



CHAPTER 12

MILITARY FREE-FALL DROP ZONE OPERATIONS

The airborne and airlift commanders make joint recommendations concerning drop altitudes and DZs. The airborne force commander recommends the final selection of DZs. He bases his recommendations on the suitability and size of the DZs, their geographic relationship to the initial objectives, and the natural or man-made obstacles and the rough surfaces that could cause an unacceptable number of injuries or excessive equipment damage. After considering the airborne force commander's preference, the routes to the DZs, the terrain obstructions, the ease of DZ identification, and enemy defenses, the mission commander recommends approach headings and selects initial and timing points. The MAC/Air Force Special Operations Command (AFSOC) mission commander ensures the delivery of the troops, equipment, and supplies to the selected DZs at the times established in the air movement plan.

Categories

USA and USAF DZs consist of terrain or water masses that have been approved jointly by the USA and USAF for the conduct of joint airborne operations involving personnel and equipment delivered from USAF troop carrier aircraft. A USA DZ consists of terrain or water masses that have been approved by the Army for the conduct of airborne operations involving personnel and equipment delivered from aircraft other than USAF troop carrier aircraft.

Selection Criteria

The ground unit commander selects the general area of the DZ where it will best support the ground tactical plan. The joint force commander (JFC) gives guidance on DZ size in operation plans (OPLANs) and operation orders (OPORDs).

Size

There is no minimum size for MFF DZs (STANAG 3570 and MAC Regulation 55-60). During training, the experience level of the parachutists must be considered when selecting DZs. An area 50 meters by 100 meters (for example, a football field) is the recommended minimum size DZ for training.

Other Considerations

In a peacetime environment, before dropping personnel and equipment from an aircraft, DZs must be surveyed and marked. Control personnel must also be located on the DZ before and during the drop. Joint inspection by USA and USAF personnel is required annually for USAF troop carrier aircraft drops. Obstacles on the DZ and in the immediate surrounding area must be recorded for use in the jumpmaster personnel briefing.

The maneuverability of the RAPS allows for greater flexibility in the selection of DZs; however,

DZs are selected only after a detailed analysis of the following:

- Mission.
- Proximity to the objective area.
- Enemy threat and air defense capability.
- Adequate approach and departure routes.
- Method of insertion (HALO or HAHO).
- Elevation and drop altitude.
- Physical characteristics of available DZs and surrounding areas.
- Relative number of obstacles in the area.

Number of parachutists to infiltrate.

Personnel Qualifications and Responsibilities

drop zone safety officer (DZSO) must be an officer, warrant officer, or noncommissioned officer (NCO). The commander ensures the DZSO is familiar with MFF operations IAW this manual and is a qualified and current static-line jumpmaster. The jumpmaster briefs the DZSO on the DZ markings, communications, and operating procedures that will be used.

DZSO (Officer or NCO)

The DZSO has overall operational responsibility for the DZ. He conducts a ground or aerial recon of the DZ before the drop to ensure there are no safety hazards. Other responsibilities include-

- Establishing personal liaison with the USAF drop zone control officer (DZCO) and the combat control team (CCT) and discussing drop procedures (USAF troop carrier aircraft).
- Clearing the DZ of unauthorized personnel and vehicles.
- Briefing and posting road guards (if required).
- Ensuring medical personnel are in position.
- Opening the DZ to provide adequate lead time.
- If using a CCT, collocating with the CCT about 10 minutes before the drop time and remaining with them until the completion of the jump (USAF troop carrier aircraft).
- Maintaining constant check of ground winds. Peacetime ground wind training limits will not exceed 18 knots. There are no winds aloft restrictions. Winds aloft, either in flee-fall or under canopy, are computed in the wind drift (D=KAV) calculation.
- After the pilot notifies the DZSO that the aircraft is 2 minutes from drop time, reporting back to the pilot the ground winds and a clear or negative drop. The aircraft pilot reports to the DZSO the number of parachutists that exited the aircraft.
- Relaying strike report to the aircraft pilot (Army aircraft or USAF troop carrier aircraft).
- During night drops, ensuring that all lights on or next to the DZ (except for DZ markings) are turned off 5 minutes prior to drop time and remain off during the jump.
- Directing recovery crew to assist parachutists and to retrieve equipment in trees.
- Assisting in medical evacuation of injured personnel from the DZ.
- Immediately after the completion of the jump, requesting the CCT to ask the pilot (USAF troop carrier aircraft) or asking the pilot (Army aircraft) if any personnel or equipment did not drop and then relaying this information to the airborne commander on the DZ.
- If a malfunction occurred, preventing the handling of the equipment until parachute malfunction personnel have examined the equipment. If a malfunction officer or an NCO is not physically located on the DZ, the DZSO secures the equipment and allows no one to examine it until he can turn over the equipment to an appropriate parachute maintenance facility.
- Recording the necessary information for the parachute operation report.
- Closing the DZ.

USAF DZCO

The USAF DZCO represents the airlift commander. He supervises all USAF personnel on the DZ. He also observes drop operations. Other responsibilities include—

- Evaluating all factors that might adversely affect safety.
- If conditions make drop operations unsafe, directing the CCT to relay that information to the appropriate USAF commander as soon as possible and to display the established NO DROP signal on the DZ.
- Directing the use of CCT equipment.
- Canceling drops when requested to do so by the Army DZSO.
- Keeping the Army DZSO advised on ground wind speed on the DZ.
- Preparing the necessary log and reports for submission to the airlift control element (ALCE) or the appropriate USAF commander.

CCT

The CCT marks the DZS with proper navigational and identification aids. He establishes ground-to-air communications at DZS as well as communications with designated control agencies. Other responsibilities include—

- Providing USA DZSO with surface weather and low-level (up to 1,500 feet) wind-aloft observations.
- Exercising air traffic control over aircraft in the vicinity of specific DZ (as directed).

Drop Zone Markings

MFF infiltrations usually take place on blind DZS due to the general ineffectiveness of visual markings when viewed from high altitudes (HALO) and extended distances (HAHO). DZ identification is normally by location in relation to major terrain features.

Drop zone markings are sometimes used when the tactical situation permits and it is desirable to

indicate wind direction to the descending parachutists (Figure 12-1). FMs 31-24 and 57-38 and MAC Regulation 55-60 outline marking techniques.

Release Points and DZ Detection

Location in relation to major terrain features identifies the HARP. Appendix B contains methods of computing the HARP. The HARP may be marked, if known, when the tactical situation permits. In heavily vegetated, mountainous, or urban terrain and during conditions of restricted visibility, DZs and HARPs may be difficult to detect. Electronic beacons or radar transponders and appropriate tracking devices help aircraft personnel and parachutists in locating DZs or HARPs. Expedient methods such as balloons and pyrotechnics may also assist aircraft personnel and parachutists in locating DZs or HARPs. In situations where secrecy is important, aircraft and parachutists equipped with automatic direction finding (ADF) equipment may conduct drops using only the radio homing beacon. Parachutists may also use the NAVSTAR Global Positioning System with portable terminals.

HAHO Aircraft or Team Identification

In air-to-ground identification, the aircraft or team (HAHO) identifies itself to the reception committee by arriving in the objective area within the specified time limit. It also identifies itself by approaching at the designated drop altitude and track (aircraft).

In ground-to-air identification, the reception committee identifies itself to the aircraft or team by displaying the correct marking pattern within the specified time limit and using the proper authentication code signal.

Authentication System

There is no standard authentication system for unconventional warfare (UW) reception operations. During mission planning, the commanders concerned agree on the authentication system they will use. Signal operation instructions (SOI) prescribe the authentication procedures.

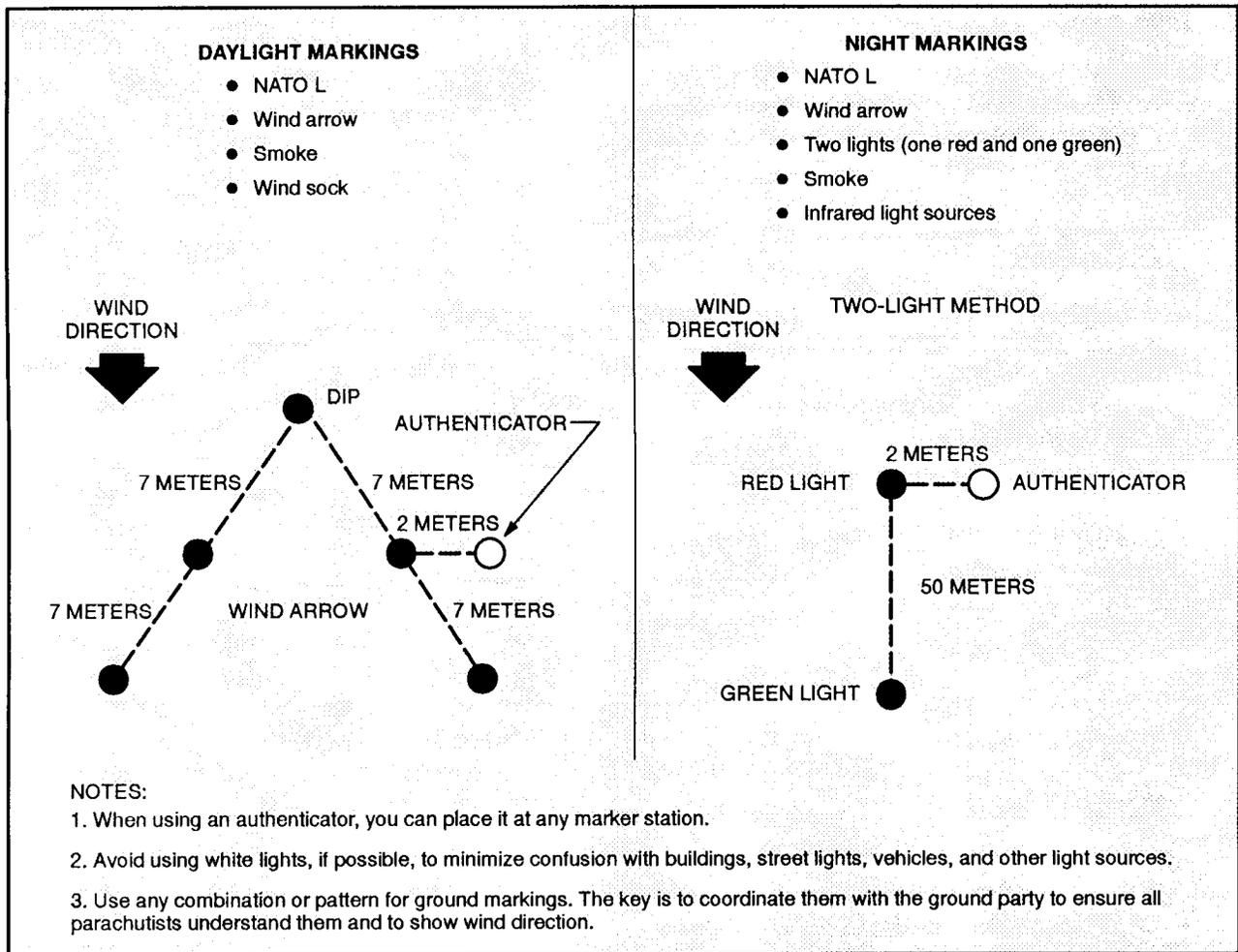


Figure 12-1. Military free-fall drop zone markings.

Authentication may take the form of a coded light source, panel signal, radio contact, homing beacon, or combinations thereof. Authentication may be employed individually or in conjunction with the marking pattern. When using a homing beacon or

radar transponder for authentication, the commanders concerned will jointly agree upon positioning and turn-on and turn-off times during mission planning.