



By the Numbers: Power, Attitude, Configuration (PAC) Chart

E-Series Bonanza E185-11 and E225-8

CONDITION	MP	RPM	ATTITUDE	GEAR	FLAP S	MPH	VSI	TRIM
Initial climb	FT	2300	+10°	UP upon positive rate	UP	Per POH	↑XXX	Per POH
Cruise climb	FT	2300	+5°	UP	UP	120-130	↑XXX	As req'd
Cruise	As desired	As desired	Level	UP	UP	XXX	0	0 to 2 down
En route descent	As desired	As desired	-2°	UP	UP	Green arc	As desired	As needed
Approach (level)	15° 17°	2300	+0° +2°	UP	UP 0°	105	0	+3° to +5°
Precision descent	15° 17°	2300	+0° +2°	DOWN	UP 0°	105	↓500 - 600 fpm	+0° to -3°
Nonprecision descent	13° 15°	2300	+0° +2°	DOWN	UP 0°	105	↓800 - 1000 fpm	+3° to +5°
MDA level	20° 22°	2300	+0° +2°	DOWN	UP 0°	105	0	+3° to +5°
Missed approach	FT	2300	+7°	UP	UP	105	↑XXX	+3° to +5°

Reducing manifold pressure by one inch results in a roughly 100-fpm descent.
A 5-inch reduction in MP results in a 500 fpm descent.

Modification to an oil-controlled propeller does not change propeller rpm limitations.

The "By the Numbers" technique has been taught since World War II to provide a simple, consistent way to conduct flight, especially instrument flight, yet it is not widely taught to pilots of personal airplanes like the Bonanza. For attitude reference, adjust the airplane bar to the horizon during level cruise flight and do not adjust further. Power settings and airplane configurations will result in the approximate performance tabulated. Adjust these numbers as necessary for your airplane under current conditions.