Crestron **CNSNET**
PC Interface

Operations Guide

A supplement to the Cresnet II Technical Manual

*Includes description and installation procedure for VisionPC/Control^{SM} software*

CRESTRON
R E M O T E   C O N T R O L   S Y S T E M S

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DESCRIPTION:

Functional Description

CNSNET

The CNSNET, illustrated in figure 1, is an RS-232 interface, designed to operate with the CRESNET II remote control system (herein referred to as the CRESNET II system). This unit in conjunction with VisionPC/Control[SM] software permits a PC to functionally operate as a touchpanel.
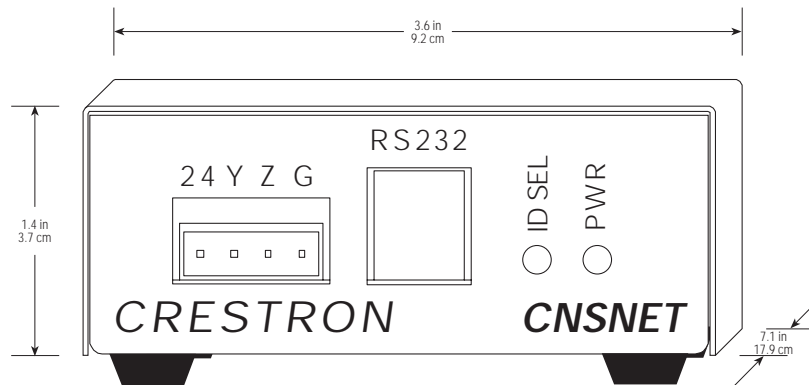
Figure 1. CNSNET, RS-232 Interface

VisionPC/Control Software

VisionPC/Control software turns a project created in VisionPC/Create[SM] into a run-time executable. This software provides full control and communications to a CRESTRON control system via your PC and a CNSNET.

Physical Description

CNSNET electronic hardware is housed in a black cold-rolled painted steel box (refer to figures 1 or 2). Silk screening is applied to the face of one panel of the steel case. Located on this panel is a four-pin network port (24 Y Z G), a RJ-11 port (RS-232), a red LED (ID SEL), and a green LED (NET PWR).

There are four rubber bumpers on the base of the unit for stability and to prevent slippage.
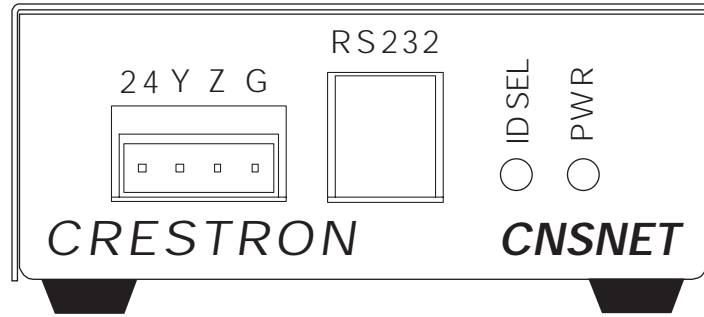
Figure 2. CNSNET, Panel View

LEADING SPECIFICATIONS:

Table 1 provides a summary of leading specifications for the CNSNET. Dimensions and weight are approximations rounded to the nearest tenth unit.

Table 1. Leading Specifications

SPECIFICATION	DETAILS		
Power Requirements	3 Watts		
CRESNET II Workshop	Version 4.31 (standard released version)		
CRESNET II Operating System	3.09.17 or later (standard manufacturing version)		
Compiler	3.06.06 or later (standard release version)		
Dimensions & Weight	Height:	1.4 in	(3.7 cm)
	Width:	3.6 in	(9.2 cm)
	Depth:	7.1 in	(17.9 cm)
	Weight:	1.1 lb	(0.5 kg)

As of the date of manufacture, the unit has been tested and found to comply with specifications for CE marking.

$C\epsilon$

CONTROLS AND INDICATORS:

Controls

There are no user accessible control mechanisms on the CNSNET.

Indicators

There are two LED indicators located on the CNSNET, refer to figure 2.

ID SEL

The red LED illuminates when communication between the CRESNET II system and the CNSNET is established. Illumination indicates that the identity code of the CNSNET matches the identity code of a network unit in the SIMPL program currently running in the CRESNET II system.

PWR

The green LED illuminates when 24 volts is supplied to the CNSNET over the network.

INSTALLATION/SETUP:

Software Installation

After creating customized control screens for a specific project with VisionPC/Create, use the "Create Install" utility to develop VisionPC/Control disk(s). Refer to the latest revision of the VisionPC/Create Operations Guide (Doc. 5495) for details. The VisionPC/Control disks must be installed and used in conjunction with the CNSNET to connect to the CRESNET II control network. Virtually any electronic or electromechanical device or subsystem can be controlled.

Before installing VisionPC/Control software, verify that Windows is open. Complete the following steps in the order provided to ensure proper installation.

1. Insert the VisionPC/Control disk #1 into drive A: (or B:) of the PC.

2. Close all program windows except Program Manager.

3. From the Program Manager window, select File and Run to open the "Run" dialog box.

4. At the Command Line, type "A:INSTALL" (or "B:INSTALL") and select the "OK" button to run the Crestron VisionPC/Control Installation program.

5. The installation program attempts to create the "c:\visionpc" directory to set up VisionPC/Control software. If installation is preferred on another directory and/or drive, enter or select the path.

6. CRESTRON recommends a complete installation. Therefore, select the Full install button.

7. The program prompts the user for additional disks, as required.

8. The install program adds a set of icons to a particular Program Manager group, "VisionPC". If another group is preferred, enter the name of the new or existing group. Select the Create button to verify the group's identity.

   The first part of VisionPC/Control software is installed. Continue with the following steps to install files for a specific project.

9. From the "Project Install" dialog box, enter or select the project directory. The suggested directory is the same directory used earlier to install VisionPC/Control.

10. The "Project Install" dialog box also offers the opportunity for last minute verification or modification of COM port and network ID settings.

11. The program prompts the user for additional disks, as required.

12. Installation is complete. Select the OK button to return to the Program Manager window.

Preparation for Use

Hardware Hookup

Refer to figure 3 for a typical hook-up diagram of the CNSNET. Complete the following steps in the order provided to ensure proper installation of the unit.

1. Before making any connections, review latest revision of network interconnection drawing (Doc. 5411).

2. Connect the network female connector to the 4-pin male connector at the front of the CNSNET. The male connector is marked 24 Y Z G. Network termination points are available at the control system power supply. Network units may also be daisy-chained together. Refer to the latest revision of the CRESNET II reference manual section on CNPWS power supplies for wire gauge specifications and connection details.

3. Connect one end of the seven foot telephone cable to the CNSNET panel marked RS-232. Figure 4 illustrates a detailed drawing for the cable.

4. Attach the RJ11 to DB9S adaptor to the loose end of the telephone cable.

5. Attach the nine-pin connector to the proper COM port on the PC.

6. Apply power to the CNSNET and observe illumination of the red LED marked ID SEL and green LED marked NET PWR on the unit's panel.

Identity Code

Each device on the CRESNET II network requires a unique identity code (ID CODE). These codes consist of a two-digit hexadecimal number ranging from 03 to FE. The ID CODE of each unit must match the ID CODE specified in the "NET.ID" statement of the CRESNET II SIMPL-I program in order for the device to be addressed properly. The CNSNET ID CODE is not manually set on the unit itself. Instead, the CNSNET ID CODE is assigned in VisionPC/Create and can be modified during installation of VisionPC/Control disk(s).

METHOD 1:   CONNECTION WITH CNRACK OR CNRACK-D
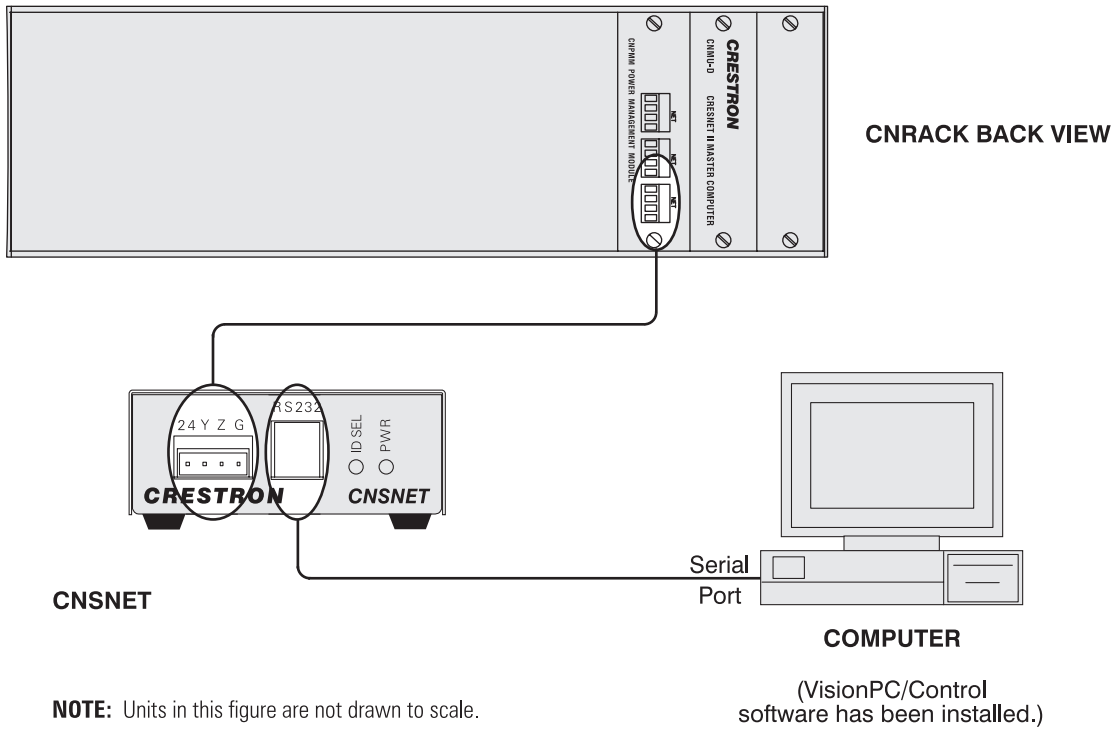
METHOD 2:   CONNECTION WITH CNMS
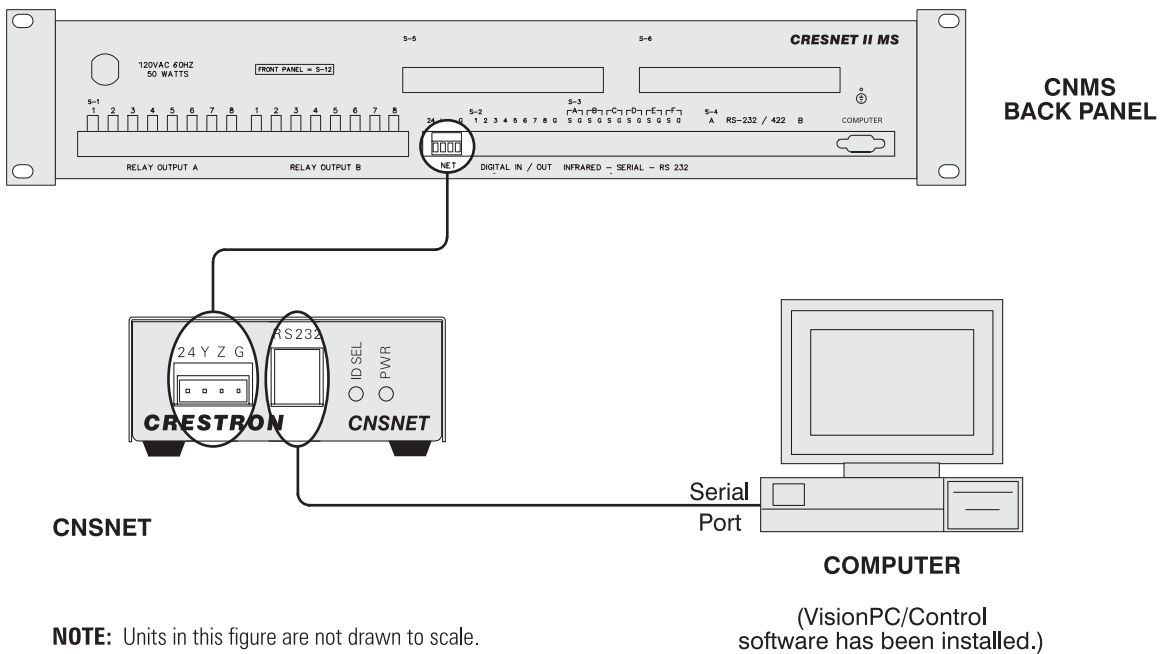
Figure 3. CNSNET, Typical Hook-up Diagram

RJ11   DB9F
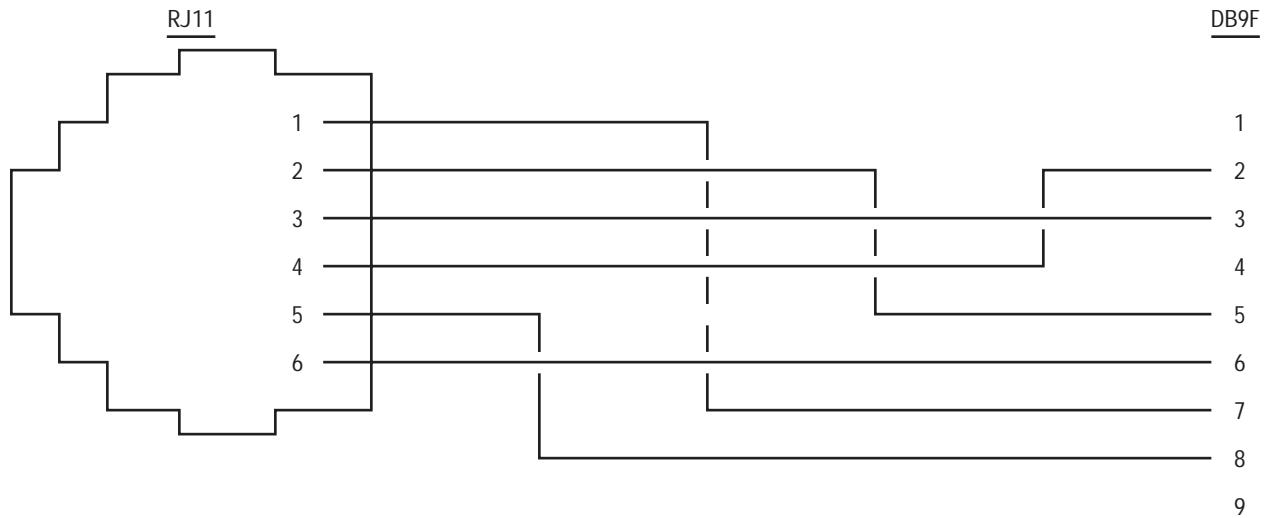
Figure 4. CNSNET, RJ11 RS-232 Port to 9-Pin Computer Port Cable

PROGRAMMING:

A basic touchpanel SIMPL program is illustrated in figure 5. An example follows the figure to illustrate the CRESNET II screen displays for touchpanel signal name assignment. The screen displays illustrated in this example are accessible from the "Define Network" section of the SIMPL-I Menu in the CRESNET II Workshop.
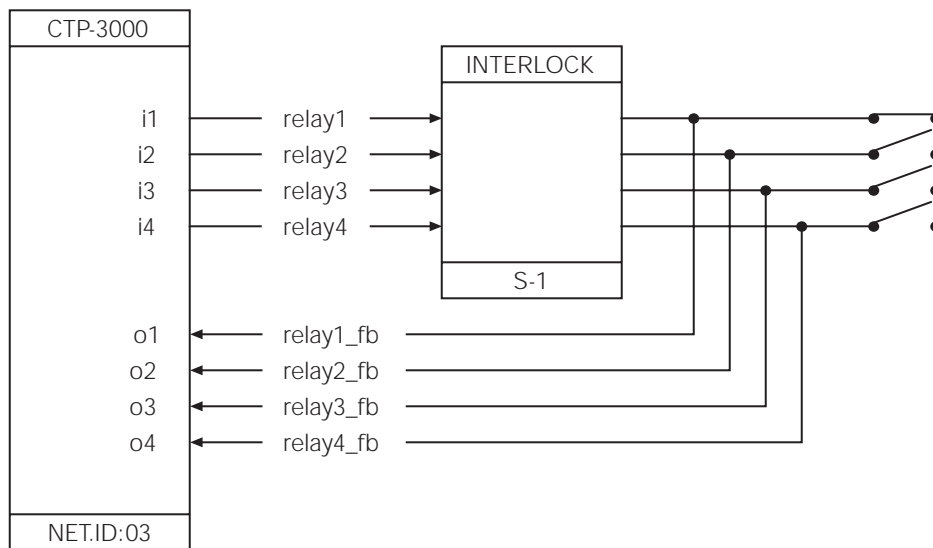

Figure 5. CNSNET, SIMPL Program

System PF: 4.5   Net PF: 3.0

Net ID	Net Device	Description	P.F.
03:	CTP-3000		
04:			
05:			
06:			
07:			
08:			
09:			
0A:			

TAB to select entries   PgUp/PgDn to find ID

F2-Detail   F3-Display Signals

ESC to Def Equip   Define Network   F1 = Help

Net ID: 03

CTP-3000
Command Center Touch Panel   P.F.: 3.0

JOIN#	BUTTON SIGNAL NAMES		FEEDBACK SIGNAL NAMES
1:	relay1	——————	relay1_fb
2:	relay2	——————	relay2_fb
3:	relay3	——————	relay3_fb
4:	relay4	——————	relay4_fb
5:		——————	
6:		——————	
7:		——————	
8:		——————	
10.		——————	
11.		——————	m

F2-Detail   F3-Display Signals   F4- Auto-Increment

F6-Connect Buttons/FB   F7-Define Bar Graphs   TAB-Button↔FB↔Join#

ESC to Def Equip   Panel Detail   F1 = Help

TEST/TROUBLESHOOTING:

Table 2 provides corrective action for possible trouble situations. If further assistance is required, please contact a CRESTRON technical support representative.

Table 2. Troubleshooting Guide

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
CNSNET does not function.	CNSNET is not communicating to the network.	Verify network connection on CNSNET panel. Poll network in Performance Viewport.
NET PWR LED is not illuminated.	CNSNET is not receiving network power.	Confirm power is supplied to the network.Verify network connection.
CNSNET is not responding.	Incorrect network wiring.	Verify correct wiring to the electrovert connectors.
	CNSNET ID is not unique; two or more units share same ID.	Verify that each ID is used once.
Message: "Cresnet not responding" appears on the PC and ID SEL LED is extinguished.	CNSNET ID is not set to match the SIMPL-I program ID.	Enter Performance Viewport in the CRESNET Workshop. Depress the F4 key to poll the network. Verify that the NET ID for the CNSNET (set during project install in the "Project Install" dialog box) is properly set to match the SIMPL-I program.
Message: "PC to CNSNET communications error" apears on the PC when trying to open VisionPC/Control icon.	Incorrect COM port selected.	Confirm COM port assignment during installation of VisionPC/Control disk(s).
	CNSNET is not receiving network power.	Verify power is supplied to the network and CNSNET.
	There is a problem with the PC to CNSNET cable.	Verify cable connections and restart VisionPC/Control.
Message: "Communication timeout during Poll" appears while running VisionPC/Control.	There is a problem with the PC to CNSNET cable.	Verify cable connections and restart VisionPC/Control.

FURTHER INQUIRIES:

If after reviewing this Operations Guide you still have additional questions, please contact a CRESTRON technical support representative by dialing (800) 237-2041 or (201) 894-0660.

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DOC. 8085

SYNTAX:

The following syntax codes are provided for compatibility purposes only.

NET.ID < 03 to FD > : CTP-3000

i15 = <signal name>	**\i# refers to join # of touchpanel button**
o15 = <signal name>	
i20, o20 = <signal name>	**\button and feedback combined**
i21, o21 = <signal name>	
i25 = <signal name>	**\independent button**
o25 = <signal name>	**\independent feedback**
" = " "	
" = " "	
AN1 = <signal name>	**\analog signal to bargraph**
AN2 = <signal name>	
" = " "	
" = " "	
AI1 = <signal name>	**\analog signal from touchpanel**
AI2 = <signal name>	**\ex: positouch button**
" = " "	
" = " "	

RETURN AND WARRANTY POLICIES

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange, or service without prior authorization from CRESTRON. To obtain warranty service for CRESTRON products, contact the factory and request an RMA (Return Materials Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number, and return address.

2. Authorized returns must be shipped freight prepaid to CRESTRON ELECTRONICS, INC., 101 Broadway, Cresskill, New Jersey 07626, along with the Return Authorization Number marked on the outside of the package. Shipments received freight collect shall be refused.

3. All credit/exchange merchandise must be in the original cartons and is subject to a restocking charge. Soiled or damaged merchandise is subject to additional refurbishing charges. A photocopy of CRESTRON's original invoice must accompany the return or the equipment shall be refused.

4. Return freight charges following repair of warrantied items shall be paid by CRESTRON, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

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CRESNET II Limited Warranty

CRESTRON ELECTRONICS, Inc. warrants its CRESNET II products, denoted by a "CN" prefix model number, to be free from manufacturing defects in materials and workmanship for a period of three (3) years from the date of shipment to purchaser. Disk drives and any other moving or rotating mechanical parts are covered for a period of one (1) year, excluding switches and pushbuttons, which are covered for three (3) years. CRESTRON warrants all its other products in this price list for a period of one year from the defects mentioned above, excluding touch panel displays which are covered for 90 days. Incandescent lamps are completely excluded from Crestron's Limited Warranty. CRESTRON shall, at its option, repair or replace any product found defective without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

CRESTRON shall not be liable to honor warranty terms if the product has been used in any application other than that for which it was intended, or if it has been subjected to misuse, accidental damage, modification, or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced, or removed.

This warranty shall be the sole and exclusive remedy to the purchaser. In no event shall CRESTRON be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. CRESTRON makes no other warranties nor authorizes any other party to offer any warranty, expressed or implied, including warranties of merchantability for this product. This warranty statement supercedes all previous warranties.

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