

Federal Aviation Administration, DOT

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The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate attainable, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
4. Heading (Primary flight crew reference).	0–360° and Discrete "true" or "mag".	±2°	1	0.5°	When true or magnetic heading can be selected as the primary heading reference, a discrete indicating selection must be recorded.
5. Normal Acceleration (Vertical) ⁹ .	–3g to + 6g	±1% of max range excluding datum error of ±5%.	0.125	0.004g	
6. Pitch Attitude	±75°	±2°	1 or 0.25 for airplanes operated under § 135.152(j).	0.5°	
7. Roll Attitude ²	±180°	±2°	1 or 0.5 for airplanes operated under § 135.152(j).	0.5°	A sampling rate of 0.5 is recommended.
8. Manual Radio Transmitter Keying or CVR/DFDR synchronization reference.	On-Off (Discrete) None		1		Preferably each crew member but one discrete acceptable for all transmission provided the CVR/FDR system complies with TSO C124a CVR synchronization requirements (paragraph 4.2.1 ED–55). Sufficient parameters (e.g. EPR, N1 or Torque, NP) as appropriate to the particular engine being recorded to determine power in forward and reverse thrust, including potential overspeed condition.
9. Thrust/Power on each engine—primary flight crew reference.	Full Range Forward.	±2%	1 (per engine)	0.3% of full range.	
10. Autopilot Engagement.	Discrete "on" or "off".		1		
11. Longitudinal Acceleration.	±1g	±1.5% max. range excluding datum error of ±5%.	0.25	0.004g.	For airplanes that have a flight control breakaway capability that allows either pilot to operate the controls independently, record both control inputs. The control inputs may be sampled alternately once per second to produce the sampling interval of 0.5 or 0.25, as applicable.
12a. Pitch control(s) position (nonfly-by-wire systems) ¹⁸ .	Full Range	±2° unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 135.152(j).	0.5% of full range.	
12b. Pitch control(s) position (fly-by-wire systems) ^{3 18} .	Full Range	±2° unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 135.152(j).	0.2% of full range.	
13a. Lateral control position(s) (nonfly-by-wire) ¹⁸ .	Full Range	±2° unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 135.152(j).	0.2% of full range.	
13b. Lateral control position(s) (fly-by-wire) ^{4 18} .	Full Range	±2° unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 135.152(j).	0.2% of full range.	