

DCM-1553

Digital Bus Communicator

The Atlantis DCM-1553 Digital Bus Communicator is a data bus simulator and signal analyzer that simplifies the testing of remote terminal devices in aircraft equipped with the MIL-STD-1553 digital bus or variants, such as the F-16, F-18, A-10, and AV-8B. Using pre-established data standards, the DCM-1553 eliminates the need to assemble message transfers or interpret binary codes when testing remote terminal devices. Data standard programs resident in field-installable PROMs translate between digital bus data and engineering units. As an added convenience, the operator can view the transmission in binary format at any time.

The DCM-1553 handles message transfers, error generation and detection, and data transmission with a minimum of operator intervention. The user controls testing operations by touching menu boxes on the screen. By following a tree of menu screens, the user can access the full range of testing functions and can pre-set parameters such as message rates, status, and response time. Output messages can be sent as single messages or continuously repeated at a user-selectable rate.

The DCM-1553 gives the operator the option of manual construction of command and data words in binary, decimal, or hexadecimal form. The manual mode utilizes the full range of DCM-1553 user interface features to assist the operator in communicating with new RTU devices or RTUs for which a data standard has not yet been developed.



Features

- Reliable, simple operation
- No special programming required
- Easily adaptable to specific testing requirements
- High resolution, touch-sensitive CRT for user friendly operation
- Carefully engineered menu structure provides uniform display and control
- Communicates in all MIL-STD-1553 information transfer formats
- Operator interface with RTUs directly in engineering units
- IEEE 488 interface for computer control
- Built-in self-diagnostic routines

Options

- Carrying case for maximum protection while in transit or on the flight line
- Remote keypad
- Custom data standards for varied customer requirements

Specifications

Data Display:

- Real time update in engineering units, binary, or hexadecimal
- Response time .25µs

Sync Pulse:

- Switch-selectable to trigger on command word, data word, and status word
- Falling-edge TTL-level allows viewing of entire command/response sequence data bits and parity status on first data word received and all remaining words

Transit Modes:

- Single message, continuous message, 1 to 100 times/sec. user settable

Protocols:

- MIL-STD-1553A
- MIL-STD-1553B
- MCAIR A3818

Error Injection:

Comprehensive error injection capabilities are available to the operator through menu selections available on the set/view errors screens. The operator can simulate a variety of errors in transmitted words, including:

- Sync transition early
- Sync transition late
- Sync type
- Word +1 bit
- Word -1 bit
- Even parity
- Parity Manchester encoding
- Data Manchester encoding in any 1 of 16 bits
- Message +1 word
- Message -1 word

Error Detection:

- Sync type
- Manchester encoding
- Long word
- Short word
- Even parity
- Word count

Power:

- 90 to 132 VAC or 180 to 264 VAC, 47 to 440 Hz
- 150 watts maximum

Dimensions:

- 19 in x 8¾ in x 20 in (48 cm x 22 cm x 50 cm)

Weight:

- 35 lbs (16 kg)

For more information on the DCM-1553 or other Atlantis test equipment products, contact Customer Support at:



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