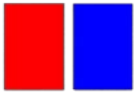
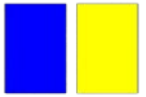
1.

Alpha Systems Merlin AOA Calibration Error Definitions

FAILURE		AUDIO RESPONSE	DISPLAY RESPONSE
Ground, Zero Calibration - on ground, engine off, no airflow at AOA probe (clears all settings)			
Pressure - Too High		**"Invalid set-point"**	**ALL LEDS FLASH CONTINUOUSLY**
To isolate the failure between mechanical or electrical problems, the air hoses should be disconnected from the IF module (IM) and repeat steps 1-3 of section 1.5 in the operations manual. If the condition persists, then the failure is electrical and the IM should be returned for an authorized repair. If the setting is successful, the failure is mechanical, such as a blockage in the air hoses or AOA probe, etc. Identify the blockage and, once fixed, repeat steps 1-3 of section 1.5 in the operations manual.			

2.

In-Flight Calibrations			
Optimum Alpha Angle (OAA) Vs x 1.3			
Pressure - Too Low		**"Invalid set-point"**	 **ERROR: FLASHES 3X THEN GOES DARK AND CONTINUES TO FLASH BLUE SEGMENT EVERY 5 TO 6 SECONDS UNTIL ACCEPTABLE VALUE IS ENTERED.**
If the pilot could not get a valid OAA value entered during the CAL button push and the display flashed BLUE and RED segments, the aircraft must be landed, and the AOA probe angle must be unpinned, rotated away from the leading edge of the wing 5 degrees and re-pinned, allowing the new angle to be secured and tightened. The in-flight OAA calibration procedure must be repeated.			
Pressure - Too High		**"Invalid set-point"**	 **ERROR: FLASHES 3X THEN GOES DARK AND CONTINUES TO FLASH BLUE SEGMENT EVERY 5 TO 6 SECONDS UNTIL ACCEPTABLE VALUE IS ENTERED.**
If the pilot could not get a valid OAA value entered during the CAL button push and the display flashed a BLUE and YELLOW segments. The aircraft must be landed, and the AOA probe angle must be unpinned, rotated toward the leading edge of the wing 5 degrees, re-pinned and tightened. The OAA in-flight calibration procedure must be repeated.			

3.

Cruise (Va)			
Pressure - Too Low		**"Invalid set-point"**	**ERROR: FLASHES 3X THEN GOES DARK AND CONTINUES TO FLASH GREEN BAR EVERY 5 TO 6 SECONDS UNTIL ACCEPTABLE VALUE IS ENTERED.**
If the pilot could not get a valid Cruise value entered and the display flashed the GREEN segment, the angle of attack was too high. Fly at weight corrected, Va speed and try the calibration again.			