CG-4A Glider Pickup by Jungle Moonlight

By Charles L. Day

Beginning with the model 15 winch, Richard duPont and his All American Engineering Company designed and built several sizes of winches for "picking up" a static article by an aircraft in flight. The model number of each winch was a basic designation of the weight capacity of the winch. The model 15 was 1,500 pound capacity and was used for mail bag pickup, practice pick-up of dead weights, sheep and finally the first human pick-up September 3, 1943. It also was used for the pick-up of a Piper Cub aircraft and a soaring glider in sales demonstrations to sell the system to the United States Army Air Forces. The model 40 winch at 4,000 pound capacity was built and installed in a B-23 which then was used by the AAF to pick-up the XCG-3 in December of 1942. The model 40 was followed by the model 80, model 120, model 160 and larger. The model 80 was 8,000 pound capacity intended for picking up the CG-4A glider. The winch functioned similarly to a fishing reel. The steel cable payed out under the load of the object being picked up, absorbing most of the shock. In just under seven seconds and less than 100 feet, the CG-4A glider was flying at the same speed as the tug.

Testing and development of the model 80 winch, C-47, CG-4A pick-up procedure occurred during early 1943 with model 80 production deliveries to the USAAF in late 1943 and early 1944. The first model 80 equipped C-47 aircraft which had been used at Clinton County Army Air Field for the procedure development was flown to North Africa in the late summer-early fall of 1943 with the intent to recover the few Sicily mission CG-4A gliders that were flyable. During pick-up demonstrations and crew briefings, the winch developed electrical problems and the Captain in charge, Lloyd Santmyer, left the crew and the C-47 and flew back to the States to obtain the needed electrical parts. On returning, he found that the local commander had put the crew aboard a ship returning to the states, removed the winch system from the C-47, and put the aircraft into freight service.

Before this happened, the officers in charge of the First Air Commando Group visited the glider test base at Wilmington, Ohio to receive CG-4A pick-up demonstrations and briefings. Because of the loss in North Africa of the winch equipped C-47, the First Air Commando unit trained using model 15 winch equipped L-1-A aircraft to pick-up TG-1 soaring gliders at Seymour-Johnson field. Finally, by October 28, 1943 the unit received a model 80 winch equipped C-47 with which they performed twenty-five CG-4A pick-ups by November 5, 1943.

Up until this time all experimental pick-up development had been done by All-American Engineering and the Glider Branch engineering pilots and engineers at Wright Field and Clinton County Army Air Field. The winch drum held slightly more than 1,000 feet of 3/8 inch diameter steel wire cable with the large hook on the end. This hook engaged the nylon line which was 15/16 inch diameter. An eighty foot circumference loop was stretched between two twelve foot tall poles spaced twenty feet apart. A two-hundred and twenty-five foot length of 15/16 inch nylon line connected to the loop and the glider. Later, through experience, for safety, a ten foot length of 11/16 inch diameter line was connected between the glider and the pick-up line. This safety link would break before the larger line, thus eliminating a broken pickup line from snapping back through the glider nose.

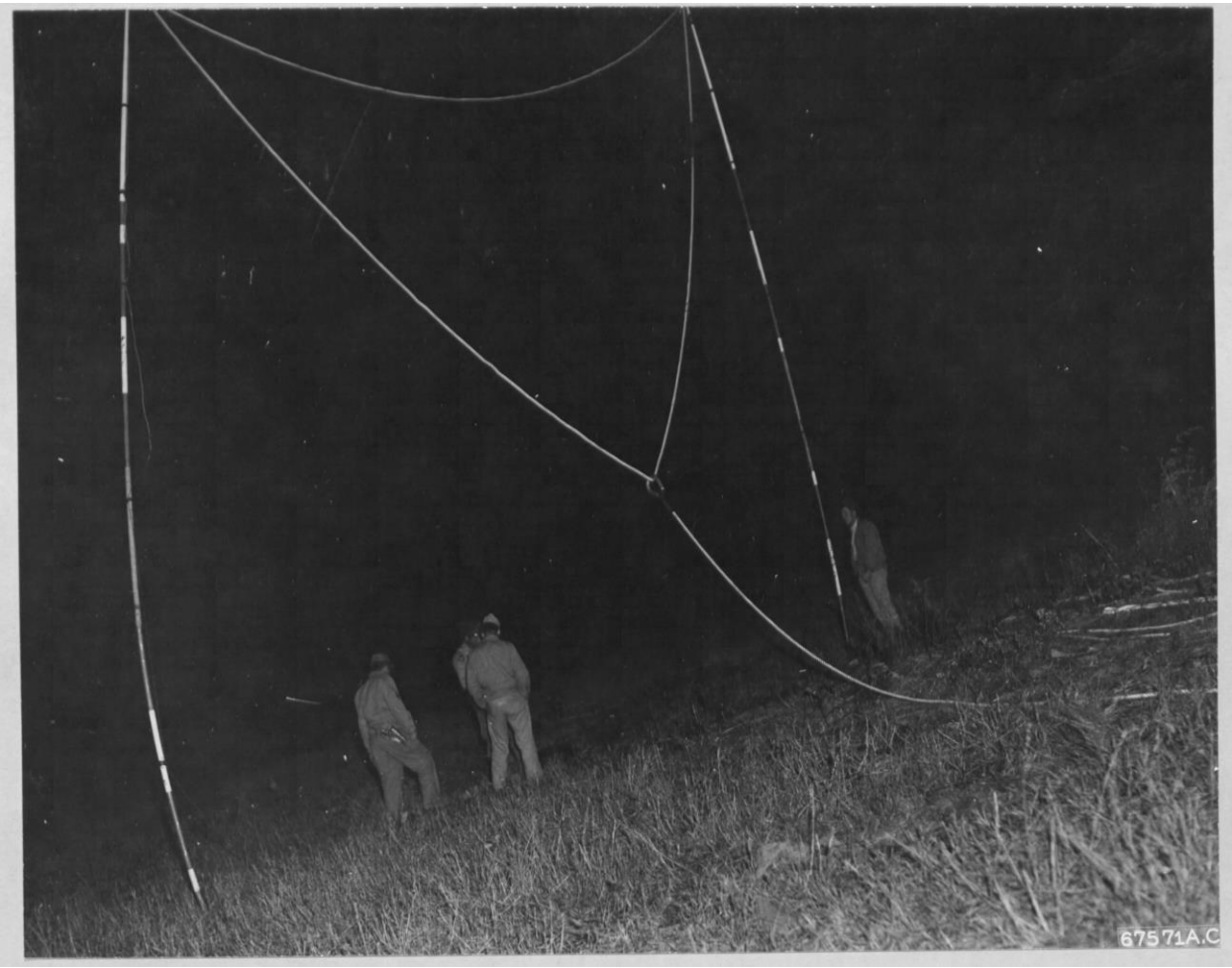
Then Captain E. Lee Jett was a pick-up tug pilot involved from the first dead- weight pick-up through B-17 pickups until the fall of 1946. He performed over 2,500 pick-ups flying development, Troop Carrier instruction and War Bond Drive tours. When I asked him if he was involved with NIGHT pick-up development, he told me he did not know night pick-up was ever done and, had he been asked, he likely would have refused as he thought it would have been too dangerous! It was dangerous enough for the tug in daylight!

The First Air Commando Group in Burma trained flying double tows at night. They hauled mules and water buffalo as well as gasoline cans, bulldozers, other equipment and supplies, and men, including some of Scotland's famed Black Watch in their CG-4A gliders. They flew gliders the width of India and back. They flew missions using the glider pick-up to rescue natives. They hauled and landed bulldozers in the CG-4A for building landing strips so C-47 aircraft could land and take off. As though that was not enough, the First Air Commandos raised the glider pick-up system one more notch. They did gliders pickups at night!

Glider pilot Lt Robert Sharrock, who later was killed in action, developed and worked on special equipment to make the night pick up possible. This work was done at Ondal India. Several other men helped Sharrock part time. W/O Evans, M/Sgt Rumpfelt, along with, glider pilots, Lt Neil Blush, F/O Edwin Lavarre and F/O James Bartlett helped set up the equipment and make "dry-runs" to check the system out.

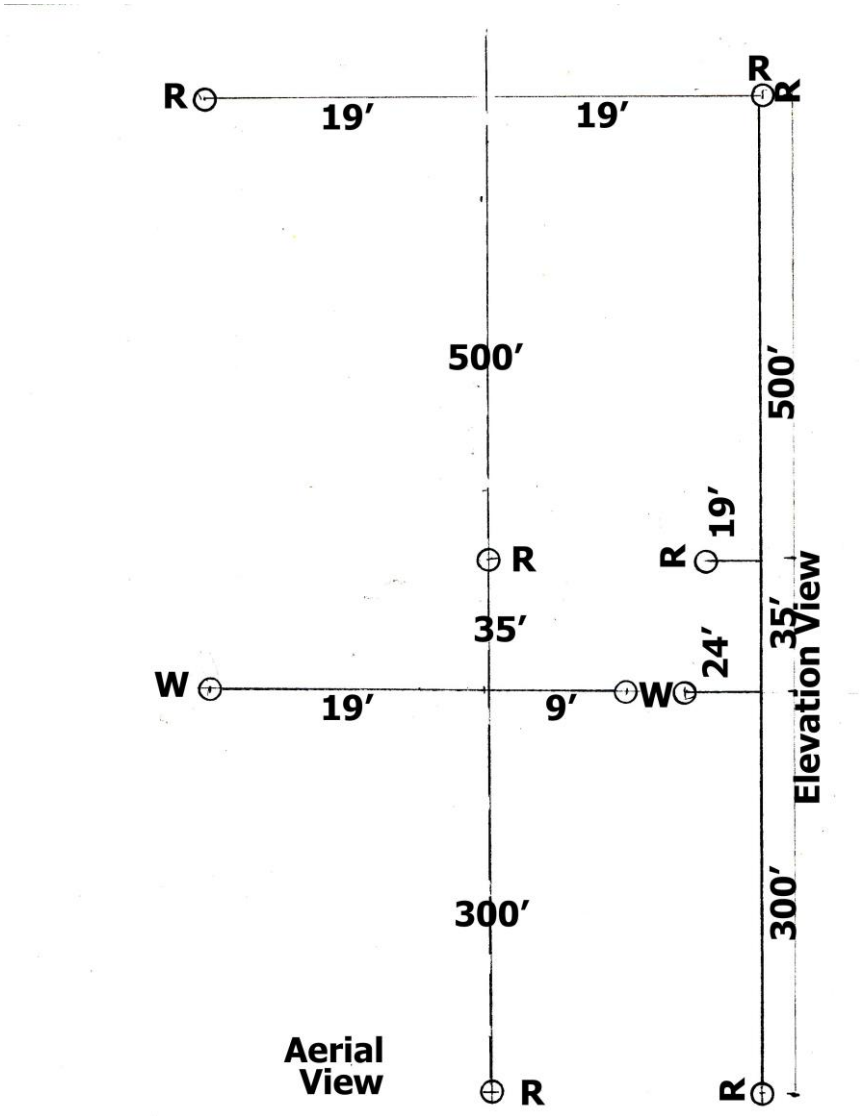
The system was basically the same as the USAAF system developed for daylight pick-up with these exceptions; the steel tubing poles to support the nylon loop were twenty-four feet tall instead of twelve feet tall. The poles were set twenty-eight feet apart rather than twenty feet apart. The rest of the system was two white lights and four red lights powered by four 12-volt batteries separately connected to each light set. The batteries would power the lights continuously for six hours.

The red and white lights were positioned to help the tug pilot see the poles and judge his height above the ground, to accomplish the pick-up. Each of the twenty-four foot tall poles had a white light at the top. A straight horizontal line was established, 90 degrees vertical to the two poles and nineteen feet to the right of the left pole (this offset compensated for the offset of the pick-up arm mounted on the port side of the C-47). One red light was set on this line, on the ground, three hundred feet in front of the 24 foot poles. On this horizontal line thirty-five feet to the rear of the two poles was set a red light on a nineteen foot tall pole. Continuing five hundred feet (535 feet from the two poles) from this red light, centered on the same horizontal line, two red lights were placed on the ground 38 feet apart. As evidenced by the photograph, the pickup loop and line were not changed, only the support poles were longer to further raise the loop contact area above the ground.



1AC night photo, 24' tall pickup poles w/standard pickup line loop. Four men would be four of those previously listed.

On January 2, 1944, glider pilot, F/O Kenneth Johnson piloted the CG-4A in the first night CG-4A pick-up at Panagarh India. Further research will have to determine where, when and how many night pickups were performed and who were the C-47 tug pilots and the glider pilots who flew those night pickups.



Aerial view depicting layout of poles and lights looking down to show the width and length of the light layout. The right edge (turn sideways) of depiction, marked Elevation, shows the height of the lights and poles relative to the ground.

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Sources are from research for *Silent Ones WWII Invasion Glider Test & Experiment Clinton County Army Air Field Wilmington Ohio* and from April 1, 1944 Joint Intelligence Collection Agency report 1449, China Burma India, courtesy Silent Wings Museum, Lubbock, Texas.

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