

# THROTTLES – CONTROLS

## ACS CONTROLS

The ACS line of controls was manufactured by Aircraft Spruce and Specialty Company from 1980 to 1985. As of June, 1985 the controls have been manufactured by ACS Products Company in Lake Havasu City, Arizona. The manufacturing and inspection procedures have been approved by the FAA and original equipment manufacturers. The following engineering data will aid in properly identifying the control most suited to each individual requirement. Also shown are some available options for the controls such as plastic protective covering and steel sleeves for clamping the control to the aircraft structure. Made in the U.S.A.

The A-790-12 vernier mixture control and the A-800-12 friction-lock throttle control are approved for Cessna 172, 172A thru Q; Cessna 150, 150A thru M, A150K, A150L, A150M; Cessna 152, A152.

Other approvals pending. Order by Part Number and state Cessna model and serial number. A790-12 is 53" long. A800-12 length is based on serial number provided.

## ENGINEERING DATA

Control Model No.	Control Type	Stroke at 0 Routing	Decrease in Stroke per 360° of Bend	Control Model No.	Control Type	Stroke at 0° Routing	Decrease in Stroke per 360° of Bend
A-700	Button Lock (Wire End)	3.37"	0.50"	A810	Friction Lock (1/4-28)	3.37"	0.35"
A-730	Glide Free (Wire End)	3.37"	0.50"	A920	Push-Pull (10-32)	3.37"	0.35"
A-740	Ratchet (Wire End)	3.37"	0.50"	A930	Push-Pull (1/4-28)	3.50"	0.35"
A-750	Vernier (10-32)	3.37"	0.35"	A970	Vernier (1/4-28)	3.37"	0.35"
A-790	Vernier (Wire End)	3.37"	0.35"	A1550	Push-Pull (10-32) with Bulkhead Fittings	3.37"	0.35"
A-800	Friction Lock (10-32)	3.37"	0.35"				

\*Length of exposed wire. \*\*Recommended minimum bending radius for all controls is 5" (never less than 3")

## PLASTIC COVERING ON CONTROL CASING

All ACS controls can be supplied with a black Polyolefin (PO) protective cover. Price of the PO cover carries a base price of \$3.00 plus the length of control in ft. multiplied by 1.50 for lengths to 10 ft. For lengths over 10 ft., use \$3.00 base price plus \$1.90/ft. for PO cover plus a 425 set-up fee. Example: Cost of PO cover on 5 ft. control is \$3.00 plus 5 x 1.40 = \$10.00. Cost of PO cover on 15 ft. control is \$3.00 plus 15 x 1.90 = \$31.50.

## STEEL SLEEVES ON CONTROL CASING

Cadmium plated 2" long steel sleeves can be added to the casing to provide clamping points for securing the control to the aircraft structure. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add \$7.50 for installation of sleeves on A730 & A740 controls .....**Price/Sleeve \$4.00**

## THREADED STEEL SLEEVES ON CONTROL CASING

Threaded steel sleeves ("bulkhead" fittings) can be added to the casing to provide secure clamping of the control where it passes through a bulkhead. The cadmium plated sleeves are 2" long, with 1-1/2" length of 7/16-20 threads. Specify sleeve location (measurement taken from under the panel nut to mid-point of sleeve). Sleeves are normally swaged to the casing but will be left unswaged when specified. Add \$7.50 for installation of sleeves on A730 & A740 controls .....**Price/Sleeve \$6.00**

## HOW TO ORDER CONTROLS

**STOCK CONTROLS** - All stock controls are identified by a part number as shown in the descriptions of the controls. To order a stock control, specify control type, knob color, length to nearest 1/8" (measured as described in text), and any added features such as PO cover on flexible casing or steel sleeves centered at specified distances from panel nut (lengths of stock controls are in whole-foot increments and only lengths listed are stocked). Include 7-digit part number as shown in text.

**SPECIAL-LENGTH CONTROLS** - If you require a special-length control, specify control type, knob color, length to nearest 1/8" and any added features such as PO cover, etc. Special-length controls carry a set-up charge in addition to the cost of the control (calculated as described in the texts).

**CUSTOM CONTROLS** - If you do not find the type of control you require in this catalog, send a detailed sketch with dimensions, or the old control as a sample, to Aircraft Spruce & Specialty Co., 225 Airport Circle, Corona, CA 92880-2527 (1-800-824-1930). Custom controls are priced like similar stock controls but with a \$35 set-up and engineering charge added, plus costs for any special parts which must be fabricated for the control.

## VERNIER CONTROLS

Vernier controls assure smooth operation - cannot creep. For coarse adjustment, depress center button and push or pull. For fine adjustment, turn knob. Smooth acting at all temperatures. Casing is made of tightly wound galvanized steel wire. Inner shaft is stainless steel cable (Models A-750 and A-970) or stainless steel wire (Model A-790). Low-friction operation is provided by an internal extruded Teflon liner. Controls have 1-1/4" dia. plastic knob with 3/4" dia. aluminum release button. A protective black PVC cover is available as an option on controls. Choice of knob color - black, red or blue (FAA Color Code: Black - Throttle, Red - Mixture, Blue - Prop), and knob design (see below).



**Throttle Control (Black) (FAA Color) Or White**



**Mixture Control (Red)**



**Prop Control (Blue)**

The FAA has recently adopted a standard configuration for cockpit control knobs in production aircraft type-certificated after August 11, 1986. The red mixture knob is to have six raised ridges whereas the blue prop control is to have the opposite profile with six grooves. The black throttle control knob is to have a smooth profile. The different knob contours assure positive identification by touch.

Aircraft Spruce is proud to offer the ACS line of vernier controls with the new style FAA knobs at no extra charge. The throttles will be furnished with the smooth black knob, the mixture controls with the contoured red knob and the prop controls with the contoured blue knob. Look to Aircraft Spruce & Specialty Company for a complete selection of original installation or replacement controls at tremendous savings.

## REPLACEMENT PARTS FOR ACS CONTROLS



ACS large Control Cable Grommet made of black synthetic rubber .....P/N 05-02633

ACS Rubber Grommets N-549-A (Small) P/N 05-02634



ACS Large Black Knob A-663-A for the A-800 controls. P/N 05-03416



Replacement ball bearings for A790 Controls P/N 05-07700

Replacement ball bearings for A700/A-1840 Controls P/N 05-02618

**NOTE:** The Grommets (rubber boots) fit all ACS 10-32 threaded end controls, such as: A-750, A-800, A-770, A-1860, A-920, A-1550, A-1750, A-950, and A-1760.