DATAIR-400/M3
Handheld ARINC 429 Tester

The DATAIR-400/M3 is aimed at providing the user with an easy to use first line diagnostic tool for testing and troubleshooting ARINC 429 avionics systems. It allows the user to connect to an ARINC 429 data bus and easily view the active ARINC 429 Labels on the bus or to generate up to 150 ARINC 429 test words to simulate a specific test. The receiver will automatically adapt to and display the bus bit rate.

The DATAIR-400/M3 ARINC 429 Tester is a Hand Held unit that comprises an 8 line by 21 character backlit LCD, an alphanumeric keypad, a microprocessor controlled ARINC 429 receiver, transmitter board with a detachable rechargeable battery pack. The data entry in engineering units format for transmitted ARINC 429 data. Data values for up to 150 labels can be entered and the values and configuration can be stored in one of ten user profiles for easy and fast recall for different projects.

Main Receiver features:

- Label search of active ARINC 429 labels
- Bus monitor displaying Bus Speed (“Hi” (100kHz) or “Lo” (12.5kHz), SSM, SDI, bits 29 ~ 11 in binary and hexadecimal, Parity and Label rate in mS.
- Bus monitor displaying selected label in engineering units (BCD and BNR).
- Automatic reception of Lo or Hi ARINC 429 bit rates
- Standard ARINC 429-15 Label definitions for Rx included selection by Equipment ID code.
- User definable and custom ARINC 429 label definitions – with save, suspend or delete.
- Automatic preservation of setup between power downs

Main Transmitter features:

- Standard ARINC 429-15 Label definitions for Tx included selection by Equipment ID code.
- User definable and custom ARINC 429 label definitions – with save, suspend or delete.
- Up to 10 Transmitter profiles for saving various configurations for use in the Lab / Workshop.
- Data entry in binary or engineering Units (BCD and BNR)
- On/Off toggling of individual data bits 11 through 29

Other features:

- Rechargeable detachable battery, 8 hour life on single charge
- Can be powered from an external 6V DC power adapter
- Standard D9 plug connector with supplied test leads for connecting to ARINC 429 busses
- Flite case available with pre-cut foam to hold the instrument and accessories
- Full EMC Compliance to European (CE) directive.

Technical Specification

ARINC 429 Receiver:	
Input	Opto-coupler isolated input
Voltage levels (Line A to B)	HI +6 to 12V
NULL	+2.5 to -2.5 V
LO	-6 to -12V
Bit rate:	Low Speed: 8 to 18kbps
High Speed	80 to 125kbps
ARINC 429 Transmitter:	
Output:	Industry standard lin driver
Output impedance	75 ±5 Ω (Line A to B)
Voltage levels (Line A to B)	HI +10V ±1V
NULL	0.0 to ±0.5V
LO	-10V ±1V
Bit rate	Low Speed: 12.5kbps ±0.5%
High Speed	100.0 kbps ±0.5%
Word rate	10 to 1000mS
Parity	ODD, EVEN, NONE
Mass:	
Weight	0.55kg
Dimensions	22.9H x 9.7W x 5.4D CM
Power requirements:	
Input	6V DC @ 300mA external OR 4.8V @ 2200mAH NiMH Battery
Environmental:	
Operating temperature	0 to 50 °C (Indoor use only
Relative Humidity	0% to 85%