



## DT600

### ARINC 429/629 DATABUS ANALYZER

A powerful tool that can be used on the ramp or on the bench

The DT600 is a combination ARINC 429/629 databus analyzer with dual, independent ports for each bus standard. Nearly identical functions are provided for each bus type. These include basic receive and transmit functions along with a general record mode and a powerful breakpoint mode. The standard RS-232 port is used for downloading real time or recorded data and for uploading new label/word definitions. The standard DAC port can be used to provide a trigger pulse or to drive recorders or instruments. An optional GPIB port permits remote control of all functions. PC software is available to aid the user in defining customized data definition table(s). The large graphical display and integrated keyboard provide an informative and intuitive user interface.

#### FEATURES

- Two ARINC TX/RX ports and two ARINC 629 transceiver ports
- Operates six to eight hours on the internal battery or power from external 28 VDC or 105-250 VAC
- Easy menu-driven setup allows intuitive control of unit
- Multi-window display of data in ENGINEERING (B777 default for 629), HEX, BINARY, USER DEFINED, and GRAPHICAL formats
- Powerful record and fault analyzer modes
- Williamsburg Protocol software extension available for ARINC 429 file transfer functions
- RS-232C and DAC interface ports standard; GPIB optional
- Software available for RS-232 port (download/upload and word definitions)



## GENERAL SPECIFICATIONS

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### ARINC 429 RECEIVER OPERATION

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**Ports**

2

**Bus Frequency**

12-14.5 kHz or 100 kHz (selectable)

**Input Levels**

+6.5 VDC to +13.5 VDC (A to B)

**Impedance**

12.0 k $\Omega$

**Word Update**

1 ms to 10 sec, update rate displayed as instantaneous, min or max value

**Display Format**

Pre-stored engineering units, hex, binary, user, ASCII, and graphic plots

**Maximum Words**

256 per SDI per channel

**Bus Activity Monitor**

Monitors loss of individual words; sensitivity selectable

**Real-time Download/Conversion**

RS-232C or 12-bit DAC port

### ARINC 429 TRANSMITTER OPERATION

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**Ports**

2

**Bus Frequency**

12.0, 12.5, 14.5, or 100 kHz (selectable)

### **Output Levels**

±10.0 VDC (A to B)

### **Output Impedance**

75 ohms

### **Word Update**

1 ms to 10 sec (selectable)

### **Burst Mode**

1-99 burst output at selectable rate

### **Display Format**

Pre-stored engineering units, full or data field hex and binary, user, and ASCII

### **Maximum Words**

128 per channel

### **Transmit Word Gap**

2, 3, 4, 5, 6, 8, 12 bits (selectable)

### **Dynamic Transmit**

Repeat pattern of ramps and flat segments. Levels programmable between + full scale and segment times or 0 to 999.999 sec

### **Add'l Transmit Options**

Recorded data, pre-stored tables

## **ARINC 429 BREAKPOINT OPERATIONS**

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### **Label Sequence**

A, B, A or B, A then B, B then A

### **Data Conditions**

EQ, NEQ, OR, GT, LT, /GT/, /LT/

### **Event Count**

1 to 99 before break

### **History**

Up to 24,540 words in a programmable window about the breakpoint; optional time stamp

### **Trigger Pulse**

5V, 0.1 ms

## **BITE OPERATION**

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### **BITE Formats**

Compatible with distributed and centralized BITE concept used on 747-400, 737-300, MD-11, A320, A330, and A340 aircraft

### **Menu Display**

Standard 14-line x 24-character format, with selectable menu choices

### **Maintenance Words**

Displays 350/351 label maintenance bits. Bit status along with prestored text presented

### **Recording Feature**

Save up to 240 BITE screens for later viewing or downloading

## **ARINC 629 RECEIVER OPERATION**

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### **Ports**

1 standard, 2<sup>nd</sup> optional

### **Bus Frequency**

2MHz

### **Input Electrical Characteristics**

Doublet as specified for SIM input in the Boeing D227W201 Universal Data Sheet

### **Word Update**

1 ms to 10 sec, update rate displayed instantaneous, min or max value

### **Display Format**

Pre-stored engineering units, hex, binary, user, ASCII, and graphic plots

### **Word Strings Receivable**

4096

### **Words Selectable**

255 words per word string, 32 word strings

### **Bus Activity Monitor**

Monitors loss of individual words; sensitivity selectable

### **Real-time Download/Conversion**

RS-232C or 12-bit DAC port

## **ARINC 629 TRANSMITTER OPERATION**

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### **Ports**

1 standard, 2<sup>nd</sup> optional

### **Bus Frequency**

2MHz

### **Output Electrical Characteristics**

Doublet as specified for SIM input in the Boeing D227W201 Universal Data Sheet

### **Transmit Interval**

0.5 to 64 ms (selectable)

### **Synchronization Gap**

16, 32, 64, and 127 us (selectable)

### **Display Format**

Pre-stored engineering units, hex, binary, user, and ASCII

### **Maximum Words per Word String**

256

### **Maximum Word String**

31 x 31

### **Dynamic Transmit**

Repeat pattern of ramps and flat segments. Levels programmable between + full scale and segment times or 0 to 999.999 sec



**14046 NW 82 Avenue  
Miami Lakes, Florida 33016  
Phone: (305)556-1957  
FAX: (305) 556-6510**

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## ARINC 629 BREAKPOINT OPERATIONS

### **Label Sequence**

A, B, A or B, A then B, B then A

### **Data Conditions**

EQ, NEQ, OR, GT, LT, /GT/, /LT/

### **Event Count**

1 to 99 before break

### **History**

Up to 40,960 words in a programmable window;  
optional time stamp

### **Trigger Pulse**

5V, 20 us

## RECORD OPERATION

### **Channels**

429: Up to 16 labels from any combination of receive ports

629: Up to 32 data words from any combination of receive ports

### **Sample Interval**

1 ms to 10 sec (selectable)

### **Record Capacity**

120 Kbytes

### **Playback Options**

Graphic plots, data lists, DAC download, RS 232C download

## PHYSICAL CHARACTERISTICS

### **Weight**

24 lbs. (10.9 kg)

### **Size**

5.7"H x 14.25"W x 12"D (14.5 cm x 36.2 cm x 30.5 cm)

## VERSIONS, OPTIONS, AND ACCESSORIES

When ordering please quote the full ordering number information.

### **Ordering Number**

994

### **Version**

DT600 ARINC 429/629 Databus Analyzer w/ Williamsburg Protocol Analyzer (110/220V)

### **Standard Accessories**

60492

RS-Read software

58225

RS-232 cable

75641

DT600 Operations Manual (CD)

29979

Cable, BNC male/DBL banana plug

29972

Power cord, 3 cond., 1250 W, 10A, 125V

58226

Cable, ARINC stub

### **Optional Accessories**

60494

PCMGR-600 Software support for DT600/650/650H

17897

Extender board for DT400/600/650

18057

DT600 2-TX port expansion

18060

DT600 2-RX port, 1-DAC port expansion

18061

DT400/600 IEEE-488 interface board

18070

DT600 transceiver board A629



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