



HELICOPTER SLING LOAD RAPID AERIAL DELIVERY EQUIPMENT (HSL RADE)

CAPABILITIES:

The HSL RADE project integrated elements from various airdrop programs into a new capability that allows aerial delivery of payloads from the cargo hook of a helicopter. The system was developed by the NSRDEC and sponsored by USTRANSCOM to maximize the carrying capacity of rotary wing aircraft in an airdrop application. The system relocates airdrop payloads from within the aircraft to under where volume and floor pressure are no longer an issue. The RADE frame also allows any payload(s) to be selected (via a wireless controller) and airdropped without a predetermined release order, allowing for greater operational flexibility.

DESCRIPTION:

The HSL RADE system consists of four frame structures manufactured from aluminum I-beams, wireless release devices located on the I-beam, and a controller device to program payload release order. The components can be flown individually, in pairs or four connected sections to provide airdrop capability for up to eight, sixteen or thirty-two payloads respectively. The controller can be used to identify the desired payload(s) for release and activate when at the desired calculated air release point.

FACTS:

Weight :

- ¼ section: ~200pounds
- ½ section: ~400 pounds
- Full system: ~900 pounds

Capacity:

- ¼ section: ~4,000 pounds
- ½ section: ~8,000 pounds
- Full system: ~16,000 pounds

POINT OF CONTACT:

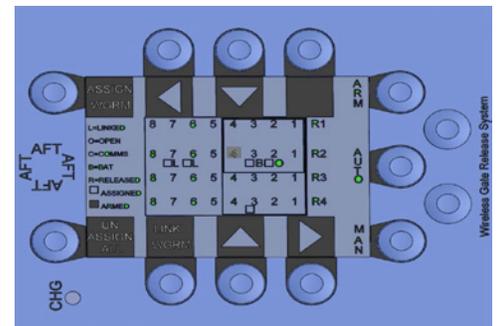
**US Army Natick Soldier Research, Development & Engineering Center
Aerial Delivery Directorate**

COMM: (508) 233-4495

Email: usarmy.natick.rdecom-nsrdec.mbx.nati-amsrd-nsc-ad-b@mail.mil



Wireless release in the frame



HSL RADE MCS GUI



Full HSL RADE System under CH-47 Helicopter



Quarter System High-Speed UH-72 Flight with Eight Payloads

UNCLASSIFIED