

Logic Beach Logic Timing Analyzers

Troubleshoot PLCs and digital control systems

- Identifies Intermittent I/O Problems
- Trap "First-Out" Events to Identify Shut-down Faults
- Compatible with All Brands of PLCs and Digital Logic Control Hardware
- Perfect for Capture and Graphic Analysis of Control System Problems
- Great Tool for Implementing and Verifying New Control Strategies

The Crakker™ is an innovative, diagnostic troubleshooting instrument that can monitor and trap state and timing information on an operating or malfunctioning control system. Information collected by the unit is then graphically displayed in a multi-channel timing diagram on a PC running the provided Crakker™ Communications program. The Crakker is available in 8- or 16-channel models.

The Crakker is set up by using the provided Crakker Communications software running on a PC and developing a "RUN" program for the current problem/application. The "RUN" program can be built in a matter of two minutes or less with the fill-in-the-blank format used in the Crakker Communications software. Then connect the Crakker Isolation Pod leads to the control system to be monitored and activate the ENABLE RECORDING on the front panel switch. The user then allows the Crakker to loop and wait for the programmed trigger event to occur. Once the information has been trapped in memory, the user then transfers the information back to the PC for review. Up to 16 channels of timing data and state data can be graphically displayed along the time base with 165 µs resolution. For quick graphical assessment, data zoom, graphic printing, and delta time measurements are also featured.

The Crakker is more effective than other troubleshooting methods. It requires no internal histograms or custom programming of the PLC. It is more effective than the internal fault detecting capability built into some PLCs in that the Crakker uses a high-speed internal microprocessor that works 60 to 600 times faster than the PLC operation under test. The Crakker also provides clear graphic timing and state display, as opposed to an ASCII text screen or CRT. Visualization and analysis of more complex control schemes is simplified. All this is provided for up to 16 channels of I/O monitoring versus single channel monitoring on an internal system.

To use the Crakker, the user needs an IBM PC or clone with a floppy drive, a display monitor, and an RS-232 port. Personal computers with hard drive, 286 or better, and VGA display add to the speed and performance of the system. The Crakker™ Communications software can also run on LCD-equipped laptops and is self-configuring, with no lengthy installation process.

Each Unit Includes: Isolation pod: 8-Ch (1); 16-Ch (2), leads and clips, charger adapter, system base, Crakker™ communications software, pod hangers, and instructions.

Ordering Information

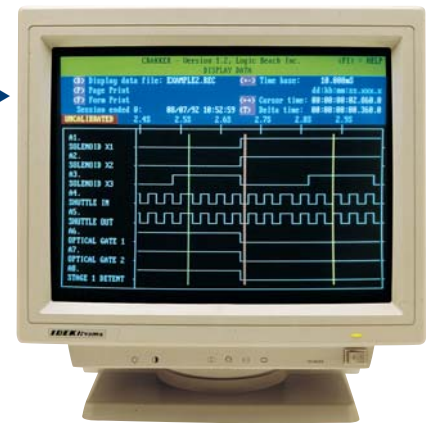
Order #	Mfg #	Description	Price
MP22130E	CK-2-8	8-Channel Crakker Logic/Timing Analyzer System	
MP22131E	CK-2-16	16-Channel Crakker Logic/Timing Analyzer System	
MP22132E	IP-2	8-Channel Isolation Pod for Use with Crakker™	
MP22133E	CK-CASE	Carrying Case	
MP22134E	RPS-1-CK	Rechargeable Power Supply	



◀ **CK-2-8—"Crakker™"
"Control System Troubleshooter"**

▶ **CK-2-8 comes
with communications
software for your PC**

**Graphical Display
easily identifies
timing problems**



Specifications

Isolation Pod	
Channels:	8 (ON/OFF)
Input Signal Range:	0 to 400 VDC, 0 to 280 VAC
Input Impedance:	100 kΩ
Inter-channel Isolation:	600 VAC
Pod to Base Isolation:	600 VAC
ON/OFF Thresholds:	33 programmable voltage steps
Resolution Low End:	Approx. 1 VDC/step
Resolution High End:	Approx. 10 VDC/step
I/O Connection Method:	5' silicone lead pairs with insulation displacement spring clips
Pod-to-Base Connection:	4' multi-conductor DB-15M cable
System Base	
Inputs:	One or two isolation pods, 16-channel total
Input Scan Rate:	165 µs to 1 ms, depending on setup
Input Filtering:	Three programmable levels and OFF (for debounce and AC filtering)
Trigger Capability:	Logical AND, OR for all channels; Level (Hi/Low) and Edge (Rise/Fall); Time Based between two channels; any channel change
Sample Capability	
8-Channel:	Up to 57,000 8-channel records
16-Channel:	Up to 38,000 16-channel records
Output Alarms:	Two alarm relays (1 Amp, low-volt)
Power Requirements:	10–26 VDC, 100 mA; 120 VAC adapter included

C

Electronic Test Instruments