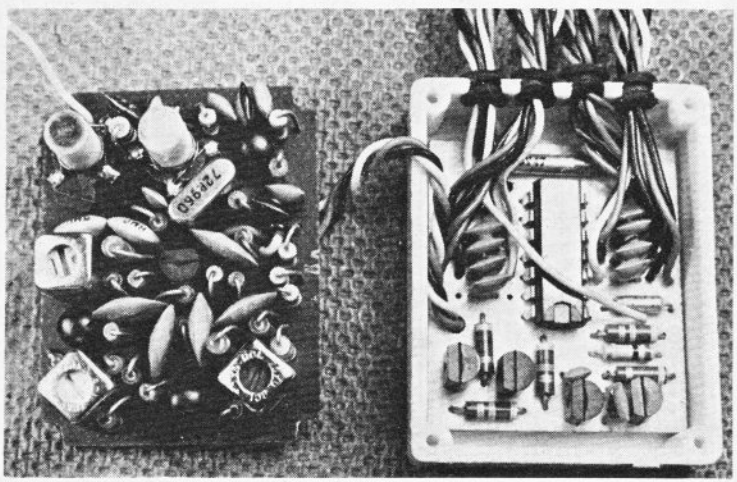
We look at the EXPERT

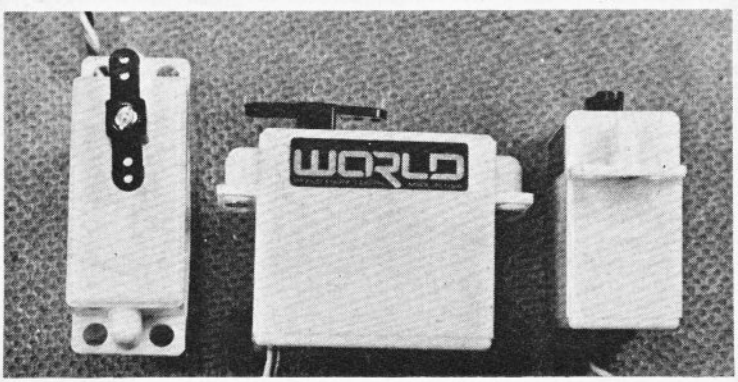
5-FUNCTION OUTFIT from World Engines

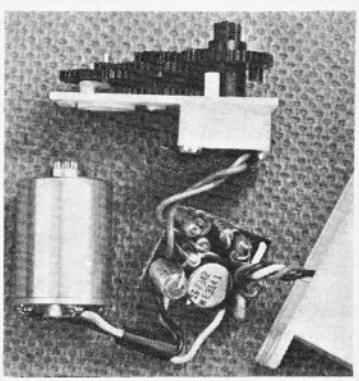
TOP LINE of the World Engines Blue Max series, this 5-function system is intended for the more serious flier, having refinements such as extremely free action open gimbal sticks, adjustable for length, and a choice of 15 different servo types, including specialist retract units. The unit described here was supplied in traditional two stick form, but single stick versions are available. It is a fixed frequency unit, available on any of the recognised spots, but a plug-in crystal facility is available as an optional extra.

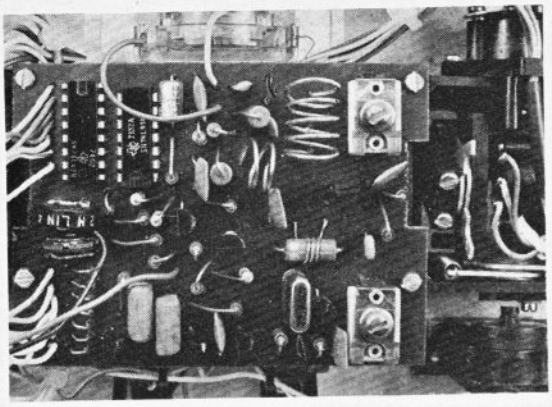
The outfit certainly has a precise action and feel. The use of open gimbal sticks has made it necessary to place the trims in a line on the front of the case, the trim system being electrical, using separate pots. The operation mode may be easily changed, and the clear instruction book shows how to make additional electrical changes to preserve the colour coded receiver outputs.

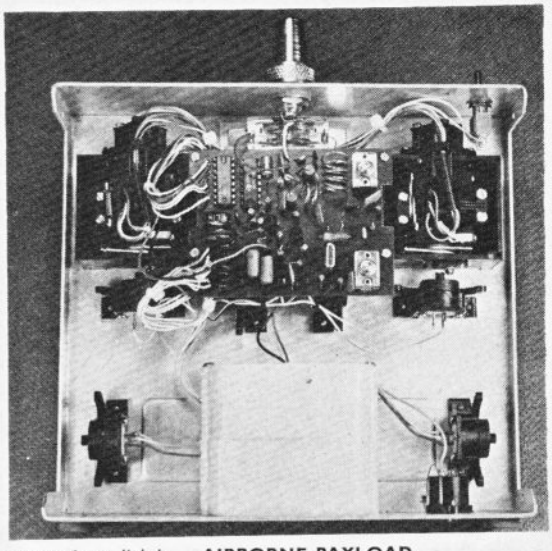


The two-deck receiver opened up to enable i.c. decoder to be viewed. (This particular receiver is an "export Expert", as will be seen from the crystal!) *Below:* the World Engines S11 servos—a "three-view" and, right the lift-out gearbox, with amplifier incorporating the WE3141 integrated circuit.









Above: close-up of the transmitter's R.F. section and, right, internal arrangement.

TRANSMITTER

The case is traditional in design, folded from "gold" vinyl clad aluminium, with removable back panel. The stick mechanics are moulded in rigid nylon and the stick yokes span the moving pots, so that there are double gearings for each axis. Metal scissors arms, with expansion springs, are used for centring and the pots are miniature types, with all leads securely tied to prevent fracture. The trim pots are bracket mounted and are arranged in a line below the sticks. A meter indicates output and the on-off switch is fitted with a safety lock. Charging is via a DIN plug fitted at the bottom of the case, while a folding handle at the back serves as a prop stand. The Nicads are encased and bolted to the inside of the case bottom.
Size: 7 x 6⅜ x 1⅞in. (Sticks project 1¼-1⅞in.)
Aerial: 6½in. extends to 50¾in.
Weight: 1lb. 14oz.

RECEIVER

This is a two deck unit with three IF stages and double tuned front end. The RF stages and amplifier are on the upper board and the IC decoder stage is on the lower. Separate harness leads, terminating in sockets, lead to each servo. The case is nylon with the lid secured by four screws.
Size: 1⅞ x 1 7/16 x 1⅛in.
Harness: 4¾in. long.
Weight: 2oz.

SERVOS

Supplied with this outfit were the World Engines S.11 type servos, with World Engines IC amplifiers. They have strong nylon four-stage gear trains with stops. Trim is via the output shaft centre core. The lugs are not open ended and grommets and spacers are provided. The arms are in black nylon with a spare set, in white, also provided. A 3-wire system is used and the wires exit from the bottom of the case. The servos buzz slightly at rest but this, the instructions explain, is a characteristic of close resolution units.

Size: 1 11/16 (plus ¼in. lug each end) x 1 9/16 (plus 7/16in. over arm) x 13/16in.
Harness: 5¾in.
Weight: 1.85oz.
Throws: 13/16in. max., ⅜in. min. Trims approx. 10%.
Power: 2lb. at maximum throw; 4lb. at minimum throw.
Transit time: Approx. 0.7sec. limit to limit.

BATTERY SUPPLY

The airborne nicads are cylindrical units in a flat square pack with the cable exiting from the top. The case is nylon and is taped together. The makers claim some four hours use per charge for the complete system.
Size: 1⅞in. sq. x 1 7/16in. thick.
Cable: 5¾in.
Weight: 4.75oz.

HARNESS

All plugs and sockets are four-pin polarised types in 3-wire mode with colour coded leads soldered and sleeved. The switch is a slide type encased and centrally positioned on an 11½in. cable. There is a separate charge socket.

ACCESSORIES

A servo mounting tray takes three servos and the switch. A yoke and guides provide for actuating the switch via a push-rod.

Weight: .95oz.

AIRBORNE PAYLOAD

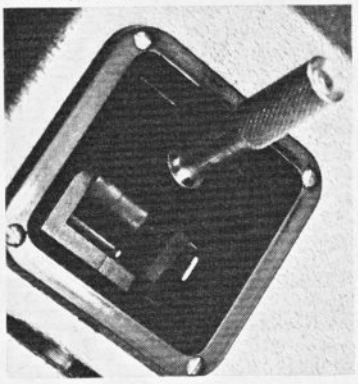
Weight: 14.25oz. with four S.11 servos (less tray).

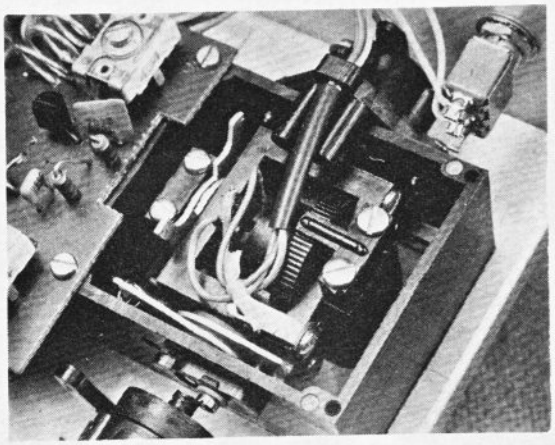
CHARGER

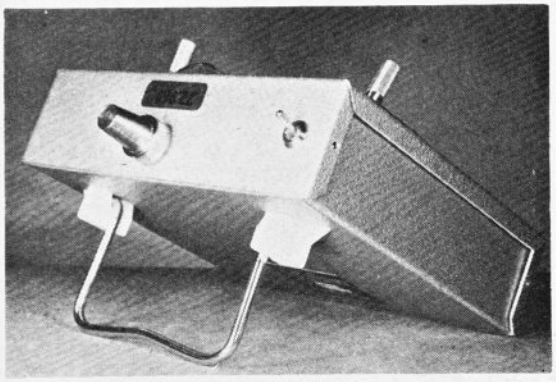
This is a 240v mains transformer type, with diode rectification and LED indicators on each of its twin outputs. Transmitter and receiver Nicads may be charged jointly or separately.

DISTRIBUTION AND SERVICE

World Engines Ltd., 97 Tudor Avenue, Watford, Herts.







Above: the open-gimbal stick units have a very free-and-easy feel. Underside of stick unit is shown left. Below: combination handle stand.