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1. ALTIMETER, PRESSURE:
   Specification Drawing  A45782 10 001
   Test Specification    KTS A45782 10 001
   Mil Specification     MIL-A-81851 (AS)
   Statement of Work     Section M of contract

2. TEST EQUIPMENT USED DURING PROGRAM:
   Precision Pressure Monitor  KM 60-C S/N 110
   Test Altimeter               D22061 04 010 S/N 35318
   Valve Set                    KI TE 8902-003
   Temperature Chamber         KI TE 0901-0046
   DC Power Supply Vibrator    Power Designs Model 3240
   DC Power Supply Lights      Trygon HH32 -1.5
   DC Power Supply Potentiometer Trygon HH 32 -1.5
   AC Power Supply Resolver    KI Transformer
   Digital Voltmeter (Voltage Ratio) Dana 5500 S/N 9012664
   Resistance Box              Shall Cross #832
   Resolver Bridge             Gertsch DRB-3C-4R
   AC-VTVM                      Instrument Electronics #253

3. TEST PROCEDURE:
   A. Connect the altimeter to the pneumatic lines as shown on Fig. 1 of KTS.
   B. Connect the altimeter to the electrical test equipment as shown on Fig. 2 of KTS.
   C. Using the KTS A45782 10 001 and MIL-A-81851, perform the tests indicated. The following is to aid in conducting the two special tests.
1. For the baro potentiometers, use care not to exceed the voltage range of the voltage ratio equipment. For the DANA Model 5500, excitation voltage is limited to 11 volts; therefore, use 10 volts across terminals A, H. The wiper load of 100K ohms is to be placed across terminals G, A. Starting at the low end baro stop, set the baro counter to the values shown in the KTS Table 1A, and read and record the Voltage Ratio of the potentiometer wiper to excitation voltage.

2. For the resolver output, using Table III, set the resolver angles on the resolver decade bridge. Slowly cross the indicated test altitude observing the AC-VTVM for a null, using the 50 mv scale. At null, read the altimeter pointer error in feet.

4. TEST RESULTS

The altimeter is essentially the same as the AAU-31/A unit, except for the inclusion of the resolver and baro potentiometer.

The pneumatic operation and accuracy show no degradation from the performance of an AAU-31/A. Particularly noteworthy is the dynamic and static friction of the units which were expected to show some degradation due to the added resolver load.

The potentiometer accuracy is well within definition of 25 feet.

The resolver accuracy has a bandwidth of about 30 feet in all temperatures. It appears that on future units, consideration of rezeroing means be applied if the end item use requires accuracy to 25 feet. The resolution is of the order of 5 feet, which is well within the requirements of S.O.W.