

**SUPPLEMENT A10  
TO THE AIRPLANE FLIGHT MANUAL DA 40 (D)**

**DISTANCE MEASURING EQUIPMENT  
KN 62A  
BENDIX/KING**

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This Supplement has been approved for the Joint Aviation Authorities (JAA) by the Austrian Civil Aviation Authority Austro Control (ACG) as Primary Certification Authority (PCA) in accordance with the JAA Certification Procedures of the Joint Aviation Authorities (JAA JC/VP).

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**0.1 RECORD OF REVISIONS**

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## 0.2 LIST OF EFFECTIVE PAGES

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## **1. GENERAL**

This Supplement supplies the information necessary for the efficient operation of the airplane when the DME KN 62A is installed. The information contained within this Supplement is to be used in conjunction with the complete AFM.

This Supplement is a permanent part of this AFM and must remain in this AFM at all times when the DME KN 62A is installed.

## **2. LIMITATIONS**

No change.

## **3. EMERGENCY PROCEDURES**

No change.

## **4A. NORMAL OPERATING PROCEDURES**

No change.

## **4B. ABNORMAL OPERATING PROCEDURES**

No change.

## **5. PERFORMANCE**

No change.

## **6. MASS AND BALANCE**

Upon removal or installation of the DME KN 62A the change of empty mass and corresponding center of gravity of the airplane must be recorded according to Chapter 6 of the Airplane Flight Manual.

## **7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS**

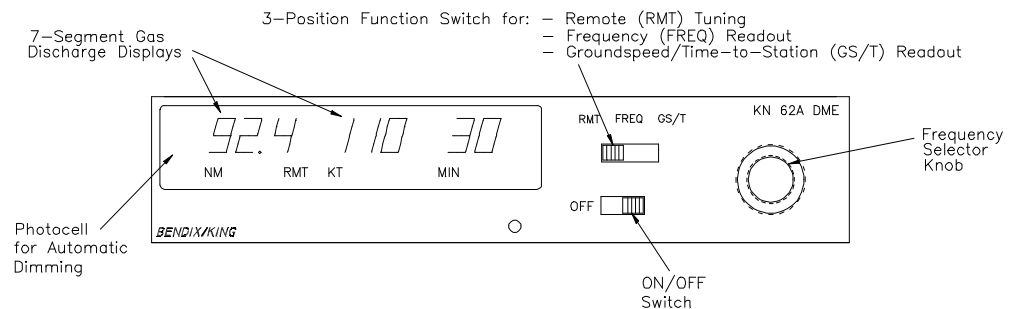
### **7.14 AVIONICS**

The KN 62A front panel controls consists of an ON/OFF switch, a function switch, and frequency selector knobs. The function switch determines both the information displayed and the channeling source for the KN 62A. In Remote (RMT) mode, the KN 62A is channeled from an external control head, and the display shows range, speed, and time-to-station. In Frequency (FREQ) mode, the KN 62A is channeled from its own frequency selection knobs, and the display shows range and frequency. In Ground Speed/Time-to-Station (GS/T) mode, the KN 62A holds the last internally selected frequency and displays range, speed, and time-to-station.

The frequency hold feature in GS/T mode is necessary to prevent accidental rechanneling of the DME when frequency is not being displayed. To prevent the unit from displaying false information, the KN 62A will display dashes and stay in 'search' whenever power is turned on or momentarily interrupted in GS/T mode. Normal operation is re-established by switching to FREQ or RMT mode.

When the KN 62A is locked to a ground station, range is displayed to the nearest 0.1 nautical mile from 0 to 99.9 nautical miles and to the nearest 1 nautical mile from 100 to 389 nautical miles. Ground speed is displayed to the nearest knot from 0 to 999 knots. Time-to-station is displayed to the nearest minute from 0 to 99 minutes.

The display also indicates 99 minutes for any computed time-to-station greater than 99 minutes. When the KN 62A is in search mode, dashes are displayed instead of range, speed and time-to-station. An automatic dimming circuit adjusts the brightness of the display to compensate for changes in ambient light level. The dimming is controlled by a photocell mounted behind the front panel to the left of the display. Backlighting is connected and controlled directly by the airplane's instrument light dimmer.



## OPERATION

The 3-position function switch determines both the information displayed and the channeling source.

Place the function switch on Frequency (FREQ). The unit is channeled internally with its own two concentric frequency selection knobs. The smaller of the two knobs has an 'in' and an 'out' position. When in the 'in' position, this smaller knob changes the 0.1 MHz digit (0.0, 0.1, 0.2, etc.). When pulled 'out', it adds 0.05 MHz to the frequency and tunes in 0.1 MHz steps (0.05, 0.15, 0.25, etc.). Pushing the smaller knob 'in' subtracts 0.05 MHz from the displayed frequency. The outer, larger knob changes the larger digits (1 MHz, 10 MHz). In FREQ mode, the unit will display distance and the selected frequency.

Now move the function switch to the Groundspeed/Time-to-Station (GS/T) position. The unit will hold the internally selected frequency and will display distance, ground speed and time-to-station.

Rotating the frequency selector will have no effect on the display, because the DME is in 'Frequency Hold'. This frequency hold feature in the GS/T mode prevents accidental rechanneling of the DME when the frequency is not displayed.

Place the function switch in the Remote (RMT) position, and your DME will be channeled when you select your NAV frequency on the NAV #1 receiver or NAV #2 receiver depending on the position of the 'Remote DME Switch'. Search time is usually about one second. When the unit locks on a ground station, it will display distance, ground speed and time-to-station.

Prior to lock on, 'dashes' will be displayed.

Note that you may have two frequencies available at all times (one remotely selected on the NAV receiver and one internally selected with the unit's controls).

### **OPERATIONAL NOTES**

The KN 62A has an audio output for use in identifying the DME ground station being received. The audio level is preset at the factory, but may be easily adjusted through the top cover.

The unit electronically converts to distance the elapsed time required for signals to travel to and from the ground station. This distance is then indicated in nautical miles on the Distance/Time-to-Station display. This distance, commonly referred to as slant range distance, should not be confused with actual along-the-ground distance. The difference between actual ground distance and slant range is least at low altitude and/or long range. If the range is three times the altitude or greater, error is negligible.

The effective range of DME depends on many factors, most important being the altitude of the airplane. Other contributing factors are the location and elevation of the station, DME transmitter power output, and receiver sensitivity.

The ground speed feature incorporated in the unit measures the rate of change in DME slant range distance with time. This speed is then read from 0 to 999 knots in 1 knot increments. To obtain accurate ground speed, the airplane must be tracking directly to or from the station. To obtain accurate time to station, the airplane must be tracking directly to the station.

## **8. HANDLING, SERVICING AND MAINTENANCE**

No change.