

# NCI Series

## Intelligent Network Chromatography Interfaces



**Figure 1.** NCI Intelligent Network Chromatography Interface.

### Introduction

The PerkinElmer NCI Series Intelligent Interface enhances the capabilities of the TotalChrom/Turbochrom chromatography data handling system. The Network Chromatography Interface (NCI) can be connected directly to the network using its own IP address and Ethernet 10Base-T communication.

The NCI interfaces are used to collect analog data from chromatographs made by virtually any vendor and of any age. They provide the ability to maintain data collection and

retain the data collected in buffered memory, even when the “Acquire” computer or the computer network is unavailable, thus preventing the loss of valuable data. The NCI interface will emulate the feature set of the previous Model 900A Series Interfaces (941, 950, 960, and 970) when used with current versions of TotalChrom/Turbochrom v6.x, Turbochrom Professional and Access\*Chrom software programs. The NCI interface supports IEEE-488 and RS-232 communications as well as direct network connections

(see Table 1). The series includes the NCI-901, a single instrument/single channel version (analogous to a model 941A) and the NCI 902, a single instrument/dual channel version (analogous to a model 970A). Table 2 lists configurations of the NCI interfaces. Input of Rack and Vial position and relay control is standard.

The NCI 901/902 front panel (see Figure 1) provides membrane switches and LED's for controlling and monitoring sampling.

**Table 1. NCI Communication**

System	Communication Supported		
	RS-232	IEEE-488	10-Base T
TotalChrom/Turbochrom V.6.x	+	+	+
Turbochrom Professional		+	
Access*Chrom	+		



**Figure 2.** NCI interfaces may lie flat to permit stacking.

The membrane switches allow you to start and stop data collection from the instrument as well as through direct software control. The LED's allow you to determine if the power to the NCI is on, if the NCI is ready to start data collection, if the NCI is currently collecting data, if data is in buffer memory but not yet stored by the "Acquire" computer, and if the detector data is in range.

NCI interfaces may lie flat to permit stacking of NCI's (see Figure 2) as a space-saving benefit. They may also be set vertically when a thin profile is preferred.

### Primary Features

When used with the TotalChrom/Turbochrom v.6.x, or Turbochrom Professional application:

- 256 KB of dynamic memory that allows data buffering of up to 120,000 data points.

- Direct Network Connection with its own IP address via Ethernet 10Base-T communications as well as IEEE-488 and RS-232 Serial communications.
- Four programmable unipolar and four programmable bipolar voltage ranges. The four nominal ranges are 10 V, 2 V, 1 V and 0.1V. Each voltage range provides a dynamic range of 1:1,000,000 (120 dB) at a sampling rate of one point per second.
- The NCI 902 contains two A/D converters; the NCI 901 contains one. On the NCI 902, the second A/D converter allows you to collect data synchronously from two detectors during a single run.

- Two sense input lines (Start and Stop) that allow control of the start/stop functionality of the NCI interfaces externally, from an autosampler as an example.
- An Instrument Ready relay which is normally closed and signals the autosampler that an injection can occur. If the buffer memory becomes filled, the Ready relay will open and stop further injections from taking place, thus saving valuable samples from being wasted.
- The RVP provides:
  - Seven relays that can be programmed as timed events in the Chromatographic run to open or close switches which can be used to operate valves, etc.
  - A Rack and Vial port that allows the NCI to transfer to the Raw file the rack and vial number of the injection site, if the autosampler has the required BCD output.
- A two-meter cable to connect the NCI series interface to the 600 LINK series is available as part number S501-0041. This configuration is used to support instrument control and analog data acquisition.

**Table 2. NCI Interface Configurations**

Part Number	Product Identification	Product Description
S900-0070	NCI 901 120 V.	Single Instrument/single analog channel NCI
S900-0075	NCI 901 240 V.	Single instrument/single analog channel NCI
S900-0090	NCI 902 120 V.	Single instrument/dual analog channel NCI
S900-0095	NCI 902 240 V.	Single instrument/dual analog channel NCI

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