Knabenshue Collection - Aircraft Equipment

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AMERICAN AIRLINES, INC.
INSTRUCTIONS FOR USE OF NAVIGATIONAL COMPUTER

Paragraph

1. The American Airlines Navigational Computer has been developed to aid the pilot in controlling his flight under all conditions of wind and weather. Practically all problems encountered in air navigation except those involving Celestial Navigation may be solved accurately and rapidly by the use of this computer. Proficiency in its use demands persistent practice, and it is suggested that before attempting to use it in the air the pilot work a number of practice examples on the ground.

2. The computer consists of three celluloid discs which are free to revolve about a common center. One side of the computer, which will be called SECTION A, consists of two discs of different sizes. The smaller one contains a window through which may be observed a small scale on the under-lying disc. The other side, which will be called SECTION B, consists of a transparent celluloid disc revolving over an opaque disc of the same size.

SECTION A

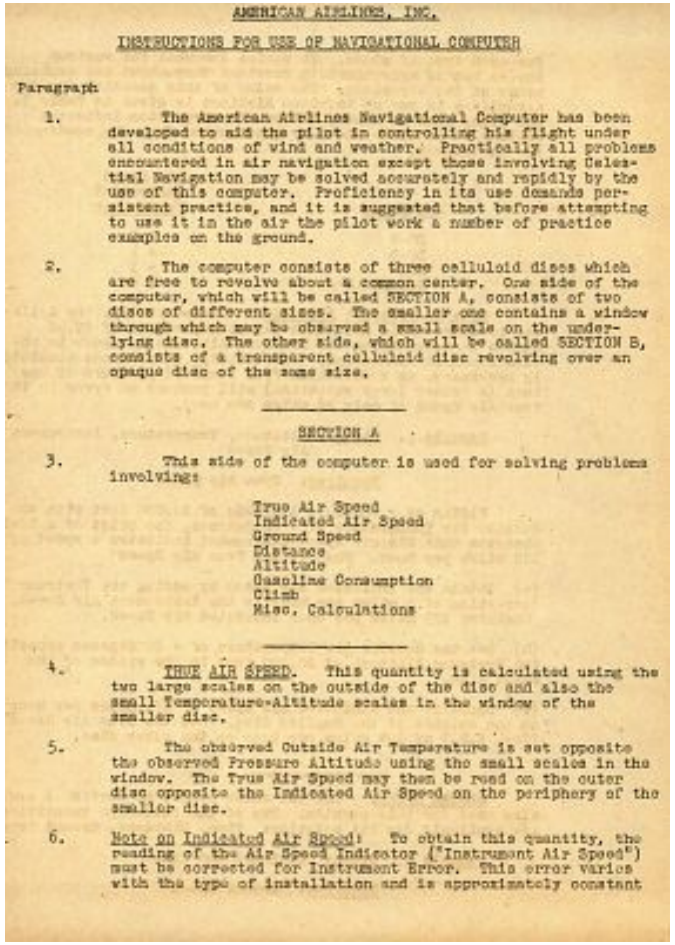
3. This side of the computer is used for solving problems involving:

True Air Speed
Indicated Air Speed
Ground Speed
Distance
Altitude
Gasoline Consumption
Climb
Misc. Calculations

4. TRUE AIR SPEED. This quantity is calculated using the two large scales on the outside of the disc and also the small Temperature-Altitude scales in the window of the smaller disc.

5. The observed Outside Air Temperature is set opposite the observed Pressure Altitude using the small scales in the window. The True Air Speed may then be read on the outer disc opposite the Indicated Air Speed on the periphery of the smaller disc.

6. Note on Indicated Air Speed: To obtain this quantity, the reading of the Air Speed Indicator ("Instrument Air Speed") must be corrected for Instrument Error. This error varies with the type of installation and is approximately constant



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