

◆ Sterling Models introduced their first "Command Master" system in 1965. This, as you probably know, operated a proportional rudder and an optional three position engine control escapement. Two noteworthy features, other than its high reliability and long range, were its crash resistant receiver, battery, actuator module. This was simply strapped into the model with rubber. The engine escapement plugged into a socket in the top of the unit. Another outstanding first was the unconditional "5 Year" black box guarantee. "If the receiving unit ceases to operate at any time within five (5) years from date of purchase, because of crash or any reason, immediate replacement will be made on receipt of the unit at the factory with \$7.50, provided the lid is not removed and unauthorized repairs are not attempted," unquote. Notice the because of crash or any reason, Sterling really has confidence in their product.

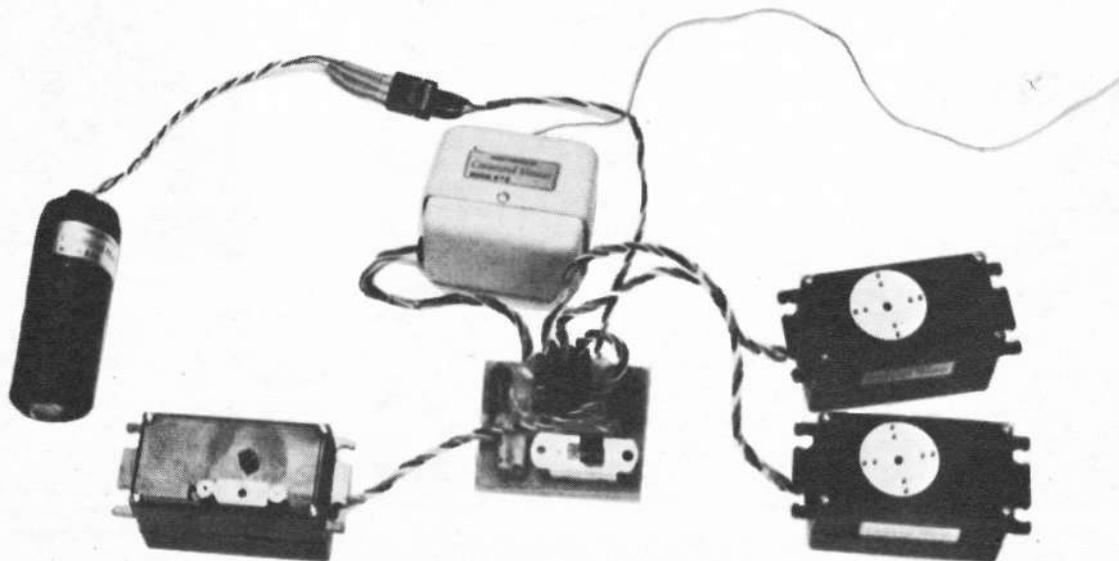
I did a lot of sport flying with this system and never had a bit of trouble with it.

The Command Master Division of Sterling Models has now gone one step farther and introduced their new "Command Master" 3+1. This is a three channel Analog system designed by Dick Jansson, a familiar name in R/C circles. He was also responsible for the original "Command Master" system. Truly unusual is that the same 5 year black box guarantee applies, except the service charges are \$9.50 for the receiver and \$7.50 for each servo. Replacement will be shipped within 24 hours of receipt. There is no limit to the number of times the system may be sent back.

The transmitter is in the same modern looking case as the single chan-

"COMMAND MASTER" R.T.E.

A strong guarantee comes with the new 3+1 Command Master RTE, Older sets may be converted, out of the box, in air in minutes.



nel unit except where the rudder knob used to be, there is a Bonner stick assembly. Throttle buttons are located to the left of the stick, and with these the engine may be "blipped" to any desired setting. It's light weight and compact size make it very easy to hold and operate.

Removal of the back cover exposes a neat looking printed circuit board and an orderly looking component layout. A 9.6 volt nickel cadmium battery pack is included. The external charger is plugged into a socket on the front of the transmitter.

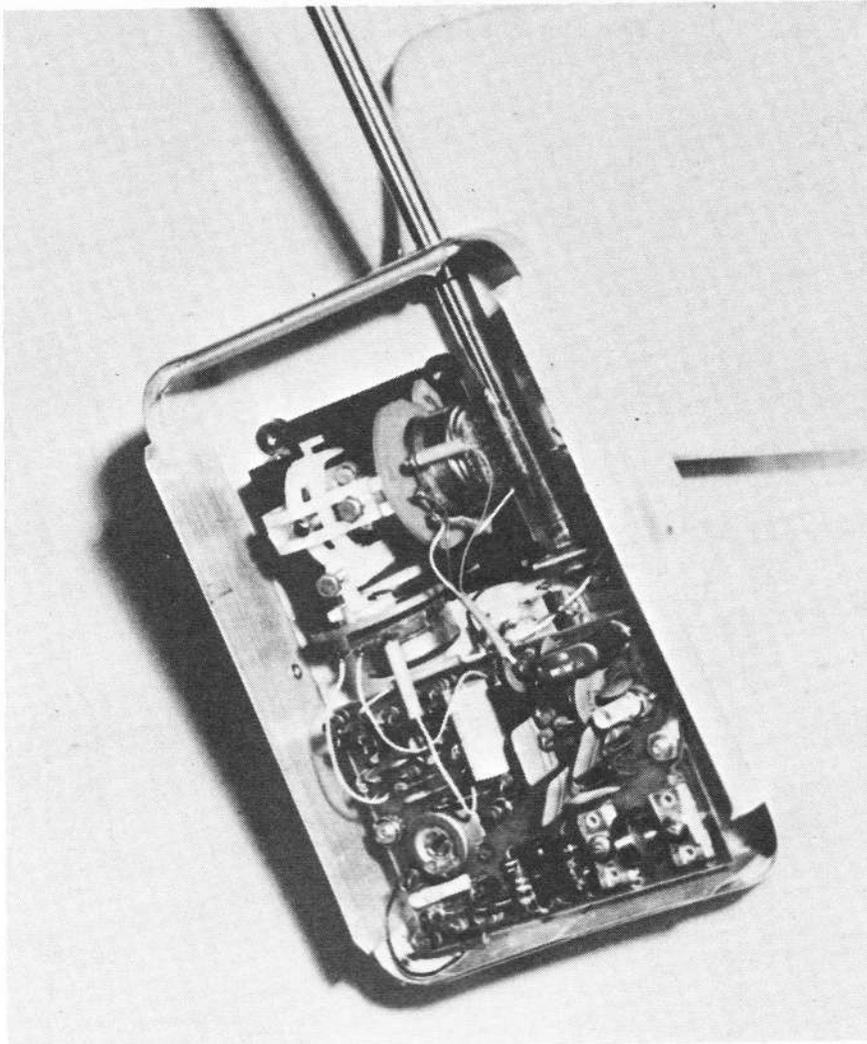
Another Sterling exclusive is the dual tone transmitted. One tone at 2800 c.p.s. is a carrier fillertone. This is always being transmitted, filling the time periods when the control tone is off between pulses. With the receiver locked on this tone it is not responsive to smaller interference signals. The filler tone is not used for any control action, it is filtered out before it reaches the decoder. Sterling feels it adds to the reliability, so they include it.

The second tone is the command tone of 3500 c.p.s. A change in rate between 30 and 51 c.p.s. affects the elevator position. Rudder is controlled by a change in width ratio between 70/30 and 30/70 percent. The throttle control servo is trimmable. It is controlled by a full on or off of the command tone. Full on, giving high engine and off, giving low.

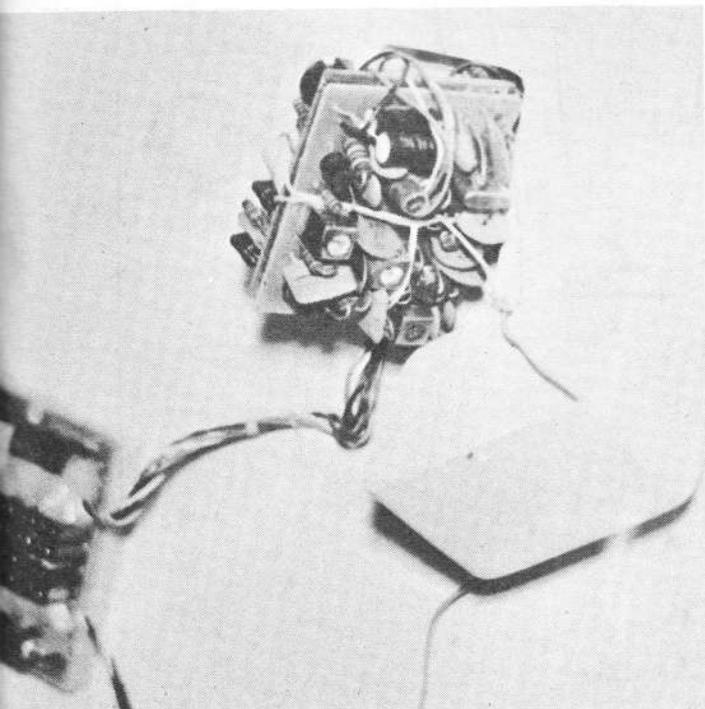
This is a "fail safe" system. When there is a loss of command signal the elevator and rudder servos go to neutral while the throttle servo moves to low. To check this, place the controls in any position, then turn the transmitter off. Low engine and neutral will result.

This system, like most all systems available today, is prewired. It takes

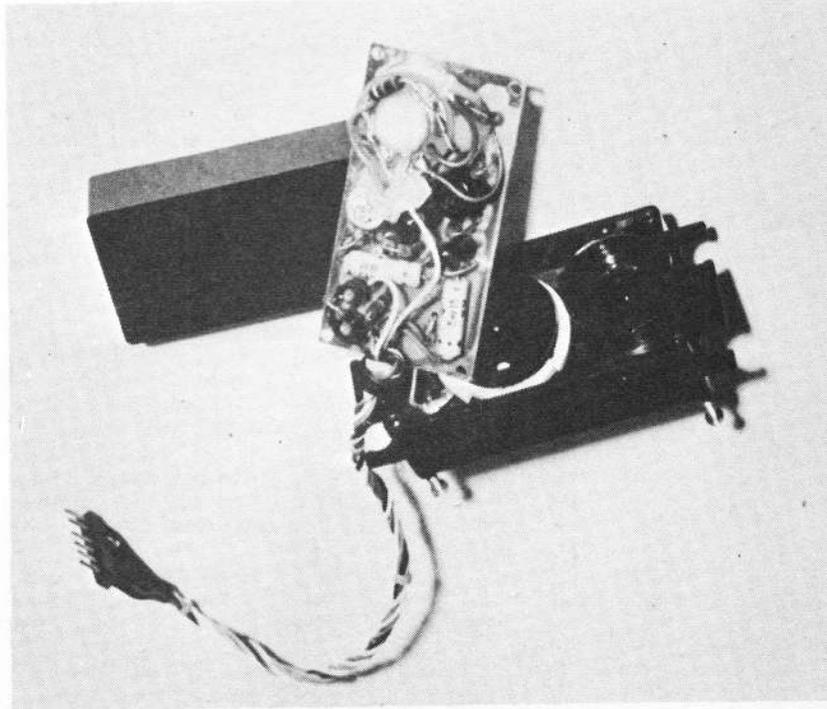
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Command Master RTE Transmitter, cover removed. A compact handful which is comfortable to hold in flight. Well engineered. System offers a low cost approach to Proportional R/C, carries guarantee.



Compact double-decker type receiver design. Receiver on one side, the decoder circuitry on the other. Compact design, fits anywhere.



De-skinned servo. Orbit type mechanics coupled to Command Master's own circuitry. A wear-resistant molded feedback pot. Accessible.

COMMAND MASTER

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only a minute to have it out of the box and operating on the bench. Connectors have always been a source of trouble in even the highest priced units. Sterling has eliminated one of these potential trouble spots by wiring the receiver directly to the connector-switch board. The 4" lead provided is more than adequate to allow removal of the receiver, if required, from a plane without affecting the connector board.

Since this is a 3+1 system, a fourth servo socket is provided on the connector board. To obtain coupled rudder and elevator without a nightmare of mechanical linkage, an optional aileron servo can be mounted in the wing and plugged into the vacant socket. I hooked up the elevator servo to work along with the rudder to simulate coupled ailerons and rudder, and see how closely they followed. The servos both followed

FLYING MODELS

the slightest movement of the stick. By eye they followed each other at the same speed and neutralized at the same time and location.

The servos utilize the familiar and highly respected Orbit case and mechanics. Sterling's own circuitry is used. The motors are of special low current design. Each servo draws approximately 45 ma. running, compared to most others at 100 ma. The complete receiver system draws about 45-50 ma. idle. A rechargeable 9.6 volt 225 mah nickel cadmium battery supply is included. This is good for at least two hours of flying. The weight of the airborne equipment is 15 ounces with three servos. A fourth servo will add approximately 2½ ounces.

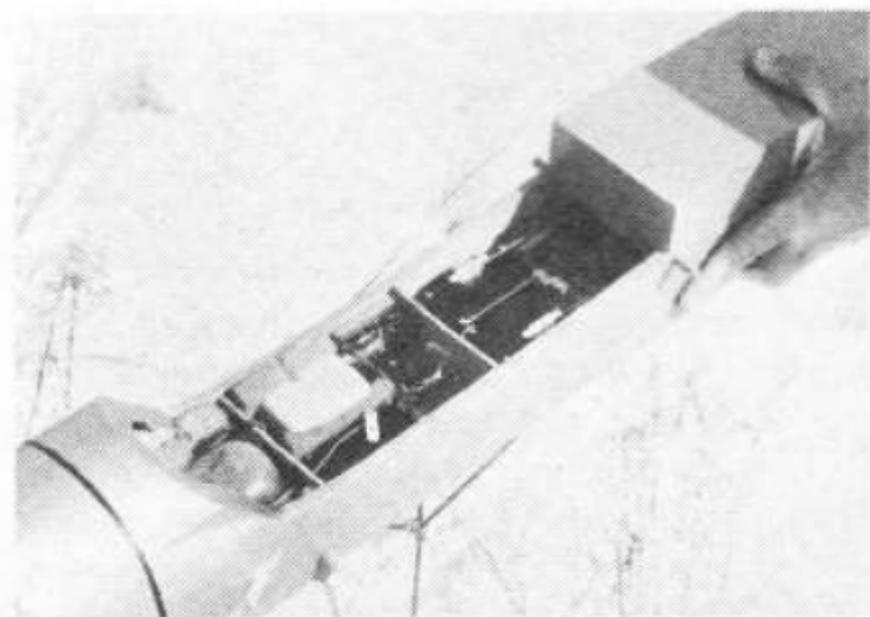
I installed the "Command Master" in my "Eindecker" E-111 published in this issue. No difficulty was encountered, however the lack of depth in the "Eindecker" fuselage meant that the connector-switch board had to be mounted on the side of the fuselage with the switch extension sticking out the bottom. This was no problem, but rather indicates the installation versatility.

I wish I could report something unusual about the first flights with the "Command Master," however performance was all Sterling claims it should be, which makes it a good system. Control was as smooth and responsive as any proportional system I have flown.

To check the fail-safe operation, the model was flown quite high overhead. Then the transmitter was turned off. The engine noise disappeared and the "Eindecker" started a gentle decent in a large left hand circle. It was allowed to lose about half its altitude before the transmitter was turned back on. A slight jolt was noticed as the servos came back to life, high engine was given and away we went.

In conclusion my experience with this system so far has all been very good. What with the reasonable price and "5 year" guarantee, the beginner in radio may find this a good choice. Those that have the single channel RT-1000 may have it converted to the RTE for \$125. This plus the price of the original RT-1000 adds up to the price of the RTE. Indeed good protection of your original investment.

I am sure we can look forward to many new R/C developments from Sterling in the future. ●



"Command Master" RTE 3+1 slips in anywhere, versatile in layout. Light, easily accessible.

Solid value marks new Command Master radio. An older set converts to RTE 3+1 for \$125.

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