

KFC 225



# Bendix/King Autopilot/Flight Director System

**Honeywell**

The KFC 225's simplicity of design and ease-of-use gives pilots unprecedented ability to efficiently and effectively manage workload. For enhanced precision and performance, the system's advanced algorithms utilize digital interfaces with GPS and EFIS.

# All-digital flight control system

For single-pilot instrument operations in light aircraft, there's only one flight control system that borrows sophisticated technology from the flight control systems developed for helicopters and high-end business jets — the Bendix/King KFC 225 Autopilot/Flight Director. The integrated, all-digital flight control system combines the functions and features of three separate avionics units — an autopilot computer, altitude pre-select/alerter, and optional yaw damper — into a single compact, lightweight unit.

## Impressive Integration

With smartly integrated digital processors and sensors, the panel-mount KFC 225 is compatible with the KI 256 attitude indicator or the KVG 350 remote vertical gyro, the KCS 55A or KCS 305 compass system, and the KRG 331 or KRG 332 rate-gyros for the optional yaw damper version. The system also works directly with EFIS EFS 40/50 (including AFCS mode annunciation).

## GPS Roll Steering

GPS roll steering has been an integral part of Bendix/King's upper class of flight control systems. The FKC 225 now brings this functionality into the General Aviation sector. The GPS roll steering algorithms are so advanced that they anticipate a course change while tracking a multi-leg flight plan from a GPS, and start turns before crossing the waypoint keeping the bank angles shallow, just like a pilot. The system interfaces directly with GAMA 429 roll steering information provided by equipment like the KLN 90B or DC roll steering information from equipment like the KLN 94.\*

## All-Digital Performance

The KFC 225's all-digital architecture improves performance and enhances reliability and maintainability. The detailed diagnostic information significantly streamlines the troubleshooting process and ensures that any fault is logged into the system for maintenance retrieval.

A laptop plugged into the RS-232 port allows a technician to quickly and easily observe and/or exercise all of the system's components, including hardware, software and inputs from various sensors such as GPS, ILS, VOR and glideslope.

The computer's all-digital platform offers extremely smooth performance typical of high-end flight control systems. The finely tuned algorithms and new sensors incorporated into the KFC 225 draw upon Honeywell's significant flight control experience with helicopters and business jets. They allow the system to capture and hold altitudes or an ILS glideslope with impressive precision offering a smooth, attitude-based flight uncommon for most general aviation autopilots.

## Superb Safety Features

Honeywell's avionics engineers built impressive safety features into the KFC 225. For example, the KS 27XC servos used for pitch, roll and pitch trim commands are carefully monitored and



automatically disconnected when excessive pitch and roll rates or excessive acceleration forces are sensed. Well-placed voice messages and audible warnings keep pilots alert to the environment around them. When the system is powered up, an extensive pre-flight test automatically inspects the monitors and other components of the system to ensure proper operation.

### The KFC 225 Two or Three-Axis Control

The KFC 225 is available with two or three-axis control. While both systems provide excellent roll and pitch control, the three-axis version provides the added benefit of a yaw damper.

### Featured Operating Modes

In addition to the standard autopilot and flight director modes you expect to find in a Bendix/King Autopilot, the KFC 225 provides integrated altitude alerting/pre-selection, radar altimeter gain scheduling, sophisticated tracking through VOR “cone of confusion” and voice messaging. The altitude alerter/pre-selector is intuitively designed for ease of use and provides auto - arming just like high-end air transport systems. Clear, straightforward annunciation is provided on the KFC 225 display. When radar altimeter information is available, approach gain scheduling is adjusted relative to altitude for more precise control.

### Control Wheel Steering

Allows manual maneuvering without the need to disengage and reengage the autopilot.

### Electric Trim

The KFC 225 features manual and autotrim operation. Trim servo and switch activity is monitored by the system for proper operation.

### KFC 225 Specifications

#### KC 225 Flight Control Computer

Width: 6.31 in. (16.02 cm)  
 Height: 1.665 in (4.23cm)  
 Length: 11.26 in (28.60cm)  
 Weight (with mounting rack):  
 3.20 lbs. (1.45 kg)

#### Operational Characteristics

Temperature: -45 C to + 70 C  
 Altitude Range: -1000 to +35,000 ft  
 Power Inputs: +28VDC @ 0.6A  
 TSO: C9c, C52b  
 Software: RTCA DO 178B, Level C  
 Hardware: RTCA DO 160C  
 Environmental Categories:  
 [(A2)(B2)(C1)]BA[MBS]XXXXXXZBA  
 [ZB]AUZ[A3XX]XX

#### KS 27XC Servo Actuator

Width: 3.925 in (9.970 cm)  
 Height: 4.675 in (11.875 cm)  
 Length: 4.605 in (11.697 cm)  
 Weight (with servo mount):  
 3.20 lbs. (1.45 kg)

#### Operational Characteristics

Temperature: -55 C to + 70 C  
 Altitude Range: -1000 to +35,000 ft  
 Power Inputs: +28VDC @ 4.0A max  
 TSO: C9c  
 Software: N/A  
 Hardware: RTCA DO 160C  
 Environmental Categories:  
 [(A2)(F2)]BA[LM]E1XXXXXAB[AB]  
 BAUZ[A3XX]XA

#### KA 285A Remote Mode Annunciator

Width: 3.550 (9.02 cm)  
 Height: 1.187 in (3.01 cm)  
 Length: 5.50 in (13.97 cm)  
 Weight: 0.73 lbs. (0.33 kg)

#### Operational Characteristics

Temperature: -45 C to + 70 C  
 Altitude Range: -1000 to +35,000 ft  
 Power Inputs: +28VDC @ 1.0A  
 TSO: C9c, C52b  
 Software: RTCA DO 178B, Level C  
 Hardware: RTCA DO 160C  
 Environmental Categories:  
 [(A2)(B2)(C1)]BA[MBS]XXXXXXZ  
 [ZB]AUZ[A3XX]XX

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