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CINENET™

Strong International Host Program

Operators Manual

Preliminary
June 19, 1997
Introduction

This manual explains how to use the Strong Host program for the CNA-100 and CNA-200 Automation systems. The Host program is designed to run on a PC-XT or AT Personal Computer under MS-DOS version 3.20 or later. The program runs in conjunction with the 39361 Network Gateway card and supports up to 63 remote CNA Automations and Remote Monitors.

This manual describes the start up and operation of the Host program in sufficient detail for the experienced CNA Automation operator to use the program without other reference material. It will however, be necessary for the inexperienced operator to refer to the CNA-200 Cinema Network Automation Reference Manual or the CNA-100 Cinema Network Automation Reference Manual.
Theory of Operation

The Strong CineNet System is an integrated cinema automation network system that consists of a Host computer, a Gateway card and up to 63 remote devices (CNA-100s, CNA-200s and Remote Monitors) that automate and report the status of all screens in a cinema multiplex. The function of the Host is to monitor and display information which is transferred over the Local Synchronous Network (LSN) and to provide set-up and program data to the remote CNA Automations. The Host also provides a system wide time and date reference for all remotes.

The CineNet System can best be described by the following diagram:
The Host communicates with the Gateway over a point to point 8-bit, 9600 BAUD, RS-232 serial interface. The Gateway assumes the position of primary and controls the transfer of data across the interface. The PC assumes the position of secondary. Data packets are transferred with a two-byte checksum and retry logic to preserve data integrity.

The data link between the Gateway and the remote CNA Automations has been designed to provide an efficient and reliable means of moving data at high speeds over long distances in the cinema booth environment. The physical characteristics of the network interface are as follows:

- 2-wire isolated RS-485
- 19.2 K BAUD asynchronous
- Multi dropped remotes (63 max)

This data link is controlled with a proprietary protocol that uses retry logic and a checksum to insure the data is transferred without error.

On power up each remote CNA Automation requests the current Time and Date from the Host and sets its clock. In the event the network is down, the CNA-200 clock may be set locally.

The Host program is designed to provide all the network interface functions allowing the Personal Computer to serve as a command post to the entire system. All Host operator functions run in conjunction with the other network activity that is occurring. Programs, Clock Start Times and other Set-up data may be edited and transferred without adversely affecting the operation of the network. As long as the Host program is running, the network operations will continue transparent to the local Host function that is executing. There may however, be some degradation of response times for some functions when large amounts of data are transferred.

### Required Hardware

This section describes the hardware that is required to run the Host program. The Host program was designed for a PC-XT or AT Personal Computer. The minimum system requirements are as follows:

- 256K Random Access Memory
- Real-Time Battery Clock
- 1 - 3 ½ inch disk drive
- Hard Disk
- 1 RS-232 Serial Port
- Monochrome Monitor
There is also a cable that is necessary:
P/N 39363 PC to Gateway cable

The PC to Gateway cable is supplied with the Gateway Card along with a 9 pin DB male to 25 pin DB female adapter. Use the adapter if the serial port on your Personal Computer is a 25 pin DB female adapter.

**Required Software**

The Host System Software is delivered on a 3 ½ inch diskette. Before starting the system, for your own protection, be sure to make a working copy of this distribution diskette! Then store the original distribution diskette in a safe place. Never use the actual distribution diskette for actual work!

The Strong CineNet Host program requires MS-DOS 3.20 (or later version) to operate. The Host distribution diskette contains the following files:

- **HOST.EXE**  Main Program file
- **HOST.OVR**  Program file overlays
- **INSTALL.BAT**  Installation batch file
- **HOST.SET**  Program System Setup file
- **LOGFILE.DAT**  Log Data file*
- **LOGFILE.IXP**  Log Data index file*
- **C100FILE.DAT**  CNA-100 Data file
- **C100FILE.IXP**  CNA-100 Data index file
- **C200FILE.DAT**  CNA-200 Data file
- **C200FILE.IXP**  CNA-200 Data index file

* For future use

**PROGRAM FILES**

The program files consist of HOST.EXE and HOST.OVR. These files contain all the Host system programs and overlays that are necessary at run time. These files must both reside in the active directory when the program is started.

**INSTALLATION BATCH FILE**

This batch file (INSTALL.BAT) is only used to transfer the program and data files from the Strong CineNet Host distribution diskette to the hard disk. Note, it automatically creates a new directory ‘CNAHOST’ on the hard disk.

**SETUP FILE**

The file HOST.SET contains the data entry parameters that configure the operation of the Host program. This file is automatically created by the Host
program (with default values) if it does not exist.

LOG FILE

The Log File consist of two files LOGFILE.DAT and LOGFILE.IXP. The current implementation does not support the use these files. These files should remain in the active directory as not to restrict their implementation in the future.

CNA-100 FILE

The CNA-100 file consists of two files C100FILE.DAT and C100FILE.IXP. All the programs and setup information is contained in the data file (C100FILE.DAT). C100FILE.IXP is the index into the data file. This index file provides the fast access into the large data file. In the event a problem ever occurs with the index file (C100FILE.IXP), it can be recreated from the data file. The Host program will also create these files (empty) if necessary. For further details, see the Screen Description on page 35 for creating the CNA-100 file.

CNA-200 FILE

The CNA-200 file consists of two files C200FILE.DAT and C200FILE.IXP. All the programs and setup information is contained in the data file (C200FILE.DAT). C200FILE.IXP is the index into the data file. This index file provides the fast access into the large data file. In the event a problem ever occurs with the index file (C200FILE.IXP), it can be recreated from the data file. The Host program will also create these files (empty) if necessary. For further details, see the Screen Description on page 36 for creating the CNA-200 file.
Starting the Host Program

Be sure to follow the program installation procedure in the next section before attempting to run the Host program.

The Host System is delivered on a 3 ½ inch diskette. Before starting the system, for your own protection, be sure to make a working copy of this distribution diskette! Then store the original distribution diskette in a safe place. Never use the actual distribution diskette for actual work!

Once the program and data files are installed on your hard disk, the Host program can be automatically started by the AUTOEXEC.BAT file on power up.
Installing the Host Programs

This section describes the program installation procedure. It is assumed that the PC hard disk has been partitioned for MS-DOS 3.20 or later version and configured as a System disk (bootable).

Install the Strong CineNet Host distribution diskette in drive A or B. Then run the installation batch file ‘INSTALL.BAT’. This batch file creates a new directory called ‘CNAHOST’ on the hard disk and then copies the necessary files from the diskette into this new directory. Assume the ‘Source’ drive to be drive A, and the ‘Target’ drive to be hard disk C. To invoke this batch file simply type:

>`A:INSTALL A: C:

If it is desirable for the Host program to automatically start on power up, add the following two lines to your AUTOEXEC.BAT file:

```
CD C:\CNAHOST
HOST.EXE
```

This completes the installation of the program and data files on the hard disk.

Manual Start Up

When manual startup is performed, be sure that the system Clock/Calendar is correct!

The Host program expects to find required files within it’s own (CNAHOST) directory. It is therefore necessary to set the current directory to C:CNAHOST before starting the program. The following illustrates the two manual steps required to start the Host system program:

>`C:CD C:\CNAHOST
>`C:HOST

Terminating the Host Program

The Host program should always be terminated by selecting the ‘$ Exit to DOS’ option on the Main Menu.
Screen Layout and Description

The Host program functions are organized by menus. This menu structure allows the various Host functions to be grouped in an organized fashion. Changing from menu to menu or menu to work screen is accomplished by single key strokes. The operator is prompted with text messages wherever possible to avoid the need to refer to this reference manual once the system is understood.

There is status information displayed at the top of the screen. The top status line is reserved for error and status messages. These messages may be system related problems, such as missing files, or operator entry errors such as trying to enter too large a value for a parameter. In the event that more than one message is active at a time, the messages are each cycled one second at a time until the condition is corrected. These messages, their causes, and corrections are fully described on page 37.

The top status line also displays the Time and Date, and a number representing the network activity. The network activity is indicated by the number of packets of information crossing the interface. This number is incremented each time a packet is transferred (in either direction).
Main Menu

This is the Main Menu and power up screen for the Strong CineNet Host program.

The actual menu selection is made by simply typing a single digit. Control is then transferred to the corresponding menu or screen. Return to this screen can always be accomplished by typing ‘0’ for ‘Home’ on higher level menus or by repeated use of the ‘Esc’ key. The selections on this menu are all higher level menus, and are described as follows:

Selection ‘$’ Terminates the Strong CineNet Host program. Control is transferred to the command mode of the MS-DOS operating system.

Selection ‘1’ Displays the Network Menu.
Selection ‘2’ Displays the CNA-100 Menu.
Selection ‘3’ Displays the CNA-200 Menu.
Selection ‘4’ Displays the Host Menu.

If Selection ‘$’ is taken inadvertently, simply type in the command ‘HOST’.
Network Menu

This menu operates in the same manner as the Main Menu. The selections available at this level are, however, actual system status screens. All system status information is accessed through this screen. The available choices are:

Selection ‘0’  Allows the operator to return to the Main Menu screen.
Selection ‘1’  Displays the Physical Overview screen. This screen shows the Id number of the active remote devices on the Local Synchronous Network (LSN).
Selection ‘2’  Displays the Logical Overview screen. This screen displays the current status, including device name and software version number of the Gateway and each remote device on the LSN.
Selection ‘3’  Displays the Remote Status Monitor screen. This screen displays the show status each CNA-100 and CNA-200.
Selection ‘4’  Displays the LIN Detail status screen. This screen displays the status of each Local I/O Network device for each CNA-100 and CNA-200.

Return to this screen occurs by pressing the ‘Esc’ key.
This is the LSN Physical Overview screen. This screen is used to show the Gateway’s current polling status. The Id’s of the devices are displayed indicating the device is active and responding to the network polls. In the event there is a network problem, this information can be used in conjunction with other status screens on the Host and CNA Automations to isolate the problem.

The Gateway maintains a polling status flag for each of the remote devices (CNA-100s, CNA-200s, RSM-10s, etc.). The refresh logic in this screen requests a reports of these flags every few seconds from the Gateway.
This is the LSN Logical Overview screen. This screen is used to show the Gateway’s current polling status. The device type and software version number are displayed in the corresponding Id box, indicating the device is active and responding to the network polls. If a device stops responding for some reason (loss of power, etc) the device name in the Id box will be highlighted. In the event there is a network problem, this information can be used in conjunction with other status screens on the Host and CNA Automations to isolate the problem.

The Gateway maintains a polling status flag for each of the remote devices (CNA-100s, CNA-200s, RSM-10s, etc.). The refresh logic in this screen requests a reports of these flags every few seconds from the Gateway.
This is the Remote Status Monitor screen. The operator can easily view the current show status of all the CNA Automations from this screen.

This screen operates in the following manner. On a periodic basis, a request is made to the Gateway to report the current polling status. When polling status is received, each of the active CNA Automations are sent a request for data. As the Host receives the data, it is displayed on a separate line for each Automation. The number in the first column corresponds to the device Id number (DIP switch setting) of the CNA Automation. The display fields are described as follows:

Start Mode indicates the automation is set for either a Timed, Clock or Manual start. Timed or Clock start applies to the CNA-200 only. The CNA-100 will always display Manual start.

Show Status indicates the current status of the show. The messages displayed in this field are: Ready, Fault, Running, Interm and Stopped. Ready indicates the Automation is in the ‘Ready to Run’ state. Fault indicates the show was interrupted and has been stopped by a fault. Running indicates the show is running normally. Interm indicates the show is in a programmed intermission. And Stopped indicates the show was stopped with a local or remote stop, or by a fault that has been cleared and is ‘Ready to Resume’.

Prog indicates the Program number the automation is running or ready to run.

Cue indicates the cue number the automation is waiting to see. An ‘L’ after the cue number indicates the automation is interlocked.

Sync Loop indicates what Sync Loop the automation is on.

Active Faults indicates the current fault status of the automation. The messages
that can be displayed in this field are:

- Film Presence or Tension Fault
- Film Motion Fault
- Supervisory Memory Fault
- Start Time Memory Fault
- Program xx-xx Memory Fault
- Learn Time Memory Fault
- Xenon Lamp Failure Fault
- Local I/O Network Fault
- Interlock Fault ID=xx
- Sync Communication Fault ID=xx
- Sync ID=xx Not Ready to Run
- Sync ID=xx Not Ready to Resume
- Sync: Need Master to Resume
- Remote Stop Fault
- Ready to Resume
- Low Battery Fault
- Maintenance Schedule A Fault
- Maintenance Schedule B Fault
- Maintenance Schedule C Fault
- Maintenance Schedule D Fault
- Missed Cue
- Check Cue Learn Times

These fault messages are fully explained in the CNA-200 Cinema Network Automation Reference Manual.
This is the LIN (Local I/O Network) Detail screen. The operator can easily view the status of the devices connected to the LIN for each CNA-100 or CNA-200 Automation (i.e. Booth and Console termination panels). Upon entering this screen the operator is requested to enter the Id number of the automation. The Id of the automation may be determined from the ‘LSN Logical Overview’ screen. When the number is known, enter the number in the ‘Network ID’ field. After entering the Id, a request is made to the Gateway to report the current polling status. When polling status is received, the CNA Automation is sent a request for data. As the Host receives the data, it is displayed on a separate line for each I/O Device. The number in the first column corresponds to the Id number of the I/O Device. The display fields are described as follows:

<table>
<thead>
<tr>
<th>Id</th>
<th>Status</th>
<th>Device</th>
<th>Ver</th>
<th>Chk</th>
<th>Stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Active</td>
<td>Console</td>
<td>121</td>
<td>87</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Active</td>
<td>Booth</td>
<td>121</td>
<td>87</td>
<td>80</td>
</tr>
</tbody>
</table>

*Id* Indicates the Id number of the device.

*Status* This field indicates if the device is ‘Active’. If it is inactive the field is blank.

*Device* Indicates the name of the device. (i.e. Booth, Console, etc.)

*Ver* This is the software ‘version’ number.

*Chk* This field indicates the ‘checksum’ number of the device. The checksum is the arithmetic sum of the contents of the software, which is calculated upon each power up.

*Stat* These are the Polling Status bits expressed as a hexadecimal number.

| $80  | ACTIVE         | (1=RESPONDED, 0=NOT) |
| $40  | WRONG DEVICE TYPE | (1=PROBLEM, 0=OK) |
| $20  | COMMUNICATIONS LINK ERROR | (1=PROBLEM, 0=OK) |
| $10  | NOT RESPONDING REGULARLY ENOUGH | (1=PROBLEM, 0=OK) |
| $08  | NOT DEFINED    | (0=ALWAYS) |
| $04  | EXCHANGING I/O IN PROGRESS  | (1=EXCHANGING I/O, 0=NOT) |
| $02  | REMOTE PARAMETERS SET | (1=DONE, NOT=0) |
| $01  | ID & DEVICE TYPE RECEIVED | (1=DONE, NOT=0) |

The bit definitions indicate that if the remote device is communicating properly the number should read: 10000111 or 87h. If the remote device is ‘Not Responding Well’ the number 97h is displayed and so forth.
Sys  These are the Device System Status bits expressed as a hexadecimal number.

<table>
<thead>
<tr>
<th>Bit</th>
<th>Description</th>
<th>Value</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>$80</td>
<td>PARAMETERS (1=OK, 0=PROBLEM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$40</td>
<td>COMMUNICATION TIMEOUT OCCURRED (1=TIMEOUT, 0=NOT)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The remote device returns the $80 bit to the CNA Automation indicating the setup parameters were received. Normally the number in this field should be 80h. If a communications timeout occurred, the $40 bit is set and the number will read C0h.

Attr  These are the Device Attribute bits expressed as a hexadecimal number. Each type of device will have a unique number (i.e. Booth termination board = 3E, Console termination board = 1E, etc).

Pup  This number represents the number of times the device was powered up or reset.

Err  This field counts the number times the CNA Automation has polled the remote device with no response.

ErrT  This field tracks the number of times the CNA Automation has polled the device with no response.

Tmr  This is the time (in tenths of a second) since last good message was received from the remote device.

Fault  This field displays a fault message to indicate the type of problem that exists. The messages are ‘DevErr’, ‘Not Responding Well’, and ‘Not Responding’. ‘DevErr’ indicates that the CNA Automation does not recognize the remote device. This could be caused by a software version incompatibility. ‘Not Responding Well’ indicates that the remote device is not responding regularly enough. This could be due to a defective remote device or the wiring to it. ‘Not Responding’ indicates a communication timeout condition, meaning that the remote device has not responded in over five seconds.

In the event there is a network problem, this information can be used to isolate the problem.
CNA-100 Menu

This is the CNA-100 Menu for the Strong CineNet Host program.

This menu operates in the same manner as the Main Menu. The selections available at this level are, however, actual work screens. All Set-up and transferring of Set-up data is accessed through this screen. The available choices are:

- **Selection ‘0’** Allows the operator to return to the Main Menu screen.
- **Selection ‘1’** Displays the Set-up CNA-100 Programs screen. This screen allows the user to set-up programs and to create, edit or delete records.
- **Selection ‘2’** Displays the Set-up CNA-100 Supervisory screen. This screen allows the user to configure the system parameters such as time delays and relay contact configuration.
- **Selection ‘3’** Displays the Copy Configuration screen. This screen allows the user to transfer all programs and/or supervisory data from a Host record to a CNA-100 or from a CNA-100 to a Host record.
- **Selection ‘4’** Displays the Copy Individual Programs screen. This screen allows the user to transfer individual programs from a Host record to a remote CNA-100 or from a CNA-100 to a Host record.

Return to this screen occurs by pressing the ‘Esc’ key.
This is the Set-up CNA-100 Programs screen. Upon entry to this screen, the cursor is highlighting the field corresponding to the question. The user has the option to either Edit (E) or Delete (D) a record. The default is Edit (E). Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

In the ‘Record Name:’ field, the user can select a record to edit by scrolling through the list of record names with the ‘Page Up’ and ‘Page Down’ keys or by typing the name of the record (upper case only). A new record can also be created in this field.

Enter the program to edit in the ‘Program Number’ field. Legal entries are 1 through 9.

Move through the fields for each ‘Step’ and select the desired output state with the ‘Space Bar’. Each program can contain up to nine cues. The fields and the range of selections for each field are listed below.

<table>
<thead>
<tr>
<th>Step</th>
<th>Sound</th>
<th>Lens</th>
<th>Lights</th>
<th>Show End</th>
<th>Inter</th>
<th>Curtain Call</th>
<th>Out 1</th>
<th>Out 2</th>
<th>Out 3</th>
<th>Out 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>1</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>2</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>3</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>4</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>5</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>6</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>7</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>8</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>9</td>
<td>Non-Sync</td>
<td>Flat</td>
<td>Up</td>
<td>Off</td>
<td>On</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
<td>Off</td>
</tr>
</tbody>
</table>

To save the changes, press the ‘Esc’ key. The user is prompted with the message
‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a new record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-100 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-100 Menu.
This is the Set-up CNA-100 Supervisory screen. On entry to this screen the cursor is highlighting the ‘Record Name’ field. Select the record to edit using the ‘Page Up’ or ‘Page Down’ keys. Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

Edit field data with the number keys or select messages with the ‘Space Bar’. Minimum and maximum values for each numeric field are displayed in the upper right corner of the screen. The fields and the range of selections for each field are listed below.

**Sound C/O Delay (sec):** 0 - 59  
**Lens C/O Time (sec):** 0 - 9  
**Changeover Pulse (sec):** 0.0 - 1.0  
**Failsafe Delay (sec):** 0 - 10  

**Outputs**

- **Lens:** Contacts: Pulsed/Maintained  
- **Masking:** Contacts: Pulsed/Maintained  
- **Sound:** Contacts: Pulsed/Maintained  
- **House Lights:** Contacts: Pulsed/Maintained, Power-up: Up/Down/Mid 1/Mid 2/No Op  
- **Stage Lights:** Contacts: Pulsed/Maintained, Power-up: Up/Down/Mid 1/Mid 2/No Op  
- **Curtain:** Contacts: Pulsed/Maintained, Power-up: Open/Close/None/No Op, Fault-to: Open/Close/None/No Op  
- **Slide Projector:** Power-up: On/Off/No Op, Fault-to: On/Off/No Op
### Out 1:
- Contacts: Pulsed/Maintained,
- Power-up: On/Off/No Op,
- Fault-to: On/Off/No Op

### Out 2:
- Contacts: Pulsed/Maintained,
- Power-up: On/Off/No Op,
- Fault-to: On/Off/No Op

### Out 3:
- Contacts: Pulsed/Maintained,
- Power-up: On/Off/No Op,
- Fault-to: On/Off/No Op

### Out 4:
- Contacts: Pulsed/Maintained,
- Power-up: On/Off/No Op,
- Fault-to: On/Off/No Op

To save the changes, press the ‘Esc’ key. The user is prompted with the message ‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a new record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-100 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-100 Menu.
This is the Copy CNA-100 Configuration Screen. This screen allows the user to transfer all programs and/or supervisory data from a Host record to a CNA-100 or from a CNA-100 to a Host record. On entry to this screen the cursor will highlight the ‘Copy:’ field. Select the “direction” of the copy by pressing the ‘Space Bar’. Continue by selecting the Id number of the ‘target’ or ‘source’ CNA-100 and the Host record. Scroll through the list of records by using the ‘Page Up’ and ‘Page Down’ keys.

The user may choose to copy Programs, Supervisory data, or both. Use the ‘Space Bar’ to select ‘Yes’ or ‘No’ in each field.

The message ‘Are You Sure you want “Send” data to ID=1 (Y/N)?’ or ‘Are You Sure you want to “Get” data from ID=1 (Y/N)?’ is displayed prior to the copy operation. Selecting ‘N’ aborts the copy and ‘Y’ starts the copy process.

Press ‘Esc’ to exit this screen and return to the CNA-100 Menu.
This is the Copy Individual CNA-100 Programs Screen. This screen allows the user to transfer individual programs from a Host record to a remote CNA-100 or from a CNA-100 to a Host record. On entry to this screen the cursor will highlight the ‘Copy:’ field. Select the “direction” of the copy by pressing the ‘Space Bar’. Continue by selecting the Id number of the ‘target’ or ‘source’ CNA-100 and the Host record. Scroll through the list of records by using the ‘Page Up’ and ‘Page Down’ keys.

The user may choose which Program to copy. Enter data with the number keys.

The message ‘Are You Sure you want “Send” data to ID=1 (Y/N)?’ or ‘Are You Sure you want to “Get” data from ID=1 (Y/N)?’ is displayed prior to the copy operation. Selecting ‘N’ aborts the copy and ‘Y’ starts the copy process.

Press ‘Esc’ to exit this screen and return to the CNA-100 Menu.
This is the CNA-200 Menu for the Strong CineNet Host program. This menu operates in the same manner as the Main Menu. The selections available at this level are, however, actual work screens. All Set-up and transferring of Set-up data is accessed through this screen. The available choices are:

Selection ‘0’ Allows the operator to return to the Main Menu screen.
Selection ‘1’ Displays the Set-up Programs screen. This screen allows the user to set-up programs and to create, edit or delete records.
Selection ‘2’ Displays the Set-up Clock Start Times screen. This screen allows the user to create, edit or view up to ten clock start times for each day of the week.
Selection ‘3’ Displays the Set-up Cue Learn Times screen. This screen allows the user to create, edit or view up to twenty cue learn times for each program.
Selection ‘4’ Displays the Set-up Supervisory screen. This screen allows the user to configure the system parameters such as time delays and relay contact configuration.
Selection ‘5’ Displays the Copy Configuration screen. This screen allows the user to transfer Programs, Supervisory data, Learn Times and Clock Start Times from a Host record to a CNA-200 or from a CNA-200 to a Host record.
Selection ‘6’ Displays the Copy Individual Programs screen. This screen allows the user to transfer individual programs from a Host record to a remote CNA-200 or from a CNA-200 to a Host record.

Return to this screen occurs by pressing the ‘Esc’ key.
This is the Set-up CNA-200 Programs screen. Upon entry to this screen, the cursor is highlighting the field corresponding to the question. The user has the option to either Edit (E) or Delete (D) a record. The default is Edit (E). Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

In the ‘Record Name:’ field, the user can select a record to edit by scrolling through the list of record names with the ‘Page Up’ and ‘Page Down’ keys or by typing the name of the record (upper case only). A new record can also be created in this field.

Enter the program to edit in the ‘Program Number’ field. Legal entries are 1 through 9.

Special function keys and their uses are displayed at the bottom of the screen. Use these keys and key combinations to create, edit and view programs.

To save the changes, press the ‘Esc’ key. The user is prompted with the message ‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a new record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-200 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Set-up CNA-200 Clock Start Times screen. Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

In the ‘Record Name:’ field, the user can select a record to edit by scrolling through the list of record names with the ‘Page Up’ and ‘Page Down’ keys or by typing the name of the record (upper case only). A new record can also be created in this field. Use the ‘Space Bar’ to select the Day of the Week.

Enter the show Start Times in chronological order. Select a Program to run with each Start Time and enter a movie title up to 14 characters long. The movie title is optional.

To save the changes, press the ‘Esc’ key. The user is prompted with the message ‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a new record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-200 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Set-up CNA-200 Learn Times screen. Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

In the ‘Record Name:’ field, the user can select a record to edit by scrolling through the list of record names with the ‘Page Up’ and ‘Page Down’ keys or by typing the name of the record (upper case only). A new record can also be created in this field.

Select a Program number to edit. Each program can store up to twenty cue times. These times can be viewed and edited. Edit the learn times with the number keys.

To save the changes, press the ‘Esc’ key. The user is prompted with the message ‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a new record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-200 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Set-up CNA-200 Supervisory screen. On entry to this screen the cursor is highlighting the ‘Record Name’ field. Select the record to edit using the ‘Page Up’ or ‘Page Down’ keys. Press the ‘Enter’ key or the cursor down key to move forward to the next field. Press the cursor up key to move back to a previous field.

Edit field data with the number keys or select messages with the ‘Space Bar’. Minimum and maximum values for each numeric field are displayed in the upper right corner of the screen. The fields and the range of selections for each field are listed below.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound C/O Delay (sec)</td>
<td>0</td>
<td>59</td>
</tr>
<tr>
<td>Lens C/O Time (sec)</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Changeover Pulse (sec)</td>
<td>0.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Failsafe Delay (sec)</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Cue Factor Default</td>
<td>0.001</td>
<td>0.999</td>
</tr>
<tr>
<td>Password #1</td>
<td>00</td>
<td>99</td>
</tr>
<tr>
<td>Cue Learn</td>
<td>Manual/Auto</td>
<td></td>
</tr>
<tr>
<td>Timed Start</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Clock Start</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Check Cue Fault</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Missed Cue Fault</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Fault Defeat</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Schedule A</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule B</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule C</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule D</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Time Format</td>
<td>12Hr/24Hr</td>
<td></td>
</tr>
</tbody>
</table>

Enters/Set-up CNA-200 Supervisory screen.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
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<td>59</td>
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<td>Lens C/O Time (sec)</td>
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<td>9</td>
</tr>
<tr>
<td>Changeover Pulse (sec)</td>
<td>0.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Failsafe Delay (sec)</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Cue Factor Default</td>
<td>0.001</td>
<td>0.999</td>
</tr>
<tr>
<td>Password #1</td>
<td>00</td>
<td>99</td>
</tr>
<tr>
<td>Cue Learn</td>
<td>Manual/Auto</td>
<td></td>
</tr>
<tr>
<td>Timed Start</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Clock Start</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Check Cue Fault</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Missed Cue Fault</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Fault Defeat</td>
<td>Enabled/Disabled</td>
<td></td>
</tr>
<tr>
<td>Schedule A</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule B</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule C</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Schedule D</td>
<td>0</td>
<td>65,535 (hrs)</td>
</tr>
<tr>
<td>Time Format</td>
<td>12Hr/24Hr</td>
<td></td>
</tr>
</tbody>
</table>
Outputs

**Lens:** Contacts: Pulsed/Maintained  
**Masking:** Contacts: Pulsed/Maintained  
**Sound:** Contacts: Pulsed/Maintained  
**House Lights:** Contacts: Pulsed/Maintained,  
Power-up: Up/Down/Mid 1/Mid 2/No Op  
**Stage Lights:** Contacts: Pulsed/Maintained,  
Power-up: Up/Down/Mid 1/Mid 2/No Op  
**Curtain:** Contacts: Pulsed/Maintained,  
Power-up: Open/Close/None/No Op,  
Fault-to: Open/Close/None/No Op  
**Slide Projector:** Power-up: On/Off/No Op,  
Fault-to: On/Off/No Op  
**Out 1:** Contacts: Pulsed/Maintained,  
Power-up: On/Off/No Op,  
Fault-to: On/Off/No Op  
**Out 2:** Contacts: Pulsed/Maintained,  
Power-up: On/Off/No Op,  
Fault-to: On/Off/No Op  
**Out 3:** Contacts: Pulsed/Maintained,  
Power-up: On/Off/No Op,  
Fault-to: On/Off/No Op  
**Out 4:** Contacts: Pulsed/Maintained,  
Power-up: On/Off/No Op,  
Fault-to: On/Off/No Op  

To save the changes, press the ‘Esc’ key. The user is prompted with the message ‘Save Changes? (Y/N)?’ Press ‘Y’ and the user is prompted with the message ‘Save To’. Press ‘Enter’ to save the current record or type in a *new* record name. The record name may up to twenty (20) characters long and must be in upper case.

In the upper right corner of the display, a status of CNA-200 records are displayed. This is only status information and does not affect the operation of the screen.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Copy CNA-200 Configuration Screen. This screen allows the user to transfer Programs, Supervisory data, Learn Times, and/or Clock Start Times from a Host record to a CNA-200 or from a CNA-200 to a Host record. On entry to this screen the cursor will highlight the ‘Copy:’ field. Select the “direction” of the copy by pressing the ‘Space Bar’. Continue by selecting the Id number of the ‘target’ or ‘source’ CNA-200 and the Host record. Scroll through the list of records by using the ‘Page Up’ and ‘Page Down’ keys.

The user may choose to copy Programs, Supervisory, Start Times or Learn Times. Use the ‘Space Bar’ to select ‘Yes’ or ‘No’ in each field.

The message ‘Are You Sure you want “Send” data to ID=1 (Y/N)?’ or ‘Are You Sure you want to “Get” data from ID=1 (Y/N)?’ is displayed prior to the copy operation. Selecting ‘N’ aborts the copy and ‘Y’ starts the copy process.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Copy Individual CNA-200 Programs Screen. This screen allows the user to transfer individual Programs with or without Learn Times from a Host record to a remote CNA-200 or from a CNA-200 to a Host record. On entry to this screen the cursor will highlight the ‘Copy:’ field. Select the “direction” of the copy by pressing the ‘Space Bar’. Continue by selecting the Id number of the ‘target’ or ‘source’ CNA-200 and the Host record. Scroll through the list of records by using the ‘Page Up’ and ‘Page Down’ keys.

The user may choose which Program to copy. Enter data with the number keys. Select to copy Learn Times with the ‘Space Bar’.

The message ‘Are You Sure you want “Send” data to ID=1 (Y/N)?’ or ‘Are You Sure you want to “Get” data from ID=1 (Y/N)?’ is displayed prior to the copy operation. Selecting ‘N’ aborts the copy and ‘Y’ starts the copy process.

Press ‘Esc’ to exit this screen and return to the CNA-200 Menu.
This is the Host Menu Screen. This operates in the same manner as the Main Menu. The selections available at this level are, however, actual work screens. All normal system maintenance is activated through this screen. The available choices are:

Selection ‘0’ Allows the operator to return to the Main Menu screen.
Selection ‘1’ Displays the Host System Configuration screen. This screen allows the System configurable data to be edited and viewed.
Selection ‘2’ Creates the Log File if it does not exist. It also builds the Log Index file from the Log File if necessary.
Selection ‘3’ Creates the CNA-100 Program File if it does not exist. It also builds the CNA-100 Index File from the CNA-100 Program File if necessary.
Selection ‘4’ Creates the CNA-200 Program File if it does not exist. It also builds the CNA-200 Index File from the CNA-200 Program File if necessary.

Return to this screen occurs at the completion of the local function or by pressing the ‘Esc’ key.
This screen allows the operator to configure the serial port and IRQ. The valid selections for the serial port are Com1, Com2, Com3, Com4 or OFF. The valid selections for the IRQ are 0 through 7.

This screen also allows the operator to configure the Host as a “Primary Host” or “Secondary Host”. To configure the Host as a Primary, set the Gateway Card LSN Id to ‘0’. To configure as a Secondary, set the LSN Id to ‘1 through 63’. A Secondary Host will typically be used by the technician’s laptop computer for initial setting up and troubleshooting.

To select either 12 hour mode or 24 hour mode, press the ‘Space Bar’ when the ‘Time Format’ field is highlighted.

Press the ‘Esc’ key at any time to abort the screen. Press the ‘Enter’ key at the ‘ENTER/CHANGE?’ prompt to save changes and return to the Host Menu.
This screen allows the operator to create the Log Files ‘LOGFILE.DAT’ and ‘LOGFILE.IXP’ when they do not exist. This screen will also automatically create the index file ‘LOGFILE.IXP’ based on the data in the ‘LOGFILE.DAT’.

This screen will not normally be used, in fact when both files are present on the disk, this screen will not do anything. It is provided for system initialization and as a utility for rebuilding the Log Index File should it ever become necessary.

In the event a problem ever develops with the index file (LOGFILE.IXP), it may be deleted. This screen will automatically recreate it from the data file.
This screen allows the operator to create the Log Files ‘C100FILE.DAT’ and ‘C100FILE.IXP’ when they do not exist. This screen will also automatically create the index file ‘C100FILE.IXP’ based on the data in the ‘C100FILE.DAT’.

This screen will not normally be used, in fact when both files are present on the disk, this screen will not do anything. It is provided for system initialization and as a utility for rebuilding the CNA-100 Index File should it ever become necessary.

It is helpful to understand the purpose of these two files. The file ‘C100FILE.DAT’ consists of records for each CNA-100 in the file. Each record contains the Programs and Supervisory set-up parameters for that CNA-100. The file ‘C100FILE.IXP’ simply provides an index to the data contained in the ‘C100FILE.DAT’. The structure of the data file allows the index file to be recreated based on the information in the data file.

In the event a problem ever develops with the index file (C100FILE.IXP), it may be deleted. This screen will automatically recreate it from the data file.

In the event a problem ever develops with the data file (C100FILE.DAT), it must be restored from a recent backup. Therefore perform backups frequently!
This screen allows the operator to create the Log Files ‘C200FILE.DAT’ and ‘C200FILE.IXP’ when they do not exist. This screen will also automatically create the index file ‘C200FILE.IXP’ based on the data in the ‘C200FILE.DAT’.

This screen will not normally be used, in fact when both files are present on the disk, this screen will not do anything. It is provided for system initialization and as a utility for rebuilding the CNA-200 Index File should it ever become necessary.

It is helpful to understand the purpose of these two files. The file ‘C200FILE.DAT’ consists of records for each CNA-200 in the file. Each record contains the Programs and Supervisory set-up parameters for that CNA-200. The file ‘C200FILE.IXP’ simply provides an index to the data contained in the ‘C200FILE.DAT’. The structure of the data file allows the index file to be recreated based on the information in the data file.

In the event a problem ever develops with the index file (C200FILE.IXP), it may be deleted. This screen will automatically recreate it from the data file.

In the event a problem ever develops with the data file (C200FILE.DAT), it must be restored from a recent backup. Therefore perform backups frequently!
Status and Error Messages

The top line of the Host monitor screen is reserved for displaying status and error messages. These messages, their causes and corrections are described here.

**CAN’T OPEN LOG FILE** - The Log File cannot be opened. Check to see that both the index (LOGFILE.IXP) and data file (LOGFILE.DAT) are present in the CNAHOST directory. See page 34 for details for creating the Log File.

**CAN’T OPEN SETUP FILE** - The file HOST.SET cannot be opened. This file simply contains the System Setup information. Delete the file and re-enter the data on the Host System Configuration screen as described on page 33.

**CAN’T OPEN CNA-100 FILE** - The CNA-100 file cannot be opened. Check to see that both the index (C100FILE.IXP) and data file (C100FILE.DAT) are present in the CNAHOST directory. See page 35 for details for creating the CNA-100 File or restore BOTH files from a recent backup.

**CAN’T OPEN CNA-200 FILE** - The CNA-200 file cannot be opened. Check to see that both the index (C200FILE.IXP) and data file (C200FILE.DAT) are present in the CNAHOST directory. See page 36 for details for creating the CNA-200 File or restore BOTH files from a recent backup.

**KEYBOARD ENTRY ERROR** - The operator has tried to enter too high or too low a value for the current data field. Clear the field and enter a valid number.

**DRIVE N FULL** - There is no more room on this drive. The file(s) residing on this drive require more disk space than is available. In most cases the problem is due to too many records in the CNA-100 or CNA-200 Data File. Free up space on this drive.

**LOGFILE.IXP ERROR** - There is an error reading the Log Data file. This could be a mismatch due to a corrupted index file. If the problem persists, delete the ‘LOGFILE.IXP’ file and re-create it as described on page 34.

**C100FILE.IXP ERROR** - There is an error reading the CNA-100 Data file. This could be a mismatch due to a corrupted index file. If the problem persists, delete the ‘C100FILE.IXP’ file and re-create it as described on page 35.

**C200FILE.IXP ERROR** - There is an error reading the CNA-200 Data file. This could be a mismatch due to a corrupted index file. If the problem persists, delete the ‘C200FILE.IXP’ file and re-create it as described on page 36.

**PROGRAM FULL / DELETE STEPS** - The CNA-200 Program is full. This is most likely due to an extraneous instruction on the last line of the program. Page down through the program and delete the unwanted instruction.