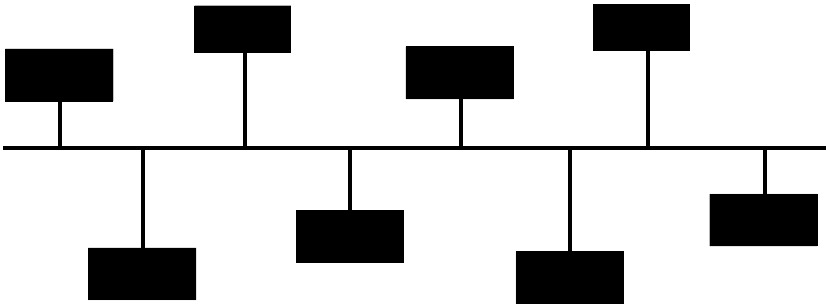
VNC
Versatile Network Controller

CINENET™



Operation and Installation Manual

STRONG
Cinema Products

Revision 2.01
Sept 2005

VNC Versatile Network Controller
Setup and Operation Manual

PR019 Revision 2.01

This manual covers the setup and operation of the VNC Controller.

Optional CineNet and related equipment is covered in the following product reference manuals:

- PR001 CNA Installation Manual
- PR002 CNA-200 Setup and Operation Manual
- PR003 CNA-150 Setup and Operation Manual
- PR004 CNA-100 Setup and Operation Manual
- PR005 QDC-400 Installation and Setup Manual
- PR006 ACP-50 Installation and Setup Manual
- PR007 RVC-5 Installation and Setup Manual
- PR008 PCI-64 Gateway Interface Installation
- PR009 CineNet Host Software
- PR010 RCM-10/RSM-10/RSM-20 Installation and Operation Manual
- PR011 Strong Dimmer Installation, Setup, and Operation Manual
- PR012 eCNA-100 Automation Manual
- PR013 eCNA-150 Automation Manual
- PR014 eCNA-200 Automation Manual
- PR016 Strong FP350 Installation and Operation Manual
- PR017 Eprad FP350 Installation and Operation Manual
- PR018 Paging system Setup and Installation Manual
- PR019 VNC Setup and Operation Manual
- PR020 CineSuite Installation and Operation Manual

Warranty

CineNet automation products, sold by STRONG INTERNATIONAL, are warranted against defects in materials and workmanship for one year from the date of purchase. There are no other express or implied warranties and no warranty of merchantability or fitness for a particular purpose.

During the warranty period, STRONG INTERNATIONAL will repair or, at its option, replace components that prove to be defective, provided the unit is shipped prepaid to the manufacturer directly or via and authorized distributor. Not covered by this warranty are defects caused by modification, misuse or accidents and any further damage caused by inadequate packing for service return.

STRONG INTERNATIONAL's obligation is restricted to the repair or replacement of defective parts and under no circumstances will STRONG INTERNATIONAL be liable for any other damage, either direct or consequential.

Features Overview

- One 10Base2 port
- One 10Base-T port
- One LSN port
- Three LEDs to indicate Link, Active and Power status
- Optional Expander Board includes three RS-232 ports and one RS-485 port

Package Contents

- One VNC Versatile Network Controller
- One AC Power Adapter
- This Users Guide
- RS-232 Interface Cable

External Features

The following illustrations depict the external components of the VNC.

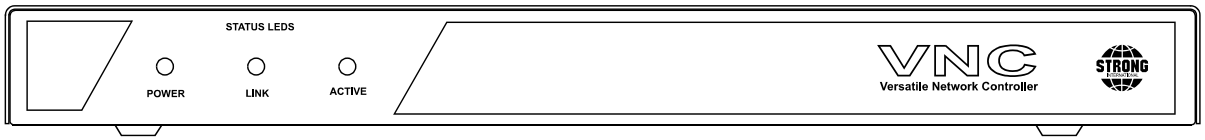


Figure 1: Front Panel

1. Power (RED) Indicator

This LED indicator lights when the VNC is powered on.

2. Link (GREEN) Indicator

The VNCs 10Base-T tranceiver continually monitors the receive data path for activity as a means of checking whether the link is working correctly. The tranceivers at both ends of the segment also send a link test signal to one another to verify the integrity of both twisted pair links. The Link LED indicator remains on when the connection is okay.

3. Active (GREEN) Indicator

This LED indicates transmit and receive activity on the segment.

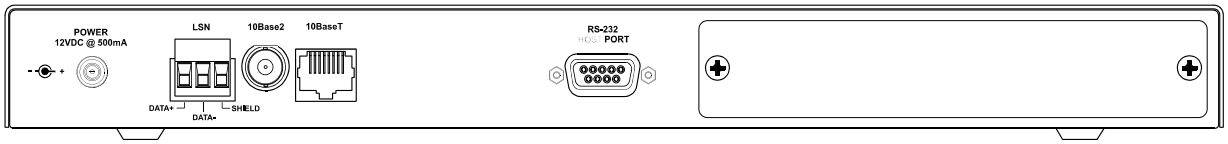


Figure 2: Rear Panel

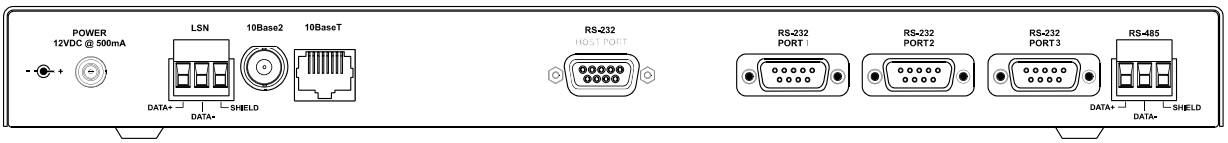


Figure 3: Rear Panel with Optional Expansion Board

1. AC Adapter Port

Plug the AC Adapter jack into this port.

2. LSN Port

This is an RS-485 port for making connections to the LSN (Automation Sync Network).

3. BNC Port

The VNC is equipped with one BNC port for making 10Base2 connections.

4. RJ-45 UTP Port

The VNC is equipped with one RJ-45 UTP port for making a 10Base-T to hub connection.

5. RS-232 Host Port

This is an RS-232 port that is used to connect the VNC to the Host computer.

6. RS-232 Port 1, 2 and 3 (optional)

These are RS-232 ports used to connect the VNC to auxiliary equipment such as an On-Premises Paging Transmitter, LED signs, etc.

7. RS-485 Port (optional) 4

This is an RS-485 port used to connect the VNC to auxiliary equipment such as LED signs.

Making Network Connections

The VNC can be wired as a Host gateway interface. Connect the RS-232 HOST Port to a serial port on the Host computer with the cable provided. Connect the LSN (Automation network) to the LSN connector on the VNC. Use RS-485 communication cable (Shielded twisted pair: Alpha #6412, Belden #9841 or equivalent).

The VNC also provides an LSN data path over 10mbps ethernet. The VNC can support either 10Base2 or 10Base-T. Any network device used to construct the ethernet network (such as hubs and bridges) must operate at the data link layer, or Layer 2 of the OSI model. A maximum of eight VNCs can be connected to the same ethernet network. A total of 63 automations (or other LSN devices) are supported. See the wiring diagram below

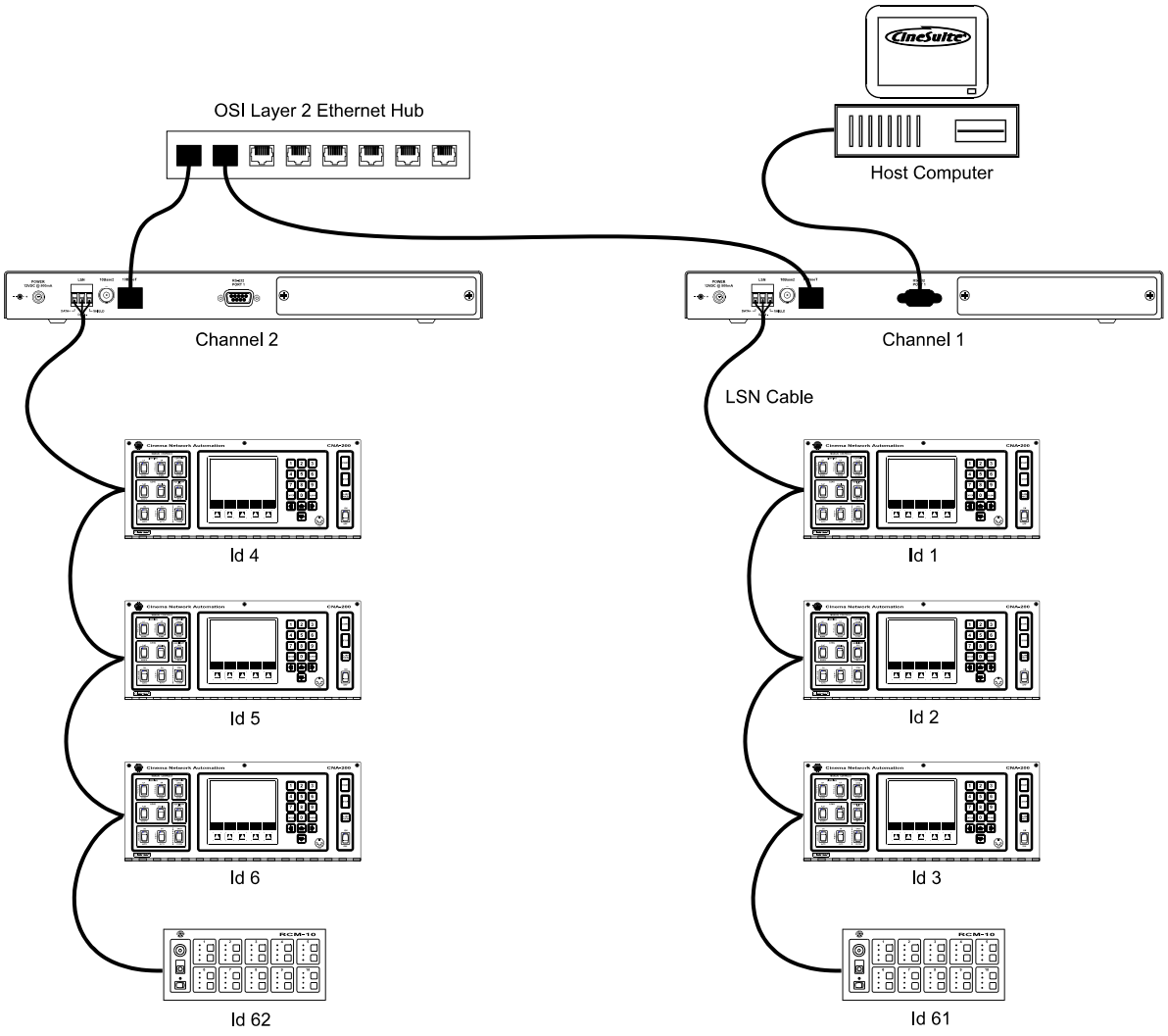


Figure 4: Connecting a Host computer and automations over an Ethernet network.

Insure that the VNC and other network device are in the power off mode before making the connections.

The following figure illustrates a simple network topology using a 10Base-T or 10Base2 Ethernet. Each VNC and CNA Automation must have a unique Id number. The Host computer must connect to VNC Id 0.

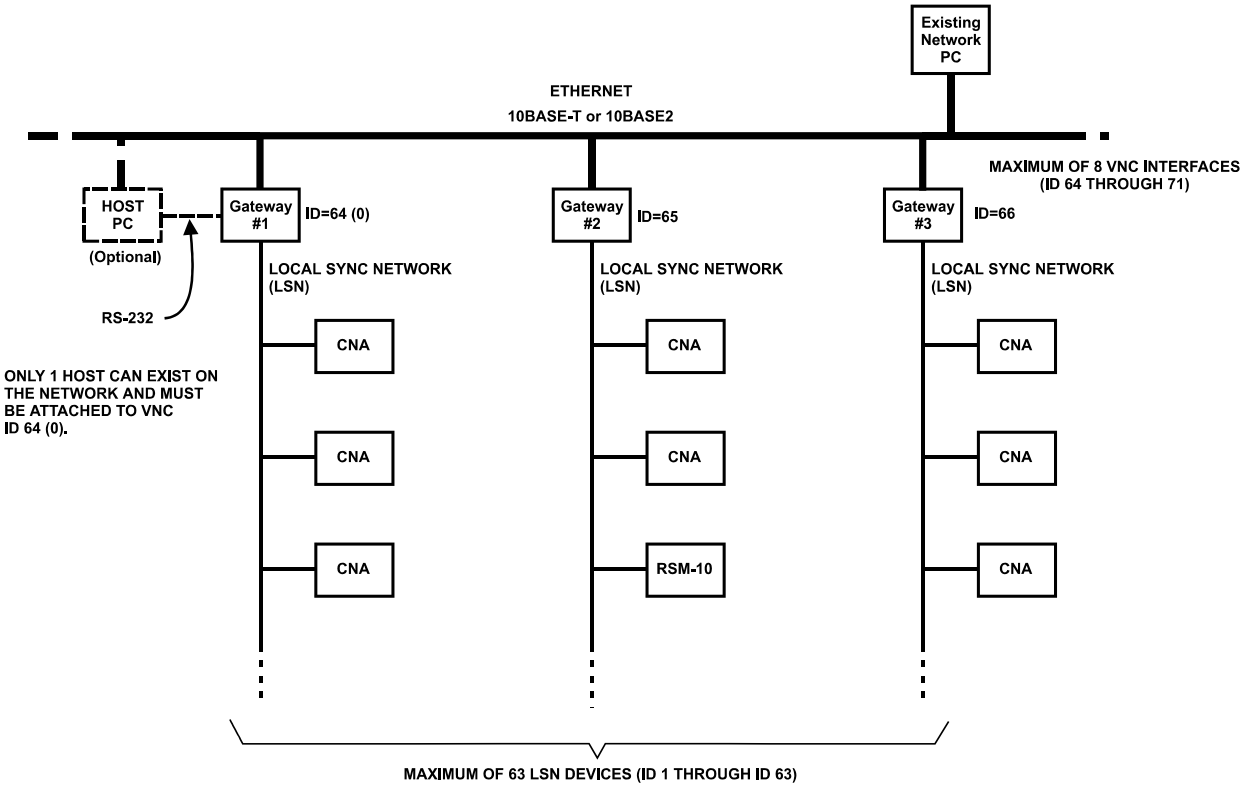


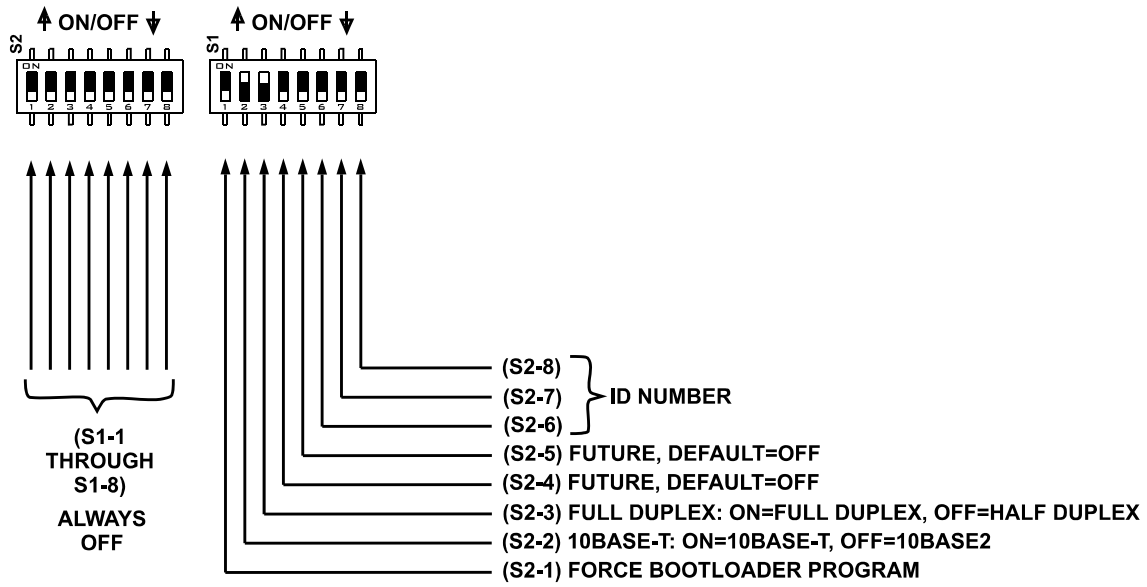
Figure 4: 10Base-T or 10Base2 network connections.

In order to Fully utilize the VNC the CineSuite software package should be up and running on your Host PC. The user should take time to learn all of its features by carefully studying the CineSuite user's guide.
The DOS Host program is also available for use with the VNC, it however does not operate via TCP/IP. The DOS Host program provides functional but limited features to control and monitor the LSN and LIN components.

DIP Switch Settings

Open the VNC enclosure to configure the DIP switches on the VNC pc board.

***Switches are shown in default positions**



S1-6	S1-7	S1-8	ETHERNET ADDRESS	LSN ID
OFF	OFF	OFF	00-D0-AD-00-00-01	(LSN Id=64, 0, Host connects here)
OFF	OFF	ON	00-D0-AD-00-00-02	(LSN Id=65)
OFF	ON	OFF	00-D0-AD-00-00-03	(LSN Id=66)
OFF	ON	ON	00-D0-AD-00-00-04	(LSN Id=67)
ON	OFF	OFF	00-D0-AD-00-00-05	(LSN Id=68)
ON	OFF	ON	00-D0-AD-00-00-06	(LSN Id=69)
ON	ON	OFF	00-D0-AD-00-00-07	(LSN Id=70)
ON	ON	ON	00-D0-AD-00-00-08	(LSN Id=71)

Note: Full duplex is ignored when S1-2 is off (10Base2).

Replacement Parts:

This list contains replacement part numbers that will assist the technician/ equipment owner in the event of a component failure or damage to the VNC.

Component Description	Strong P/N	OEM P/N
VNC Controller board		39460
VNC Expansion board		39461
Power supply		27106

Software Changes:

Date: 5-23-00
Version: 1.000A
Checksum: 37470
Reduced ethernet send byte count by 2

Date: 8-1-00
Version: 1.002
Checksum: 54452
Fixed bug that caused continuous paging when CNA had a fault on ID 63

Bootloader Changes:

Date: 5-3-00
Version: 1.000
Checksum: 26292
Created Bootloader program for VNC. Ethernet can now be used to extend the LSN, Added DIP switch configuration for bootloader and address.

Date: 5-23-00
Version: 1.000A
Checksum: 26584
Reduced ethernet send byte count by 2

Date: 6-13-00
Version: 1.001
Checksum: 55369
Added packet routing support for astsk
Added R/W configuration data (serial e^2 commands)
"Read VNC configuration data" "Write VNC configuration data"
Added astsk for expansion ports and waveware paging support

Date: 10-7-02
Version: 1.002
Checksum: 37622
Re-wrote Fl-Erase Routine. Fixes hardware incompatibility issues with certain Flash eeproms

Date: 9-16-02
Version: 1.001
Checksum: 26555
Wrote fix to prevent possible bug