

Small Unit Resupply Kit, SMURK

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# Report Documentation Page

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Pretend if you will that the conflicts in Afghanistan and Iraq are over. In order to maintain constant pressure on the global terrorist network, the Marine Corps has assumed a significant role in "direct action" missions. Prior to September 11<sup>th</sup>, such missions were given to Special Operations Command and its associated Special Operation Forces. Well trained Marines in small units (platoon and below) armed with lessons learned from recent experience now operate with significant autonomy, and they are lighter and more lethal than ever. They seek an enemy that finds refuge in the urban sprawl of third world nations, such as the remote wadi's of Africa and the jungles of Indonesia. Armed with minimal gear and rations of food and water, these Marines are required to close with, identify, observe, and neutralize terrorist threats. They are more capable, but also more vulnerable than ever. Accordingly, they are extremely dependent upon a flexible logistical support system capable of timely distribution, regardless of the enemy situation or terrain in which they may be operating. Hypothetical situations aside, the Marine Corps continues to have a gap in its ability to resupply units that are conducting a wide variety of missions in urban environments or that have been isolated due to the enemy situation. Therefore, the small unit resupply kit or SMURK must supplement traditional forms of ground and air resupply.

### **What is a SMURK?**

The SMURK is a boxed container designed to absorb high speed impact with the ground. Its primary method of delivery is by helicopter, but it can also be delivered by fixed wing transport aircraft. The SMURK delivery system takes various shapes and sizes, but in general one should picture an elongated rectangular cardboard box, three feet long with fins like a traditional "high drag" or Snake eye bomb. The fins stabilize and decelerate the box as it spirals to the ground. On impact, the foam, air bags, or a combination thereof that had filled the nose compartment absorbs a majority of the impact. The passing of the loud helicopter muffles its impact. The Marines on the deck open the aft end of the SMURK and retrieve whatever supplies they need to sustain themselves. For example, a SMURK can be tailor-loaded in the rear area by a supporting unit. Depending on the situation, a SMURK may contain twenty or thirty filled magazines of 5.56mm ammunition and several smoke grenades, or it may be filled with life-saving plasma, morphine, intravenous supplies, and so on.

### **Scenarios where the SMURK may be used?**

Upon initial consideration, the need for such a device seems to be trivial; after all, convoy assets can resupply units wherever they may be, and helicopters can land in very small landing zones (LZs). But today's battlefield is increasingly

non-linear and complicates our efforts to conduct logistical resupply. Marines need options that increase their chances of mission success or survival. In Mogadishu and in Fallujah seemingly disorganized forces made coordinated efforts to draw American units in and isolate them from their supporting forces. Since the Marines Corps is a light force, often with little or no armored assets to reinforce units, helicopters become the primary means of sustaining small units until an alternative plan for resupply or extract can be executed. Additionally, units in contact with an enemy in an urban environment may not be able to move to an LZ or roof top, much less secure the LZ prior to a helicopters arrival. In the Vietnam war, North Vietnamese forces conducting pre-siege operations on Khe Sanh, later referred to as the "hill fights", intentionally held their fire knowing that helicopters were most vulnerable while sitting or hovering over an LZ. And while a helicopter must still land to evacuate wounded Marines, the SMURK would reduce the number of times and duration that a helicopter must be exposed to a threat.

In a hypothetical another scenario, a commander charged a reconnaissance and surveillance team with waiting for a "target" individual who has yet to arrive at a known hideout. The commander may have to abort the mission because his team is running out of drinking water and power for their PSC-5

satellite communications. That night, he considers a resupply but decides against it knowing that while the plastic water bottles would fare well in the impact, the same could not be said for batteries. The SMURK on the other hand could be delivered under cover of darkness by a transiting helicopter or KC-130 and done so with relative ease and minimal external support. The SMURK provides the commander with more options, for both planned and emergency situations. The Marine Corps will continue to operate in environments where it does not possess the capability to effectively resupply small units and must prepare for such inevitable situations and lives are at stake.

#### **Historical uses for the SMURK**

After the North Vietnamese Army's initial siege on the out post at Khe Sanh, one would think that the Marine Corps would have devised new techniques for delivering supplies. Instead the Marine Corps will do the same thing as it did in 1968-- "improvise". The most successful way to ensure that a resupply took place was to throw massive amounts of ordnance at the enemy positions primarily with fixed wing A-4s supplemented by artillery and mortar fire from surrounding areas.

Using the "Super Gaggle" technique, groups of helicopters could resupply the hills four times per day with little danger of losses. Indeed, only two CH-46s fell to enemy fire during "Super Gaggle" missions, and in both cases, the Hueys picked up the crews immediately. During the month of

March, the helicopters in "Super Gaggles" delivered about 80,000 pounds of cargo per day to the hill outposts. Brigadier General Henry W. Hise," one of two assistant wing commanders, observed, however, that without the fixed-wing support, "the 46s could no longer have supplied the hills." He noted that the Super Gaggle reduced the "hit rate" among the helicopters from 10 per 1,000 sorties to 5 per 1,000 sorties. According to Captain Dabney on Hill 881 South, with the suppression of the North Vietnamese anti-aircraft batteries by the fixed-wing aircraft, "you could get in 10 helicopter loads on the hill in one minute and get the birds the Hell out of there and into smoke where the NVA couldn't see to shoot." With obvious Service pride, Dabney later praised the Super Gaggle: "It was a massive, complex, well rehearsed, gutsy and magnificent performance and only the Marines could have pulled it off."<sup>1</sup>

So much for learning from the past. With the SMURK, troops could would take cover in their fighting positions as dozens of SMURKS rain down on or near their positions, day or night. The argument that the use of night vision devices would permit pilots to deliver the supplies at night and reduce the effectiveness of the enemy's fire, fails should the enemy employ illumination rounds or there is burning equipment and vegetation near the LZ.

#### **What makes the SMURK different?**

The SMURK system allows the delivering aircraft to maintain a flight profile that permits it to close on the designated grid, chemical stick, cross street at seventy to one-hundred and fifty knots and a low altitude (fifty to two-hundred feet). If

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<sup>1</sup> <http://www.ehistory.com/vietnam/books/1968/0485.cfm> p. 485

the threat is significant or the actual drop needs to be concealed from observation so as to not reveal the supported units position the delivery could be made at night. A typical delivery profile could drop four to eight SMURKs per aircraft with the limiting factor being time to manually deploy the SMURK while transiting over the units position.

The SMURK would not replace traditional aerial delivery conducted by KC-130s or other transport aircraft, nor would it accomplish the same task as the large GPS guided parachutes currently under development by the U.S Army. These delivery systems either have a high dispersion rate and are designed to work with heavier payloads typical of full canopy deliveries. Therefore, these delivery systems are ineffective at resupplying small units, especially if they are in an urban environment.

#### **Requirement across the spectrum of operations**

A recent, non-urban example where traditional aerial delivery forms, as well as helicopter LZs, would fail to resupply troops took place during Operation Anaconda in Afghanistan. Special Operation Forces (SOF) were inserted via helicopter into the few zones available in the area. Due to degradation of helicopter capabilities operating at high altitudes (in this case above eight thousand feet), U.S. Army



CH-47D heavy lift helicopters<sup>2</sup> to performed a task that very few, if any other helicopters in the U.S. inventory could accomplish. Once inserted, these lightly armed troops uncovered and pursued Taliban and Al Qaeda forces. These special operation forces required traditional close air support (CAS), but they especially favored CAS provided by AH-1Ws Cobras. This is due in part to the tactics utilized by the Cobras which allowed them to engage terrorist literally face to face without sustaining a single hit. By constantly moving at seventy knots airspeed or greater in a "wagon wheel" pattern over head the SOF troops each Cobra protected the rear of the aircraft to its front. The same tactic of maintaining forward airspeed and never coming into a hover would increase the survival of helicopters conducting SMURK drops in close proximity to friendly and enemy troops.

Something else to consider in this situation; allied fixed wing CAS aircraft filled the skies just above the battlefield and numerous near mid-air collisions were encountered.<sup>3</sup> Considering that the priority was for CAS aircraft, it is highly doubtful that a transport plane such as a KC-130 would have been permitted to fly over the objective area to parachute supplies to these troops. Supplies that very easily could have drifted

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<sup>2</sup> James B. Sisler, Maj. USAF "Operation Market-Garden and Anaconda: Airpower Lessons" (USMC Command and Staff College, Marine Corps University, 2003) p.12

<sup>3</sup> Interview with Major Matthew Hafner, VMA-211 Harrier pilot during operation Anaconda. January 2005.

into enemy hands or missed the troops for whom they were meant. Instead there were numerous helicopter assets available that could have dropped resupplies when and where it was needed. The extent of integration required with the other aircraft would have been routing into and out of the drop zone to prevent fratricide.

### **Humanitarian Assistance Operations**

The SMURK system will not just be an effective delivery tool for troops conducting combat operations, but it should prove equally beneficial to troops conducting Humanitarian Assistance Operations (HAO). They could be loaded to accommodate a number of critical supplies such as water, medicine, and other relief materials. A multitude of airframes both military and civilian could then deliver them, increasing the delivery methods of much needed supplies. Additionally, SMURKs utilized in this situation would serve as one more ambassador to people in need and help deny the enemy a constituency when they come looking for recruits.

### **Development of the SMURK**

The greatest benefit of this project would be to keep it inexpensive so that both its production and its distribution could be widespread. There is a similar device that has been

developed in Australia called a "Helibox."<sup>4</sup> However, much of its details are classified, but could provide a great start for SMURK development. Ideally the Marine Corps develops the SMURK by utilizing lightweight, impact absorption materials. This absorption material or foam can come in cans like "Fix-a-Flat" canisters or airbags produced the same way that other packing bags are produced but with more durable plastic and inflated once they are needed. Additionally, collapsible cardboard containers similar to "tri-wall" utilized on board Navy ships could be folded flat and palletized for stowage and transport to a theater. It is not hard to fathom where such a device could be needed by all services as well as non-governmental organizations conducting humanitarian assistance operations and make the SMURK well worth its development.

Going back to our hypothetical situation in the beginning of this paper, the wars in Iraq and Afghanistan continue. We are not involved in a new kind of a war, we are involved in an old kind of war, one that is well addressed in the Small Wars Manual (FMFRP 12-15). It is encouraging to see that it too has some decent ideas about aerial delivery of supplies.

Explosives, detonators, liquid medicines, etc. may be swathed in cotton and excelsior and dropped safely; water in half-filled canteens may be dropped from low altitudes with no protection other than the canvas cover; dry beans,

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<sup>4</sup> <http://www.defence.gov.au/news/raafnews/editions/4401/story01.htm>

rice, sugar, and similar supplies may be dropped by enclosing a half-filled sack in a larger one.<sup>5</sup>

The Marine Corps' history is filled with valuable lessons learned. We must prepare for the inevitable situation where our Marines are without traditional forms of resupply due to enemy action, terrain, or mission protocol. The small unit resupply kit is the answer to bridging this gap.

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<sup>5</sup> Department of the Navy. Headquarters United States Marine Corps. December 22, 1990. p. 23.

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