SILVER CROWN PANEL-MOUNTED FLIGHT CONTROL SYSTEM CAPABILITIES

	KFC 150	KAP 150	KAP 100
Two Axis	Yes	Yes	—
Single Axis	—	—	Yes
Flight Director	Yes	—	—
KI 525A PNI	Standard	Optional	Optional
KG 107 DG	—	Standard	Standard
KG 258 Horizon Reference Indicator	—	Standard	Standard
KI 256 Flight Command Indicator	Standard	—	—
Automatic Electric Elevator Trim	Standard	Standard	—
Manual Electric Trim	Standard	Standard	Optional
Yaw Damper	Optional for some aircraft	Optional for some aircraft	—
KA 185 Remote Mode Annunciator	Optional for some aircraft	Optional for some aircraft	Optional for some aircraft
KAS 297B Altitude Preselect/ Alerting, Vertical Speed Hold	Optional for some aircraft	Optional for some aircraft	—
FUNCTIONS/MODES			
ALT Hold (ALT)	Yes	Yes	—
ALT Preselect	Optional	Optional	—
Heading Select (HDG)	Yes	Yes	Yes
NAV (VOR/RNAV)	Yes	Yes	Yes
Approach (APR)	Yes	Yes	Yes
Glideslope (GS)	Yes	Yes	—
Back Course (BC)	Yes	Yes	Yes
Control Wheel Steering (CWS)	Standard	Standard	Optional with King manual electric trim
Vertical Speed Hold	Optional	Optional	—
Vertical Trim	Yes	Yes	—
Auto Capture	Yes	Yes	Yes
Auto Track	Yes	Yes	Yes
All Angle Intercept	Yes	Optional (with KI 525A)	Optional (with KI 525A)
Auto 45-degree Intercept	—	Standard (with KG 107)	Standard (with KG 107)
TEST			
Manual and Auto Trim Monitor	Both	Both	Manual Trim Monitor (with King manual electric trim option)
Roll Rate Monitor	Yes	Yes	Yes
Pitch Rate Monitor	Yes	Yes	—

NOTE: The KFC 150, KAP 150 and KAP 100 are designed as independent systems to maximize their individual capabilities. Therefore they are not designed for conversion from one system to another.

IMPORTANT: This Pilot's guide provides a general description of various operational characteristics of the KFC 150, KAP 150 and KAP 100 Flight Control Systems. However, operation of a system should not be attempted without reviewing the specific information in the FAA approved Aircraft Flight Manual Supplement for your particular aircraft type.

SYSTEMS INTEGRATION

The individual systems diagrams on pages 7, 8, and 9, show the components and their relationships in typical KFC 150, KAP 150 and KAP 100 Flight Control Systems. The actual components used on individual aircraft may vary slightly in order to optimize certification and installation requirements.

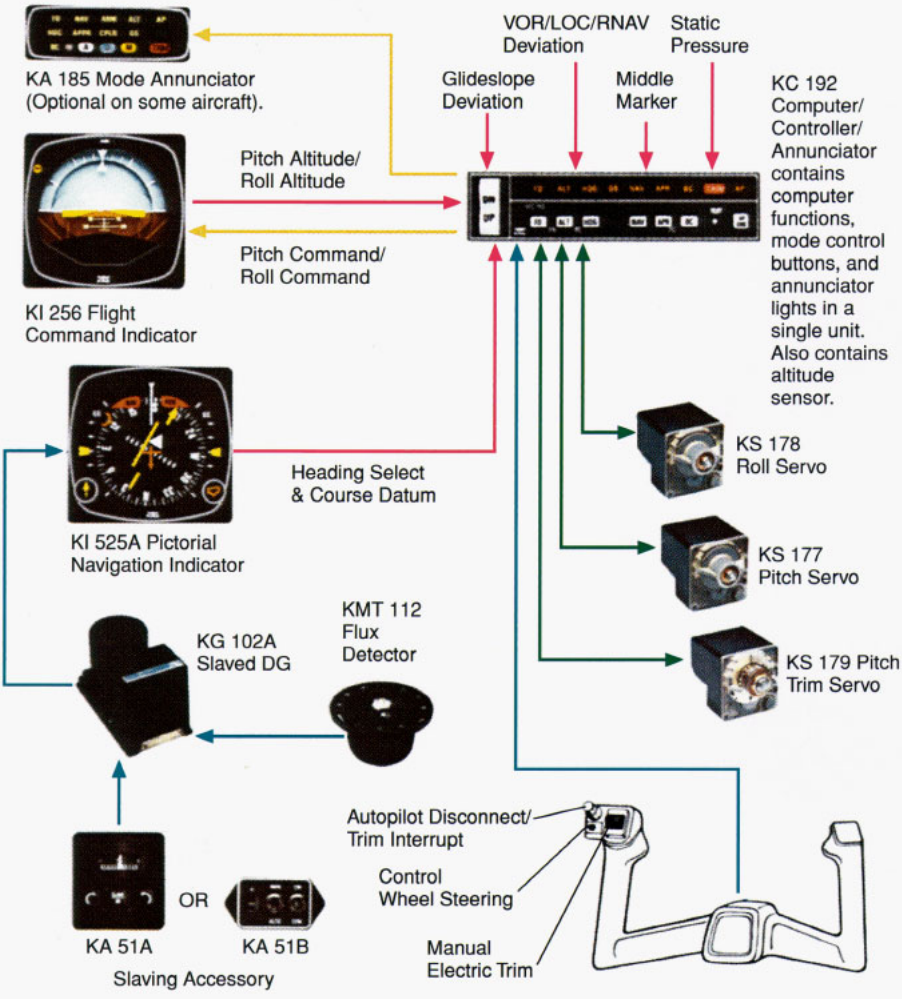
Each system has a number of inputs and outputs: sensor outputs are shown in red; computation inputs shown in blue; display outputs shown in orange; and aircraft control shown in green. The systems diagrams reflect that the KAP 150 and KFC 150 systems control both pitch and roll axes of the aircraft. The KAP 100, being a single-axis system, controls only the roll axis of the aircraft. All sensor information (pitch and roll reference, heading and course datum, RNAV/VOR/LOC/GS deviation and flags, marker receiver and static pressure [altitude] is fed into the system's flight computer).

The flight computer computes pitch and roll steering commands (or in the case of the KAP 100, roll commands only). In the KFC 150 system these commands are routed through the KI 256 Flight Command Indicator (FCI), where they are displayed on the V-Bar as visual guidance commands.

In all three systems these steering commands are fed to the autopilot computation circuits contained in the appropriate flight computer which generates the commands for the individual servos to manipulate the ailerons, elevator and elevator trim. An optional yaw channel is available for some aircraft, but is independent of pitch and roll commands.

Using the same pitch and roll commands in the KFC 150 system for flight director and autopilot provides totally consistent flight director steering command and autopilot control. There is no disagreement in computation. The autopilot simply converts the pitch and roll steering commands from the flight computer, displayed on the V-Bar in the FCI, into the required elevator and aileron position commands. Full integration of flight director and autopilot allows the pilot to delegate the manual effort of flying the aircraft to the autopilot while monitoring its activity with the flight director.

TYPICAL KFC 150 FLIGHT CONTROL SYSTEM



This is a 2-Axis (Pitch and Roll) System.