ARCNET®

ANA Network Analyzer

ANA: ARCNET Network Analyzer

- **Accurately monitors real-time data traffic**
- **Displays all low-level ARCNET frame types including ITT, FBE, ACK, NAK, and Packet data**
- **Intelligent acquisition unit that does not rely on PC for real-time storage**
- **Supports complex triggering on ITT, FBE, ACK, NAK, PAC and ERR**
- **512 kB acquisition memory for larger storage**
- **Supports coaxial or twisted-pair cabling (including DC- or AC-coupled EIA-485)**
- **Saves data to disk as text for future review**
- **Extensive hotkeys allow use with or without mouse**
- **User-friendly design**
- **Operates with Windows® 98, ME, 2000 and XP**
- **Uses all common ARCNET data rates**
- **Connects to PC using USB 1.1 interface**

PRODUCT OVERVIEW

The ARCNET Network Analyzer (ANA) allows engineers to capture and decode low-level messages that controllers use to initiate and control a packet transmission. This device proves indispensable when examining the data sent over embedded ARCNET networks.

The ANA views all frame types including invitations to transmit (ITT), free buffer enquiry (FBE), acknowledgements (ACK), negative acknowledgements (NAK). It also provides the ability to view ARCNET packets (PAC).

Typically, ARCNET analyzers only display transmitted packets because they incorporate an ARCNET controller chip for capturing packets. However, the ANA does not use an ARCNET chip, but reconstructs complete ARCNET activity by observing the symbols on the cable.

ARCNET is a token-passing network and the ANA will display the tokens along with a time stamp.

The device has a 2.5 microsecond timer resolution for all recorded events and will operate at the 10 Mbps upper limit of ARCNET.

It operates on a standard PC or notebook computer with a USB interface, and directly accommodates coaxial or twisted-pair cabling—including DC- or AC-coupled EIA-485. Data rates can range from 156 kbps to 10 Mbps.

The product does not rely on the PC for real-time acquisition. Its USB module contains its own CPU, memory and custom triggering hardware to facilitate capture of all frames.

Unrecognisable transmissions will be captured and displayed as well. This includes noise transients and reconfiguration bursts.

The ANA is a necessary tool for developing and troubleshooting embedded ARCNET networks.

CONTEMPORARY CONTROLS®

ANA Network Analyzer

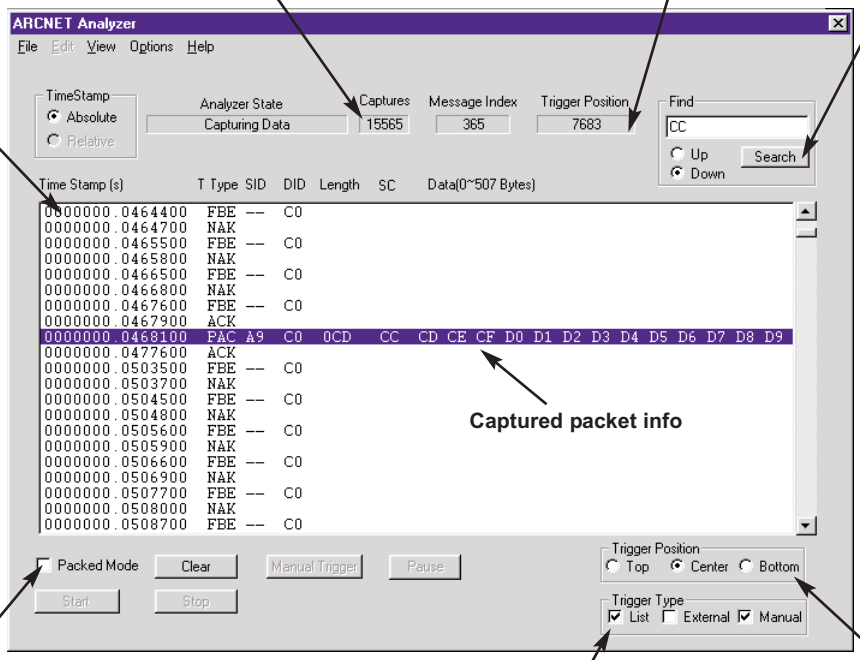
Features

Use trigger position to find trigger location quickly

Large on-board memory for real-time storage of ARCNET frames

Search function will find any character string in the acquired data

ANA Main Display



High resolution time stamp of all frames

Captured packet info

High volume traffic data can be compressed for more efficient data storage

Trigger can be set to occur at the top, center or bottom of captured data

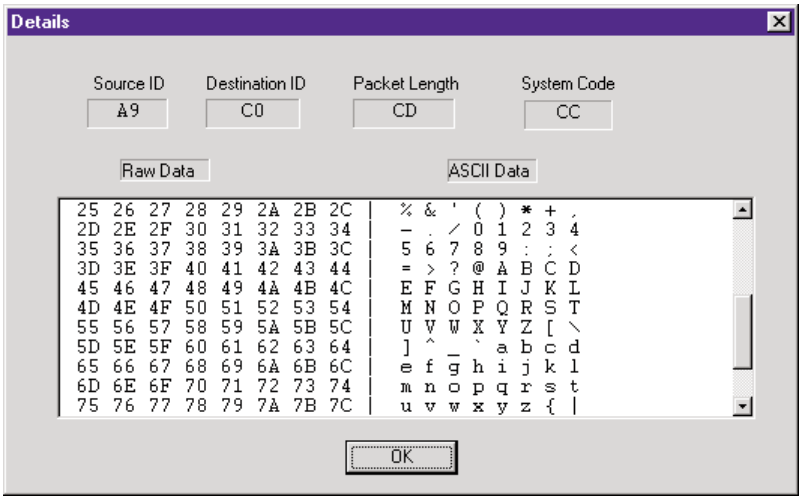
Three Trigger Types are available:

LIST – allows triggering on data within the ARCNET frames

EXTERNAL – allows an external device to cause a trigger

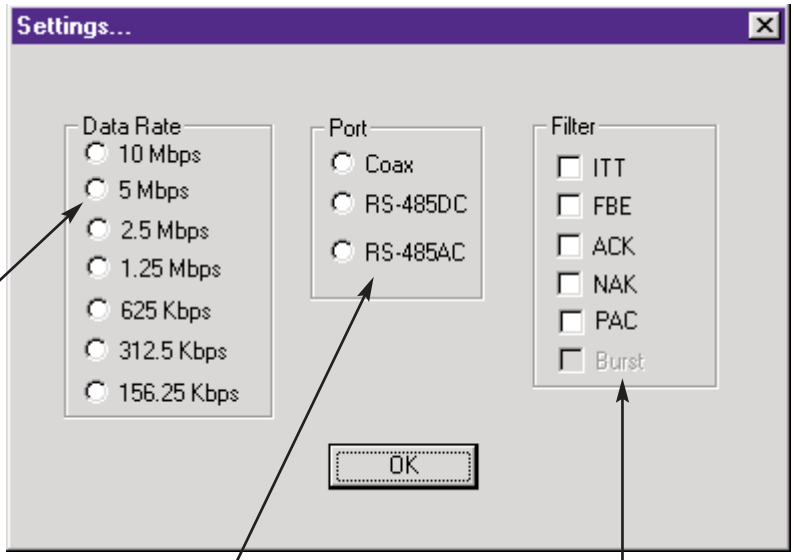
MANUAL – allows a mouse click to cause a trigger

Details of Captured Packet Info



The data in each packet can be viewed in full detail

Settings Menu

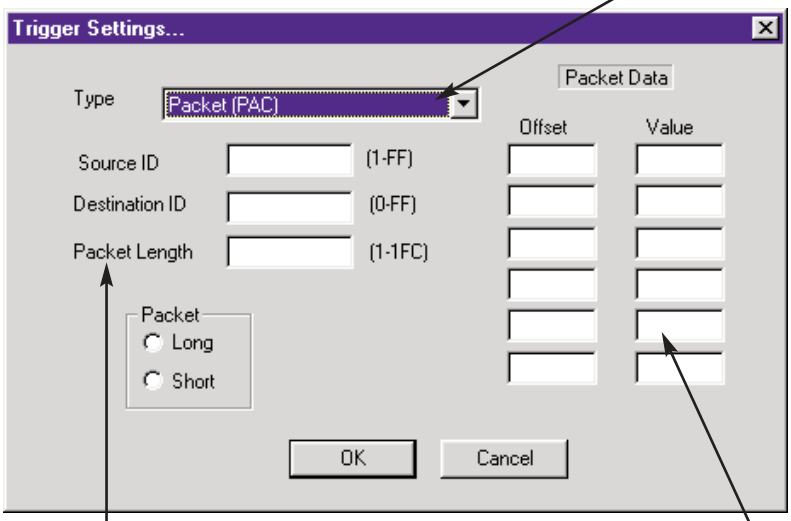


Full range of ARCNET data rates

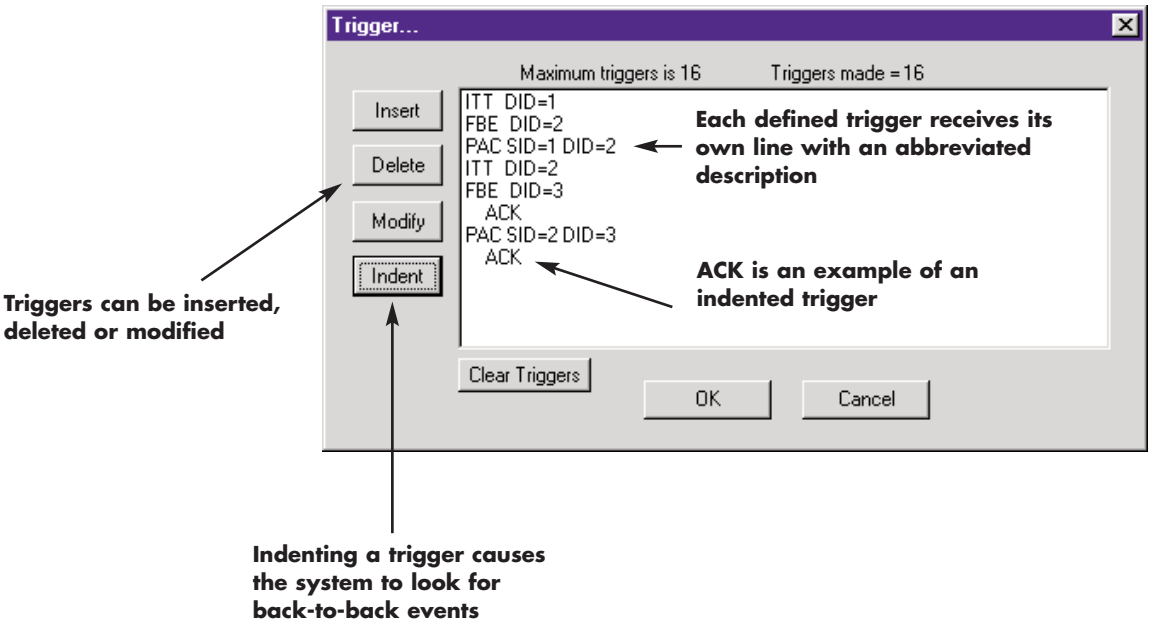
Can be connected to coaxial, twisted-pair EIA-485 DC or AC networks

On-board circuitry to display the desired frame type

Trigger Setting Menu



Multiple triggers can be cascaded to create a sophisticated trigger



Specifications

Electrical	
Power requirements	
Switching AC power supply	100–240 VAC, 25 W
USB Module	5 VDC, 500 mA typical
External trigger input	
Non-isolated trigger	2–5 Volts at 2 mA maximum
Isolated trigger	5–24 Volts (depending on setting of R84) 18–30 mA (depending on input voltage and setting of R84)

Environmental	
Operating temperature	0°C to +55°C
Storage temperature	–20°C to +65°C

Functionality	
Data rates	10 Mbps, 5 Mbps, 2.5 Mbps, 1.25 Mbps, 625 kbps, 312.5 kbps, 156.25 kbps
Dimensions	8.25" x 4.5" x 1.5" (210 mm x 115 mm x 38 mm)
Cable	USB A plug/B plug interface cable
Connectors	Coaxial, dual RJ-11 and screw terminal
Shipping weight	2 lb. (0.90 kg)
Compliance	Compliant with ANSI/ATA 878.1–1999, USB 1.1 and CE Mark

System requirements	
Processor	Pentium, 90 MHz minimum
RAM	32 MB minimum
Hard disk	500 MB minimum, 100 MB free
Operating system	Windows 98, ME, 2000, XP
Monitor SVGA	800 x 600 pixel resolution or better
Removable media	CD-ROM

Ordering Information

ARCNET Network Analyzer includes the program on CD-ROM, an intelligent data acquisition unit, a USB interface cable and external power supply. The CD contains a manual of instructions, an ARCNET tutorial, and supplementary information.

Model	Description
ANA	ARCNET Network Analyzer

CONTEMPORARY CONTROLS®
www.ccontrols.com

Contemporary Control Systems, Inc.
2431 Curtiss Street
Downers Grove, Illinois 60515 USA

Telephone (630) 963-7070
Fax (630) 963-0109