







Alpha Systems AOA Merlin on the Ground Calibration Card

STEP	ACTION	AUDIO RESPONSE	DISPLAY RESPONSE
1. Ground, Zero Calibration - on ground, engine off, no airflow at AOA probe (clears all settings)			
	Turn system power OFF		
	Turn rotary switch to position 1		
	SEL button, press & hold		
	System Power ON	"Set Zero Offset"	 All LEDs flash
	CAL button, press	"Zero offset complete"	 Blue + green flash 5X
2. Brightness Calibration			
	Turn system power OFF		
	Turn rotary switch to position 3		
	SEL button, press & hold		
	Turn system power ON	"Set Brightness Levels"	 All LEDs ON
Set Daytime:	Light on Photocell, repeatedly press brightness button until desired level	"Maximum Brightness Reached"	Display cycles up through 16 levels of brightness then restarts at minimum level
Set Nighttime:	Cover Photocell, repeatedly press Brightness Button until desired level	"Maximum Brightness Reached"	Display cycles up through 16 levels of brightness then restarts at minimum level
At desired selection	Turn system power OFF		
3. Select Audio Type			
	Turn system power OFF		
	Turn rotary switch to position 5		
	SEL button, press & hold		
	Turn system power ON	"Set Audio Choice"	No display response
	CAL button, press	Cycles through 4 audio choices	
At desired selection	Turn system power OFF		

Alpha Systems Merlin AOA Calibration Flight Test Card

STEP	ACTION	AUDIO RESPONSE	DISPLAY RESPONSE
In-Flight Calibrations			
1. Optimum Alpha Angle (OAA) Vs x 1.3			
	System Power ON		
	Turn rotary switch to position 2		
	SEL button, press	"Set-point calibration on" "Set OAA set-point"	 Blue LED flash 3X approx. every 8 seconds
Fly @ identified Vs x 1.3 IAS (Hold Altitude)	On condition, press CAL	"OAA set-point complete"	 Blue LED ON & continues to flash 3X until Step 2
2. Cruise (weight adjusted Va, maneuvering speed)			
	SEL button, press	"Set cruise set-point"	 Green LED flash 3X approx. every 8 seconds
	On condition, press CAL	"Cruise set-point complete"	 Green LED ON & continues to flash 3X until Step 3 completed
3. Save Settings & Exit			
	Turn rotary switch to position 0		
	SEL button, press	"Calibration off"	Display runs self-test
4. Set Flap Setpoints			
	Turn rotary switch to position 7		
	SEL button, press	"Set Flap 1 (2) (3)"	Display remains active at current position
Fly Vs (Flaps #1) x 1.3 Fly Vs (Flaps #2) x 1.3 Fly Vs (Flaps #3) x 1.3	On condition, press CAL	"Flap 1 (2) (3) Complete"	 Blue LED ON
	Turn rotary switch to position 0		
	Turn system power OFF	"Calibration Off"	Display runs self-test
Repeat Step 4 for Flaps 2 and 3 if necessary			