



RF Control System

2AAEW HBRFHS001 ***User Guide***

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For use with all Remote Hook Systems

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***** Manual should be printed in color for clarity*****



Operating limitations are mentioned throughout this manual, the significance of such limitations provide for the safe assembly and operation of the Tow Bridle®.

The following are used throughout this manual to emphasize the importance and significance of each operating limitation:

WARNING [all caps, bold, and underlined]

OPERATING PROCEDURE, PRACTICE, ETS., WHICH MAY RESULT IN PERSONAL INJURY OR LOSS OF LIFE IF NOT FOLLOWED CAREFULLY [bold all caps text]

CAUTION [all caps, bold]

OPERATING PROCEDURE, PRACTICE, ETC., WHICH IF NOT STRICTLY OBSERVED MAY RESULT IN DAMAGE TO EQUIPMENT. [non-bold all caps text]

NOTE [all caps]

An operating procedure, condition, etc., which is essential to emphasize. [normal text]



Table of Contents

Section 1 – Operation4

1.1 – FCC Instructions.....4

1.2 – Purpose.....5

1.3 – Product Features.....5

1.4 – Pre-Flight Testing.....5

Step 1 – Electrical Connection to the Aircraft.....5

Step 2 – Turn on Power on Receiver.....7

Step 3 - Test.....7

1.5 – In-Flight Use

Section 2 – Maintenance.....9

2.1 – Battery Charging Receiver.....5

2.2 – Battery Replacement Receiver and Transmitter.....10

2.3 – Hand Control Circuit and Polarity.....11



2AAEWHBRFHS001 Operators Manual

Section 1 – Operation

1.1 – FCC Instructions

INSTRUCTION TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Operation with non-approved equipment is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.



1.2 – Purpose

This system was designed to provide a wireless link from the Hand Control to the Remote Hook using an encoded Radio Frequency Transmitter and Receiver. The use of this system will allow the use of a long line of any length or capacity to be used with a remote hook without the need to provide an electrical wire and protective wire cover on the long line. This removes many of the problems associated with using the hook system in areas covered with vegetation or obstacles that might snag the wire or tear the cover.

1.3 – Product Features

The system consists of the following:

- Hand control which allows the crewmember to operate the system from anyplace within the cabin of the Helicopter.
- Transmitter that is directly connected to the Hand Control. The Transmitter sends an encoded signal which is encoded to a type one level preventing any inadvertent operation from signals close enough to be detected.
- Receiver that is mounted on the Hook body powered by a battery that also powers the solenoid.
- Wireless connection from the Helicopter to the receiver which removes the need for electrical cable from the Helicopter to the long line.
- The system can be used with any length long line up to 200 ft. (Depth perception becomes questionable past 200 ft.)

1.4 – Pre-Flight or Daily Testing

The System should be tested prior to the first flight of the work day.

Step 1 – Electrical Connection to the Aircraft

The Hand Control needs to be connected to the aircraft. Turn the Aircraft battery to the on position. Ensure that the Hand Control is connected to the Transmitter and that the connection is good.

Step 2 – Turn on Power on Receiver

Turn the power on at the receiver. To ensure extended battery life, the receiver should be turned to the Off position after each days flights have been completed. Therefore, to begin the test, the receiver must be turned to the ON position.



Step 3 – Test

Apply a slight load to the load beam of the Hook (this may be done by hand). Signal the crewmember to press the correct button on the Hand Control. The solenoid should operate and the load beam of the Hook should be released. Close the Load Beam and check to see it is engaged. Complete this process a minimum of three times. If all are successful, the system is ready for use.

1.5 – In-Flight Use

The system should operate as tested while in flight.

To attach a load, the load beam should be checked to ensure that it is engaged. This can be accomplished by pulling on the load beam to ensure it cannot open. The load may be attached using the proper shackle or attachment device.

To release the load, the Hand Control pushbutton will send the signal to the receiver to operate the solenoid in the Hook and the load will be released. This system is designed to release the load while it is in the air when an emergency occurs. In normal operation, the load will be set down and the Hook will be released. If necessary, the Hook may be actuated more than once to ensure that the load is released.

The load may be released manually using the Manual Release on the face of the Hook if necessary. Please ensure that there are no personnel under the load when releasing manually.

Section 2 – Maintenance

2.1 – Battery Charging Receiver

The receiver has a Lithium Polymer battery that will need to be recharged when the indicator on the battery shows less than 50 % of charge. If the system is being used on a daily basis at a high rate, the battery charge should be checked weekly. The system is provided with the correct charging unit for the battery. Remove the battery from its place on the Hook and attach the charger to recharge the battery.

2.2 – Battery Replacement Receiver and Transmitter

The Battery for the receiver is a standard issue UBBL09 Lithium Polymer battery that has been defined for use by the US Military. When the battery will no longer hold a charge, you may purchase a battery from HeliBasket LLC or from the Ultralife battery company.



The Transmitter must be returned for battery replacement

2.3 – Hand Control Circuit and Polarity

The Hand Control is shipped with the correct polarity for the aircraft with which it is designed to operate. It can only be used with this aircraft.