

DESIGN SPECIFICATION # 97030006
P/N 96080011
2 OF 5 TO ARINC 429 Adapter
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i. OPERATING INSTRUCTIONS

The Unit, by it's design has no independent operating instructions. Being an integral part of the on board DME Channeling, the operating instructions for that system will need to be followed.

ii. EQUIPMENT LIMITATIONS

The unit was designed to adapt the installed 2OF5 Control Head to the appropriate ARINC 429 Digital Control format as such is limited to tuning the new Digital DME's.

The adapter, as a component of the on board DME system is limited by the output of the Control Head and the DME unit that is being driven.

The design of the unit is such as to cause minimal degradation of the input signal and to convert the data in the fastest and most accurate means possible.

iii. MAJOR COMPONENT

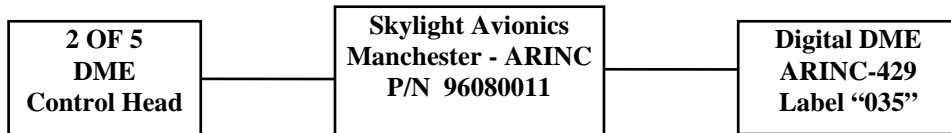
Equipment Supplied

1. Part Number 96080011

Equipment Required But Not Supplied

- | | |
|------------------------------|--------------------------------|
| 4 Standard Mounting Screws | Determined By Install |
| 1 Connector Standard DA 37S | AMP P/N 205209-2 or equivalent |
| 1 Back Shell with Screwlocks | AMP P/N 747570-1 or equivalent |

Interconnect Block Diagram



(Illustration iv-1)

iv. SPECIFICATIONS

SPECIFICATION

CHARACTERISTICS

Physical Dimensions:

| | |
|--------|--------|
| Height | 1.20" |
| Length | 4.205" |
| Width | 4.7" |
| Weight | 1 lb. |

Temperature Range

| | |
|-----------|----------------|
| Start Up | -20 C to +70 C |
| Operation | -40 C to +70 C |
| Storage | -55 C to +85 C |

Altitude 50,000 ft.

Power Requirements 28 VDC @ .1A Nominal

Inputs 2 OF 5, Tuning Control

Outputs ARINC 429 Label 035 @ 165mS

Accuracy Bit to Bit Conversion

Limitations: Limited to ARINC 429 Tuned DME systems.

v. INSTALLATION PROCEDURES

1. INTRODUCTION

This section contains information relative to the installation of the adapter to assure satisfactory performance of the unit. (See Sections "6" and "7" for detailed mechanical and wiring diagrams.)

2. UNPACKING AND INSPECTING EQUIPMENT

After unpacking the unit, make a visual inspection of the unit for evidence of damage incurred during shipment. If claim for damage is to be made, save the shipping container to substantiate the claim.

3. PREINSTALLATION CHECK

Perform a continuity and power check on the wiring harness before connecting equipment.

4. POWER REQUIREMENTS

The adapter operates from a standard 27.5 VDC provide circuit protection with an in line 1 AMP breaker on the 27.5 VDC

5. POST INSTALLATION CHECK

There is no in-aircraft adjustment required for the unit. All alignment and adjustment procedures are accomplished during bench maintenance. Follow the manufactures check out procedures of the on board systems, to determine indications being driven by the unit are accurate.

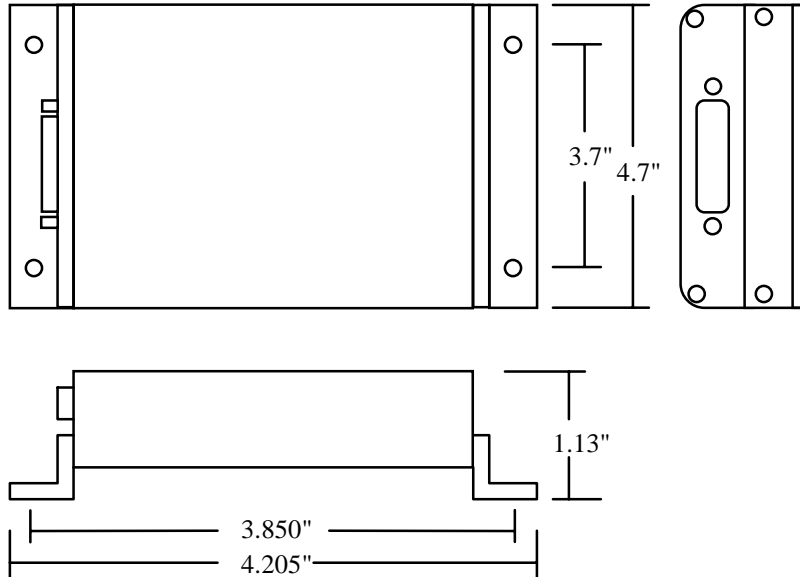
6. PREFLIGHT CHECK

Follow the manufactures check out procedures of the on board systems, to determine proper operation.

vi. INSTALLATION MECHANICAL DIAGRAMS

The adapter is designed for flat mounting anywhere on board the aircraft, pressurized or unpressurized compartments. The unit has four (4) mounting holes for number (6) size screws. (NOTE: Screws and other miscellaneous mounting hardware are NOT included with unit.

MECHANICAL DRAWING

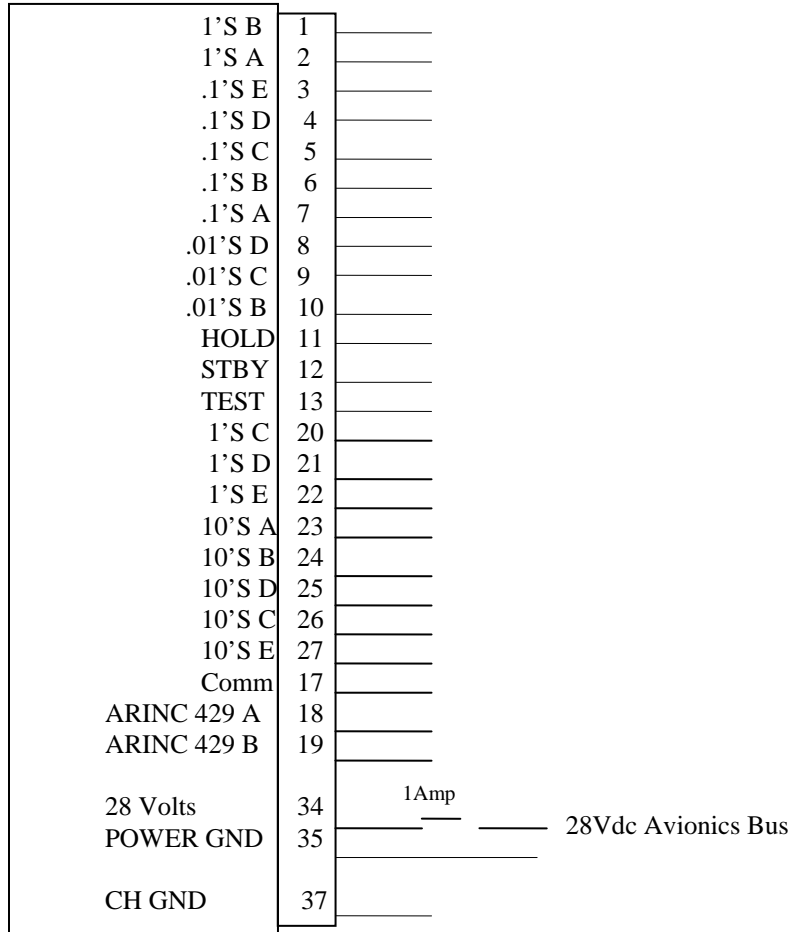


Unit Connector - DB-37P, Mate - DB-37S

Mechanical Drawing of P/N 96080011, (Illustration vi-1)

vii. INSTALLATION ELECTRICAL

P/N 96080011



P/N 96080011 Pin out (Illustration vii-1)

viii. Data Specification

Output Bits:

| | |
|-------|--|
| 1-8 | Label 035 |
| 9-10 | Pad Low |
| 11-13 | Mode Standby = 0 Normal = 1 Hold = 4 |
| 14-15 | Pad Low |
| 16 | Pad Hi |
| 17 | Hold |
| 18 | .01Mhz, Hi = C, D inputs Hi, B low |
| 19-22 | .1 MHz, BCD from 2 of 5 |
| 23-26 | 1 MHz, BCD from 2 of 5 |
| 27-29 | 10 MHz, BCD from 2 of 5 |
| 30 | Pad Low |
| 31 | Test |
| 32 | Parity = odd |

ix. ENVIRONMENTAL QUALIFICATION FORM RTCA/DO-160C

| | | |
|--|------------|---|
| Temperature & Altitude | 4.0 | Equipment tested to Category A1/D1 |
| Temperature Variation | 5.0 | Equipment tested to Category B |
| Humidity | 6.0 | Equipment tested to Category A |
| Shock Operational | 7.0 | Equipment Tested per DO-160C Paragraph 7.1.1 |
| Vibration | 8.0 | Equipment tested without shock mounts to category Y & R. (DO-160C, Table 8-1) |
| Sections | 9.0 - 14.0 | Equipment identified as X no test |
| Magnetic Effect | 15.0 | Equipment tested as Category A |
| Power Input | 16.0 | Equipment tested as Category B |
| Voltage Spike | 17.0 | Equipment tested as Category A |
| Audio Frequency Conducted Susceptibility | 18.0 | Equipment tested as Category B |
| Induced Signal Susceptibility | 19.0 | Equipment tested as Category B |
| Radio Frequency Susceptibility | 20.0 | Equipment tested as Category U |
| Radio Frequency Emission | 21.0 | Equipment tested as Category B |

Sections 4-8 Test Report # 20342-1212926
 Sections 15-21 Test Report # 20-291