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(57) Abstract :

Single-Line Kite power Control System with On-Air Motorized Controller comprises a single Brushless DC motor; Power lines 201 connected to the ground via the kite control pod; control lines 202 for steering through a steering pulley mechanism 203; kite controller to control the movement of kite; a sensor unit attached to a dual or quad-line kite; electromagnetic switches and a pair of solenoid, wherein the single Brushless DC motor (401) equipped with two solenoids (402, 403) configured to extend/retract driving gears of the motor; the electromagnetic switches control the winches connected to a gearbox, a gear sliding mechanism with a bearing 406 that converts linear force into rotational movement of kite; the gear retracts when the solenoid coils are energized and disengages the driving pulley from the worm gear thereby controlling left and right movement of the kite as a result the system significantly reduces weight and enhanced the performance of the kite controller.

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