ConnTech 2000

ESCON™ Analyzer

The ConnTech 2000–ESC is the first in a series of test and analysis tools developed by CTP supporting the ESCON™ S channel protocol. The engineers at CTP have drawn upon years of communications experience to introduce a tool that is both powerful and easy to use. The ConnTech 2000–ESC performs equally well in the field, data center, manufacturing center, or engineering lab.

The ConnTech 2000–ESC is both an *Analyzer* and a *Generator*. Independent receivers allow full duplex analysis/monitoring of an ESCON™ channel. The status of the Channel and Control Unit Links are continuously displayed by the Windows application. The statuses also include Error and Trigger Machine status.

The Analyzer has two independent Trigger Machines. Each can be programmed to trigger on any pattern in the Link Header, Device Header, and first four Payload Bytes of an ESCON™ frame. EOF, Sequence, and Error triggering are also provided. Fast cross-triggering provides synchronization of the communication to within 100 ns. A powerful compression algorithm allows a capture of as much as two seconds.

The Generator is driven by an internal transmitter. Sequences, Errors, and User-defined Frames can be generated and the response captured. A standard channel initialization sequence is also provided. The continuous display of the link status provides direct feedback during Sequence and Error generation.

The ConnTech 2000–ESC also has a BERT generator for line testing. All of the standard and user-defined data patterns are supported. The data is generated at the full ESCON™ rate.

The **ESCON™ Analyzer** for Windows™ provides all of the Analyzer and ESCON™ Generator facilities, and the Optional **LINK Tester** for Windows™ provides a high-level interface for data-pattern testing of an ESCON™ link. The Windows™ software interfaces with the ConnTech 2000–ESC over a standard RS232 line.

The ConnTech 2000–ESC features all of this in a package not much larger than a lap-top PC. In fact, it was designed so that a lap-top can be placed on top of it without interfering with the unit's operation. The small size combined with its extensive features and low cost make the ConnTech 2000–ESC an invaluable tool for the ESCON™ professional.

Features

- Remote Access by external modem allows analysis and debugging to be performed from a central service office.
- The onboard operating system is Field-Upgradeable with newer versions supplied by CTP.
- The Windows™ applications automatically detect and report POST failures to facilitate troubleshooting.
- Line Interface Expansion Card makes the unit upgradeable to support other protocols.
- Trigger on any pattern in the Link Header, Device Header and first four Payload Bytes. EOF, Sequence, and Error Triggering.
- Errors and Sequences can be forced and custom frames created by the Internal Generator.
- Optional LINK Tester.
- Small Lightweight Package makes the ConnTech 2000–ESC ideal for field service.
- Windows™ (3.1x, 95, NT) Based Host Application. makes the ConnTech 2000–ESC easy to use and eliminates the need to understand the bit-level details of the protocol.
- Advanced Hardware and Architecture allow the ConnTech 2000–ESC to perform all of these functions at an exceptionally low cost.

CTP Connecticut Technology Products

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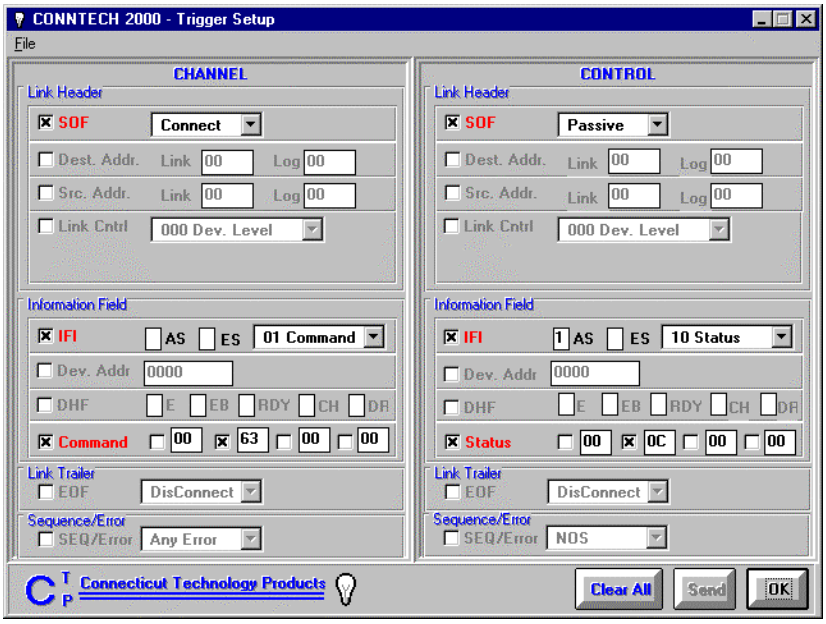
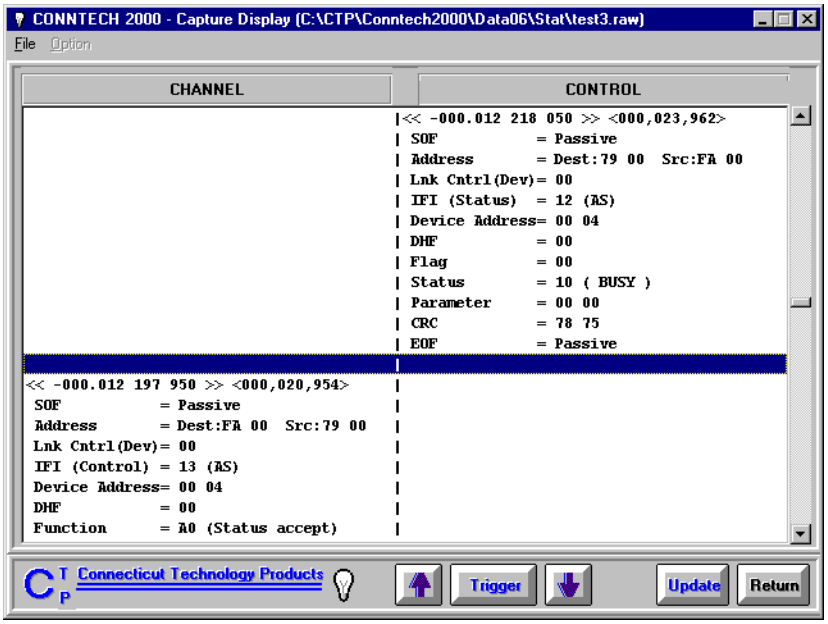


The **Analyzer** features a high level interface for defining the Trigger pattern for each trigger machine. Triggers are specified in terms of the logic of the protocol. A bit-level understanding of the protocol is not required to use the ConnTech 2000–ESC.



The **Analyzer** displays the Captured data in a format that is both easy to read and understand. Each frame is time stamped relative to the Trigger Point. The number of idles between frames is also displayed. The example above shows Control Unit Status being reported to the Channel.

Specifications

Analyzer
- Two independent receivers
- Time resolution < 400ns
- Latency < 100ns

Triggering Capabilities
- Trigger on any pattern in the Link Header, Device Header, and first four Payload Bytes
- Sequence (UD, UDR, NOS, Offline, NOS)
- EOF and Error Triggering
- Triggering on one or a range of addresses
- Cross triggering (Resolution < 100 ns)
- Trigger Point resolution < 100 ns

Trace Capabilities
- Each direction has a 32 K buffer (1/2-1 sec.)
- Pre and Post store centered around trigger point
- High level formatted display of capture

ESCON™ Generator
- Force UD, UDR, NOS, Offline, Loss of Light, Idle
- Force Errors
  - CRC errors
  - Less than 4 idles between frames
  - UD, UDR sequence violations
  - Code violations
- Custom frame generation

BERT Generator (Optional)
- All 0's, 1's
- Alternating 40's, AA's, CC's
- PRBS – 223-1, 220-1, 215-1
- User defined patterns up to four bytes

Error Detection
- CRC errors
- Code violations
- Sequence violations
- Minimum Idles between frames
- Delimiter errors

Interfaces
- Optical – Four ST connectors. Unit supplied with two 1 meter ST to ESCON™ (RSD) adapter cables
- Electrical: RS232(DB9) Com Port for PC/Modem
- Power: 90 – 264 VAC, 50 – 60 Hz universal input, 70 Watts

Physical Dimensions
- 17 x 11 x 5 inches
- 9lbs
- Operating Temperature, Min=0°, Max=50° C

Specifications subject to change without notice.

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