

KN-53 VHF NAVIGATION SYSTEM - DESCRIPTION AND OPERATION**1. General**

- A. The KN-53 is an instrument panel mounted VHF VOR/LOC Transceiver with glideslope capabilities. This system provides the pilot with means to navigate using an analog indicator. The system is FAA approved for both navigation and landing operations.
- B. The KN-53 system consists of a panel mounted transceiver with digital style readout, and a panel mounted indicator. The system utilizes existing antennas. Other components such as localizer, glideslope, marker beacon and DME may be interfaced with the KN-53 system.

2. Description

- A. VOR
 - (1) The VOR/LOC transceiver operates 200 channels in the frequency range of 108.00 to 117.95 MHz. The localizer operates on 40 channels between the frequency range of 108.10 to 111.95 MHz. When selecting a localizer frequency/channel, a corresponding glideslope frequency/channel is automatically selected.
 - (2) VOR/LOC signals are received by a pair of existing navigation antennas. Coaxial cable connects the antennas to the KN-53 and runs the length of the fuselage.

3. Operation

- A. The KN-53 transceiver contains all operating controls and displays on the front panel. A brief description of the controls and their functions follows. (Refer to Figure 1)
- B. Frequency select knobs - Clockwise rotation increases and counterclockwise rotation decreases the particular displays in the various modes of operation.
 - (1) Frequency Select Knobs provide frequency selection from 108.00 to 117.95 MHz (VOR/LOC) and 329.15 to 335.00 MHz (Glideslope) in either 1 MHz or 50 kHz increments.
 - (2) The larger knob (outer concentric) will increase or decrease the MHz portion of the display in 1 MHz steps with rollover at each band range.
 - (3) The small tuning knob (inner concentric) will increase or decrease the display in 50 kHz increments.
- C. ON/OFF/VOLUME - Clockwise rotation of the ON/OFF/VOLUME control knob applies power to the system. Pulling the knob out of detent to the "ID" position allows the Ident Tone signal plus NAV voice information to be heard. Pushing the knob into detent allows NAV voice information to be heard with no Ident Tone and also adjusts the volume level. Rotating the knob fully counterclockwise removes power from the NAV transceiver.
- D. Frequency Transfer button - Depressing the Frequency Transfer Button transfers the selected frequency displayed in the "STBY" window to the "USE" window, and the displayed "USE" frequency to the "STBY" window.
- E. Photocell - The brightness for the displays is controlled automatically by the photocell, which reacts to ambient light.

Figure 1 : Sheet 1 : KN-53 Navigation Transceiver

