

# RAC TRIM SYSTEMS

## RAC ELECTRIC TRIM SERVOS

Ray Allen trim systems were designed specifically for experimental aircraft. Ray Allen servos are small enough to fit in individual control surfaces or can be used with lightweight springs acting directly on the control system.

Ray Allen trim systems also come with RS2 rocker switches and RP4 LED indicators. All Ray Allen indicators operate off of feedback sensors located inside the servo. These feedback sensors are purposefully isolated from the power supply to the servo motor to guard against possible electronic failure. Ray Allen trim systems also come with a RC8-7 clevis/pushrod kit.

### T2-10A



#### T2/T3 SERVO SPECIFICATIONS

Operating Voltage..... 12-14 VDC  
No Load Current..... 150 ma  
Weight..... 4oz. (113 g)  
Max Thrust..... 40 lbs. (18 kg)  
Max Operating Thrust..... 20 lbs. (0.9 kg)

#### T4-5 SERVO SPECIFICATIONS

Operating Voltage..... 12-14 VDC  
No Load Current..... 75 ma  
Weight..... 2.5 oz. (71 g)  
Max Thrust..... 30 lbs. (13.5 kg)  
Length..... 2.25" (57mm)  
Width..... 2.25" (57mm)  
Height..... 0.77" (20mm)

### B6-7C



\*T2-7A = exact replacement for MAC 4A servo. \*T2-10A = exact replacement for MAC 6A servo. \*T3-12A = exact replacement for MAC 8A servo. \*T4-5 is exact replacement for the Mac S9 servo.

## RAC SERVO SYSTEMS

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
T2-7A	11-11505	0.7 in.	10 sec.	---
T2-10A	11-11605	1.0 in.	16 sec.	---
T3-12A	11-11615	1.2 in.	19 sec.	---

## SERVO ONLY

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
T2-7A	11-02048	0.7 in.	10 sec.	---
T2-10A	11-02058	1.0 in.	16 sec.	---
T3-12A	11-02065	1.2 in.	19 sec.	---

## MINIATURE LINEAR ACTUATORS

RAC Servo System	Part Number	Output Shaft		Price ea.
		Movement	Travel Time	
B6-7C	11-16311	0.7 in.	12 sec.	---
B6-7T	11-16312	0.7 in.	12 sec.	---
B6-11C	11-16313	1.1 in.	19 sec.	---
B6-11T	11-16314	1.1 in.	19 sec.	---

\*T2-7A = exact replacement for MAC 4A servo. \*T2-10A = exact replacement for MAC 6A servo. \*T3-12A = exact replacement for MAC 8A servo. \*T4-5 is exact replacement for the Mac S9 servo.

## RAC SWITCHES



**RS2 ROCKER SWITCH** - Very positive snap action in 2 directions and returns to a center off position. It was designed specifically for Ray Allen trim systems. It is wired to connect both power leads to ground when the rocker is released. This eliminates motor coasting & allows very precise trimming. The RS2 switch is rated at 1amp. The faceplate measures 1.75" (44mm) x 1.0" (25mm) x 1.47" (37mm) deep. Included with trim systems or can be purchase separately. Self adhesive labels are not included. Sold separately. ....P/N 11-02035



## RANS ELEVATOR TRIM SYSTEM

Rans Elevator Trim System features a trim tab actuated by a push-pull wire. By turning the trim wheel, the wire moves the trim tab. The system has the look and feel of a standard aircraft trim wheel. The trim tab is constructed of sheet aluminum and can be adapted to the trailing edge of many homebuilts and ultralights. The trim tab is sized for both low & high speed aircraft and since it is mechanical, requires no battery or power source other than the pilot's hands.

Trim System less Tab (no panel or flap lever mount). P/N 11-09955  
Trim System with Lower Panel..... P/N 11-09960  
Trim System Flap Mount ..... P/N 11-09965  
Trim System without Wheel..... P/N 11-09970

## RAC INDICATORS/SENSORS/ACCESSORIES



### RP4 LED POSITION INDICATOR

The RP4 LED position indicator is designed to be installed in the cockpit and give an indication of the servo output shaft position. The 10 LEDs are the brightest available for superior visibility in sunlight, but can be dimmed for night flight. It can be installed horizontally or vertically.

P/N 11-16285



### POSITION INDICATOR/ROCKER SWITCH LABELS

Finish off your panel with these high quality labels. Rocker switches and needle indicators require a LARGE label, LED indicators use a SMALL label. Elev 1 shows trim down at top of label.

Rudder - Large ..... P/N 11-01819  
Rudder - Small ..... P/N 11-01820  
Aileron - Large..... P/N 11-01816  
Elev 1 - Large..... P/N 11-01822  
Elev 1 - Small ..... P/N 11-01821  
Wing Flap - Large..... P/N 11-01818  
Wing Flap - Small..... P/N 11-01817  
Cowl Flap - Large..... P/N 11-01576  
Cowl Flap - Small ..... P/N 11-01814



### POS-12 POSITION SENSOR -

When combined with a Ray Allen indicator, this sensor can be used to measure the position of wing flaps, cowl flaps, or many other mechanisms. Small enough to be installed anywhere, size: 2.7"l x 0.8"w x 0.5"h. (note: T2 & T3 servos have their own built-in sensors) 1.2" travel.

P/N 11-01321



### REL-2 SERVO RELAY DECK

This device converts the momentary contact action of the ROS-4 4-way switch, or any SPST pushbutton switch, into a DPDT action that is necessary to operate Ray Allen servos. You will need one of these relay decks for each servo in your installation. Measures 1.6" (40 mm) x 1.8" (49 mm) x 1.1" (28 mm).....P/N 11-05312



### SPD-1 SERVO SPEED CONTROL

Enables you to slow the speed of your trim servo to suit your individual installation. Size: 2"x 0.5"x 0.8" .

P/N 11-02078



### REG-1 12V REGULATOR

Enable you to operate servos and indicators in aircraft having 28V electrical systems. Converts all input voltages up to 35V to 12V. Capable of supplying 1 amp of current allowing you to operate 2 trim systems simultaneously. Size: 2"x 0.5"x 0.8".....P/N 11-02036



### RAY ALLEN BEZEL ONLY WITH HARDWARE

They make an excellent addition to any instrument panel. The bezel was designed to integrate a professional appearing label near the switch. The bezel measures 1.25" (32 mm) x 1.35" (34 mm) .....P/N 11-08642



### RC CLEVIS / PUSHROD KITS

Contains two threaded clevis forks, one 7" stainless steel pushrod and clevis pin hardware. The Ray Allen clevis/pushrod kit is included with Ray Allen trim systems, or can be purchased separately.

RAC P/N	Part No.	Compatible Unit	Thread	Price
RC8-7	11-02040	T2/T3 Servos	8/32"	---
RC8	11-02041	T2/T3 Servos	8/32"	---
RC10	11-08643	T2/T3 Servos	10/32"	---
C2-8	11-16318	B6 Actuator	8/32"	---
C2-10	11-16319	B6 Actuator	10/32"	---



### WC2 5-WIRE TEFLON® INSTALLATION CABLE

This durable, flexible wire cable is highly recommended for Ray Allen installations. 5 separate color coded, 26-gauge, 19-strand, silver-plated, FEP Teflon® insulated wires inside a tough, all Teflon® sheathing.

20 ft. roll..... P/N 11-01577  
25 ft. roll..... P/N 11-01578  
50 ft. roll..... P/N 11-01579