintentionally reveal the CP's location; therefore, communication with villagers must be limited.
- Urban development provides CP location possibilities because of the large number of buildings and existing infrastructure.
- Units can use tunnels and sewers to organize secret passages and conduct protected and inconspicuous lines of communication.

- Basements of high-rise buildings may have enough sheltered space for simultaneous placement of all CP personnel.
- Use inconspicuous buildings with basements, thick walls, and ceilings when choosing a CP location.
- Between buildings, Soldiers can punch passages between walls, creating new routes that mislead the enemy. Additionally, Soldiers can create rifle portals or holes in walls and camouflage them with decor items.



Figure 1. Placement of a CP battalion in a village. 1. Location of the battalion commander and operations; 2. Generator room; 3. Location of personnel not on shift; 4. Location of deployed battalion CP vehicles.

Units should consider the following when placing a CP in rural areas (forests, farms, or small villages):

- The rural area makes it possible to effectively combine the use of existing infrastructure with the possibility of developing a new one. Rural areas make it easy to disperse your personnel by distributing them among the surrounding buildings and forests.
- If the CP is set up in the forest, the dense vegetation provides natural camouflage and limits the possibility of the enemy attacking the positions. However, trees create obstacles for establishing and maintaining reliable communications. It is also more difficult to provide reliable protection and defense within thick forests. The lack of roads and approaches to the CP's position restricts logistics and engineering equipment.
- Rural areas provide little infrastructure or facilities that a CP can use to function. Therefore, advanced preparation in several stages is necessary: choose a location, dig fighting positions, and move personnel and technical equipment into them.

- Local wells should not be used for cooking because of the potential for poisoning.
- Camouflage options in open fields are limited. Units should never place their CP in an open field unless there is no other alternative.
- Units should not use large engineering equipment when establishing a CP in rural areas; it unmarks positions with the audible and visual signatures and the residual track marks it leaves behind.
- Fighting positions should be made as deep as possible with a blocked “L-shaped” entrance, an inner wall, and a reinforced roof. Fighting positions should use at least three layers of logs for overhead cover. However, incorrectly calculating weight dispersal and design of load-bearing construction may result in collapse.

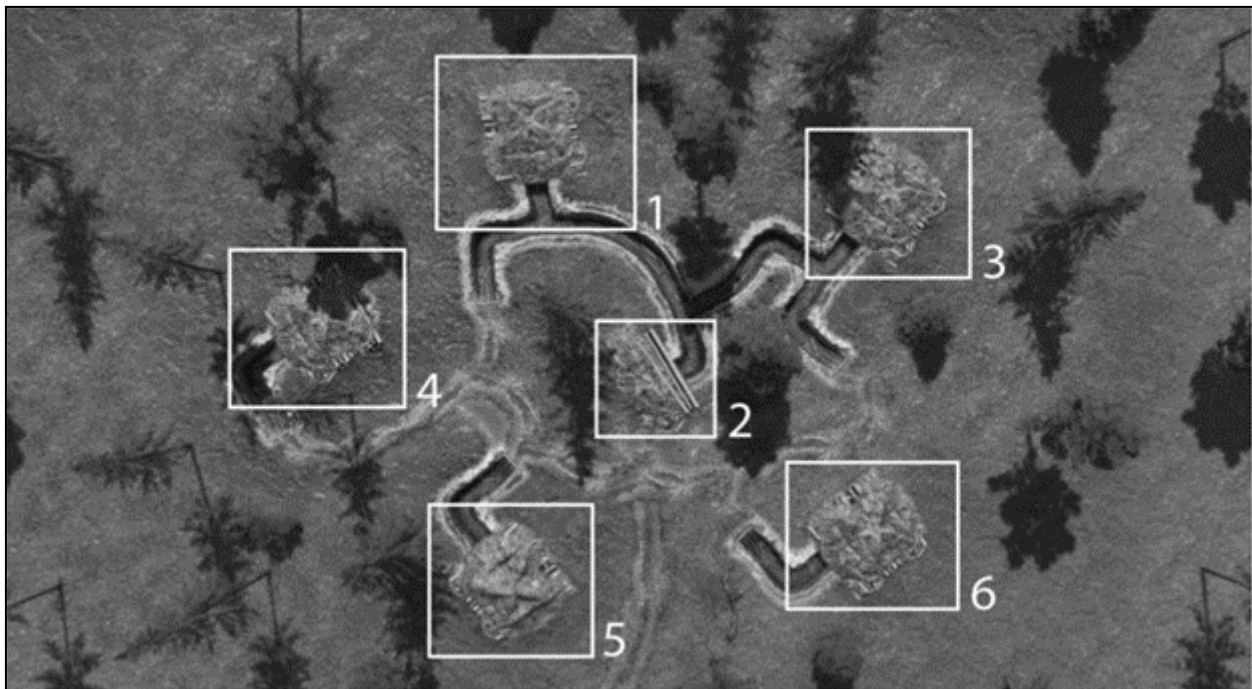


Figure 2. Sample placement of a battalion's CP in rural conditions. 1. Location of the battalion commander and operations; 2. Generator and fuel; 3. Location of personnel not on shift; 4. Location of technical personnel and security; 5. Location of kitchen and dining; 6. Location for signal personnel.

COMMAND POST CAMOUFLAGE

Camouflage is mandatory to protect the CP from enemy detection and targeting; therefore, units should consider the following:

- Units should not use readily recognized administrative structures for their CPs such as municipal or state buildings, utilities infrastructure buildings, educational institutions, dormitories, or large corporate buildings. Most administrative structures are plotted on online maps (Google Maps or Apple Maps), so their search and identification are readily available to the enemy.
- Do not use basements that are known and marked as bomb shelters or other civil-defense facilities. There is a high probability the enemy is aware of their locations and will target them.

- Use locations and rooms that do not stand out; they should blend in with the local area.
- The number of individuals who know the CP's location should be limited as much as possible because, if captured, they may disclose this information to the enemy. Only personnel assigned to the CP or who require direct interaction with it should know its location.
- Units should place the CP and CTCP in separate locations. The CP's location is easier to keep secret because observable supply routes will run through the CTCP.
- Signs of activity near the CP should be absent or minimal, especially for military equipment and military personnel.
- Leaders should organize their CP to be as autonomous as possible. Design and organize working and sleeping places to limit the time of movement between them.
- An effective method to visually verify CP camouflage is to fly over unit positions using a UAS to make an assessment from above and whether it stands out among the terrain. Raise the UAS to the maximum height and without getting too close and look at the terrain as the enemy UAS would observe it. Additionally, leaders should pay particular attention to the activity near the CP.
- Units should do the following to minimize the probability of detecting the CP location using EW:
 - Prevent the accumulation of military personnel near the CP.
 - Prohibit the use of Wi-Fi by personnel not involved in the work of the CP (and establish rules of use for those involved).
 - Ban the use of hand-held, mobile, and cellular communications.
 - Move radio communication equipment and remotely emplace antennas away from the CP.
 - Do not place Wi-Fi routers on the surface (better at ground level or below ground level).

COMMAND POST DECEPTION OPERATIONS

Misleading the enemy is an equally important component of maintaining CP survivability. The creation of false targets and positions disorients the enemy, prompting them to spend time on target verification. This leads to over expenditure of long-range and high-precision munitions. The purpose of the false position and other means of deception is to misinform the enemy and draw off fire from the actual CP. Units should consider the following when using deception:

- Units can deceive enemy EW sensors with the help of radio signal emitter decoys that imitate the operation as a repeater. Units can tactically emplace these on terrain away from the CP (but in a configuration that is believable and deceives the enemy). Another method is to use a mobile team that imitates command and staff radio transmissions.
- It is difficult to hide the radio emissions of working communication devices from enemy EW means. The enemy can find the approximate location of the decoy CP by tracing its electromagnetic emissions. After the enemy has determined the decoy CP's general location, it will send a UAS to conduct intelligence, surveillance, and reconnaissance (ISR). At this stage, it is necessary to provide the enemy with false information.

- One of the landmarks that the enemy looks for during aerial reconnaissance is the Starlink system's antenna. A technique that has been developed is the use of an oval-shaped object (a lid from a large vessel such as a pot, bucket, etc.) or a real satellite television/internet dish and color the object with white paint or chalk or wrap it in a white tablecloth. Units place the fake Starlink dish near an area where you want to create the false CP location. Additionally, lay out cables that will look like the connection of the Starlink antenna.
- Additional deception techniques include simulating normal living conditions at a CP, such as pants hanging on a rope, a coat left on the back of a chair, shoes, cigarette butts, candy wrappers, etc.,
- To simulate a vehicle park, use already destroyed or faulty vehicles and equipment and tow it to the decoy location. Camouflage the broken equipment as if it is real and functional unit CP equipment. Additionally, concentrate the decoy equipment around a specific object or building to increase its appeal to the enemy.
- To simulate the CTCP, use empty boxes, fired tubes of disposable rocket propelled grenades (RPGs), fuel cans, etc. Cover these objects with a camouflage net but do it deliberately so it is visible from above. Additionally, ensure the enemy can observe wheel tracks to simulate the active movement of vehicles.

COMMAND POST COMMUNICATIONS CONSIDERATIONS

The primary consideration leaders and planners must consider when choosing a CP's location is the ability to communicate between units. Different types of terrain have their own advantages and disadvantages for CP establishment. This section describes specific considerations when locating a CP within and outside of populated areas.

- Establishing a reliable and secure connection is necessary to effectively operate a CP. Staff members can do this with the help of radio, satellite, and internet communications.
- The quality of radio communication depends on the distance between elements and the topography of the area. Communications personnel can install repeaters in the area to strengthen the signal, if necessary.
- CPs should not use high-frequency (HF) radio stations because of their strong electromagnetic emissions and easily recognized signature. If CPs must use HF radio communications, they should only use them after installing a repeater system, operating on the lowest power setting, and using terrain masking of the antennas.
- High-power/long-range radio stations quickly provoke enemy missile and artillery fire; often it takes less than 15 minutes from transmitting on a high-power system before an enemy will target the area.
- Mobile internet connection is less dependent on distance and terrain; however, enemy EW can easily find the signature and location of routers.

COMMAND POST ESTABLISHMENT AND TRANSFER PROCEDURES

Establishing and transferring unit command posts is one of the most dangerous operations units can conduct. Units should consider the following when transferring or establishing a command post:

- Conduct reconnaissance on the terrain to determine a specific area for the location of the CP. Ensure the location is suitable to operate reliable communications with units and higher command. Additionally, ensure the area has protection from enemy observation and IDF. Plan for an alternate location.
- Provide security for the future CP area. A secure perimeter prevents unauthorized access and ensures the safety of personnel and equipment.
- Plan locations for all elements of the CP based on the features of the selected area.
- Plan for working, living, storage, and equipment parking areas.
- Monitor compliance with security measures and camouflage during CP establishment. If a new CP is compromised during the preparation stage, it will not only become a potential target but can also betray your operational intentions to the enemy.
- Design a plan for moving the CP, including measures to protect personnel during movement.
- Notify the higher command about the planned dates and specific place of the CP.
- Send an advanced party to the new location to deploy the temporary CP. It should include leadership and signal personnel.
- Ensure the necessary communication and power supply are established at the new CP location first.
- Inform all personnel working at the current CP about the specific start and end time of their transfer to the new location. Additionally, provide instructions and requirements that CP personnel must adhere to during the transfer.
- Check that all documents, equipment, and electronic devices are accounted for and ready for safe and convenient transportation. CP personnel must destroy all documents not taken to the new CP.
- Organize the transfer of personnel, equipment, and property according to the established plan.
- Leadership should make the appropriate combat reporting to the higher headquarters about the CP's location change upon completion of the movement.

CONCLUSION

CALL will continue its focus on modern warfare observations from the Russia-Ukraine Conflict. Additionally, CALL will conduct regular visits and virtual meetings with Security Assistance Group – Ukraine (SAG-U), Joint Multinational Training Group – Ukraine (JMTF-U), U.S. Army Europe and Africa (USAREUR-AF), the Polish Military Lessons Learned Center, and the TDF. Furthermore, these visits will facilitate future collection efforts from other Army and joint organizations.



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