ADVANCED TECHNICAL GROUP

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

ARINC 429 RECEIVER OPERATION

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 kΩ

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

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
Addt'l Transmit Options
Recorded data, pre-stored tables

ARINC 429 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 24,540 words in a programmable window about the breakpoint; optional time stamp
Trigger Pulse
5V, 0.1 ms

BITE OPERATION

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

Ports
1 standard, 2nd 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

Ports
1 standard, 2nd 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

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 CHARACTERISITICS

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	***Version***
994	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