Shownet

Configuration

Strand Lighting

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Default Console Configuration. Section 1

Always refer to the file RELEASE.TXT for the latest information about the operation and configuration of the console. This document can be viewed by selecting the MORE display key and the NOTES soft key.

This section covers the level of network operation that can be achieved using the default configuration after installing Genius Pro software.

Within this document the SN100 series of network nodes are referred to as SN10x. The term “CONSOLE” will be used to describe all of the 500 series of Strand Lighting desks, including the high power options with the **i** suffix.

All consoles and SN10x network nodes must have the same version of software or compatible versions of software.

This document also assumes a knowledge of simple DOS operating system commands including the use of the EDIT programme.

Connecting to the network.

Ensure that Networker application has been installed. Press the REPORT key and the list of installed applications can be seen at the bottom of the page.

After installing new operating software, or clearing the entire show, the network will default to the ON state. To enable or disable the network select SETUP then move to page 3 using the MORE softkey. The network can be turned ON or OFF if the text is coloured green.

If the option is OFF and the colour is yellow the network has failed to initialised and can not be turned on. Check the configuration of the network card. See section 9.

Checking the console configuration

The network configuration on a console can be checked at any time. Press the REPORT key and the console network configuration is displayed. The default address and node name for a console is always different to the default address and node name for a SN10x.

An additional screen is available by pressing the NET DIAG softkey. This display shows the status of the console and also information on every node connected and enabled on the network.

RECOVER.BAT

Before the subject of network configuration can be covered in this manual it is necessary to consider the effect of an out of date configuration on the operation of the console.

When a new version of operating software is installed the current configuration files 220NET.CFG and 220NODE.CFG are renamed with the extension .OLD.

In software version 1.5 or later the text file RELEASE.TXT informed the user that a program called RECOVER.BAT could be created to ensure that these files are preserved after the installation of new software.

RECOVER.BAT is run at the end of an installation of new operating software. The program will only run when the software is loaded from within the Genius Plus or Genius Pro using the key presses ARCHIVE - SOFT - OPER - LOAD. If the software is loaded from DOS using the command GPINSTAL then the program will not be run.

RECOVER.BAT usually contains the DOS commands :-

```
COPY  220NET.OLD  220NET.CFG  >NUL
COPY  220NODE.OLD  220NODE.CFG  >NUL
```

This file should be removed from the C:\220os directory before Genius Pro is installed then the new configuration files can be modified if necessary. In case this has not been done a short paragraph, in each of the following sections, will explain the effect of recovering an old configuration on the network operation of Genius Pro.

One console and one SN10x only.

After installation of Genius Pro software a console can communicate with a single SN10x with no setting up required. All of the default values of the configuration files in the console and the SN10x are correct.

A customer who has used a console with Genius Plus and a single SN10x may have a RECOVER.BAT file. When Genius Pro is installed the original Genius Plus configuration files are preserved. Genius Pro will use the original files and continue to work correctly providing there are no additions to the network.

One console and two or more SN10x.

A customer with a single console and more than one SN10x may also choose to leave the default configuration.

The REPORT screen option NET-DIAG (soft-key) will only show that one SN10x has been found. The display will report the error "Duplicate node found".

This error will not affect the transmission of DMX and Video to each of the SN10x devices.

220NET.CFG

Using Genius Plus software version 1.5 every network node required a file 220NET.CFG which was used as an "Address book" for other network hardware. It lists the node name, node type and the node address.

This file still exists in Genius Pro but all entries are preceded by a # symbol so that the example entries are not used.

When each node with Genius Pro software is connected to the Shownet network it sends a regular broadcast to every other node giving it's network address and it's node name.

The other nodes on the network receive this message and build a temporary address book. This is lost when the desks are switched off. This list of nodes on the network can be examined by looking on the REMOTE display then selecting the NET DIAG soft key.

This list only shows the connected nodes and this may not be a complete list of hardware in the Shownet installation. If the 220NET.CFG file is created and lists all hardware then the NET DIAG screen shows all of the nodes and whether the node is ON LINE or OFF LINE.

The SN100 no longer uses a 220NET.CFG file. If this file exists then it is deleted as part of the installation process.

Customised Console Configuration. Section 2

This section covers the Shownet connection from a console to a PC Backup or to one or more additional consoles.

Customers who have SERVER application installed on their consoles have the option of a LOGIN screen. This section has been split into two halves to cover the configuration with and without the LOGIN screen.

LOGIN screen disabled.

The following sections explain how to configure consoles with the SERVER login screen off.

To Configure a Main console

The configuration file is called 220NODE.CFG.

To make changes to this file exit from Genius Pro select the SETUP screen then press the EXIT soft key. When the message telling the user that it is safe to switch off the console appear type the following.

```
PROMPT $P$G  <enter>
```

The standard DOS cursor will appear

```
C:\220os>_
```

To edit the configuration file :

Type EDIT 220NODE.CFG <enter> to edit the file.
Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

This file is vital to the correct operation of the console on the Shownet Network. Only the lines used when the network login screen is not required are listed below and the full file can be found in Appendix A.

my_nodeaddr = 193.195.164.68

This is the unique address of the network node. Only the last digits (0 to 255) are read by the nodes. The first 9 digits are the Strand Lighting IP address for Internet access.

The main desk can remain at the default address.

If RECOVER.BAT (See section 1) has been used then the line **my_ip** in the 220NODE.CFG for Genius Plus versions 1.5 to 1.55 has the same function as **my_nodeaddr**. Genius Pro will use this old name and its value so there is no need to make corrections.

netmask = 255.255.255.0

This line ensures that only the last digits are used to identify each node. This line has not changed in any software version.

console_addr = 193.195.164.68

This line is used to identify the address of the main console. Since this console is being used as the main console the **console_addr** must match the **my_nodeaddr .**

If RECOVER.BAT has been used then the line **console_ip** in the 220NODE.CFG for Genius Plus versions 1.55 has the same function as **console_addr**. Genius Pro will use this old line and its value so there is no need to make corrections.

my_nodetype = 530

The type is displayed on the NET DIAG screen. It is critical when the desk is being used as a remote console. The data sent from the main console to the remote changes depending on the console type.

This line is new to Genius Pro and if missing the console will auto-detect the type. The only console type where auto-detect is unable to work is the 550. Details about the extra submasters are not available when the configuration is read and the console will believe it is a 530.

my_nodename = console1

This name is displayed on the NET DIAG screen. Each console and SN10x node must have a unique name. Any name can be used providing the name is not longer that 8 characters.

This line is new to Genius Pro and if missing, or longer than 8 characters, the console will use the default name **Console.**

login_display = 0

The login screen is disabled when set to 0.

This line is new to Genius Pro and if missing the console default is to disable the login display.

on_line = 1

This value must be set to 1 if the console is to communicate with other devices on the network. If set to 0 the desk will operate as an Off Line Editor.

This line is new to Genius Pro and if missing the console default is to set a value of 1.

backup_mode = 2

When the login display is disabled this line could cause serious problems if incorrectly set.
Main desk = 2
Backup Desk = 1
Remote Desk = 0

If two desks are setup as main desks by mistake they will both transmit network data. The video and DMX output from the SN100 will be corrupted. Lights will flash and video pictures will be a mixture of the two consoles.

If the line is missing the console will default as a main desk.

If a desk is setup as a backup by mistake the network output will be disabled.

If the desk is setup as a remote by mistake the desk will behave as a main desk. A remote desk requires additional configuration which will be detailed in a later section.

Genius Plus version 1.55 used a **backup_mode** option but the values were different. Main desk =0. If a RECOVER.BAT file has been used the desk will be configured as a remote desk. The remote desk requires additional configuration so the desk will operate as a main desk.

All other lines are used by the LOGIN screen only.

To Configure a Backup console

To configure the backup console edit the file 220NODE.CFG as described in the configuration instructions for the main desk.

There are four basic steps required to setup a console as a backup console. All other options should be configured as the main console.

1. The configuration line **my_nodeaddr** in the file 220NODE.CFG must be set to a unique number.
2. The configuration line **backup_mode** in the file 220NODE.CFG must be set to “1”.
3. The configuration line **my_nodename** must be unique. Any 8 digit name can be used.
4. The configuration line **console_addr** must be set to the address of the main console.

To Configure a Remote console

There are five basic steps required to setup a console as a remote console.

1. The configuration line **my_nodeaddr** in the file 220NODE.CFG must be set to a unique number.

2. The configuration line **backup_mode** in the file 220NODE.CFG must be set to "0".

3. The configuration line **my_nodename** must be unique. The standard name for a remote is **console2** however any 8 digit name can be used.

4. The configuration line **console_addr** must be set to the address of the main console.

5. A file must be created in the directory C:\220os called REMOTE.CFG. This file is only required for Remote Consoles and the main Genius Pro program will search for and delete this file so an extra program must be created by the user.

   Create a new file called USERINIT.BAT in the C:\220os directory and write the following line:

   ```
   @ECHO  >REMOTE.CFG
   ```

LOGIN screen enabled.

The following sections explain how to configure consoles with the SERVER login screen on.

All of the entries listed in the previous sections which do not use the login screens must still be included but these lines will not be repeated unless there is more information specifically for the login screen

The login screen can be used to select a Main, Backup or a Remote console. The configuration is usually set to default to Main desk operation.

Exit from the Genius Pro software to DOS then edit the file 220NODE.CFG as described at the start of section 2.

The network address and node name must be unique.

login_display = 1

This line will enable the login display only if Server application is installed. .

file_server_addr = 0.0.0.0

Network address of the Console or PC which is to be used as a central store for all show files.

on_line = 1

This line no longer forces the console to be On-Line or Off Line. Instead it sets the starting option on the login screen. This can be changed whilst on the login screen.

backup_mode = 2

This line no longer forces the console to be Main, Backup or Remote. Instead it sets the starting option on the login screen. This can be changed whilst on the login screen.

user_show = 0

The user can select one of five show files which can be entered into the .USR file.

If a value 1 to 5 is entered the console is not forced to load the file. The file is highlighted on the login screen and the user can choose to select another file or no file before the login.

User_name =

Each person who will use the console can have a personal desk setup. These are created by copying the file ADMIN.USR to a new file "*new-name*.USR" from the DOS prompt.

This line does not force the console to load the selected user. Instead it sets the starting option on the login screen. This can be changed whilst on the login screen.

user_pw =

Each user can have a password. The passwords are stored in the .USR files.

This line allows a default password to be entered automatically for the default user name.

The file 220NODE.CFG in the SN10x network node covers the Shownet network configuration plus the DMX connector configuration. This chapter only covers the Shownet configuration.

RECOVER.BAT

Before installing the new SN10x software it is necessary to consider the effect of an out of date configuration on the operation of the network node.

SN10x software for Genius Pro 2.0 will not operate correctly with a configuration written for Genius Plus version 1.5 or version 1.55

RECOVER.BAT can be created by the user and it is run at the end of an installation of new operating software.

The program contains the DOS commands :-

```
COPY  220NODE.OLD  220NODE.CFG  >NUL
```

This program should be removed or renamed before Genius Pro is installed.

To search for and rename this program first connect a keyboard using the keyboard adapter which came with the SN10x.
Type the following :-

- CTRL X to exit to DOS.
- DIR/W <enter> to view the content of the working directory.
- RENAME RECOVER.BAT RECOVER.OLD <enter> If the program exists.

It can be renamed back to RECOVER.BAT after installation to ensure the settings are recovered if new Genius Pro software is installed.

Installing Genius Pro in a SN100 & SN102.

Insert the SN10x operating software disk into the drive on the SN100 or SN102 then power on the console.

The software will load automatically then give a two tone alarm when installation has been completed successfully. Power the SN10x off then on again to use the new software.

Unless a RECOVER.BAT program exists the SN10x will have a default configuration.

SN10x default configuration.

If a customer has only one SN10x the configuration does not need to be changed. The default configuration in the SN10x will function correctly on the Shownet network.

If a customer has two or more SN10x the default configuration will function correctly however there are two problems.

1. Select the REPORT screen then the NET-DIAG soft key. Only one SN10x will appear on the list of connected network nodes and an error “Duplicate node”.

2. Shownet configuration software allows a new DMX configuration to be transferred via Shownet network to each SN10x. To achieve this all SN10x devices must have a unique network address.

SN100 and SN102 configuration.

To change the configuration of an SN100 or SN102 first connect a keyboard using the keyboard adapter which came with the SN10x.

Insert DOS disk 1 in the floppy drive. A set of DOS install disks were supplied with the SN10x.

Exit from the SN10x program to DOS using CTRL X.
The EDIT command is on the floppy drive. Type the command PATH=A: <enter>

Type EDIT 220NODE.CFG <enter> to edit the file.
Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

my_nodeaddr = 193.195.164.70
This is the unique address of the network node. Only the last digits (0 to 255) are read by the nodes. The first 9 digits are the Strand Lighting IP address for Internet access.

netmask = 255.255.255.0
This line ensures that only the last digits are used to identify each node. Do not change this line.

my_nodetype = SN100
The type is displayed on the NET DIAG screen.

my_nodename = SN100_1
This name is displayed on the NET DIAG screen. Each SN10x must have a unique name. Any name can be used providing the name is not longer that 8 characters.

The DMX configuration is explained in section 5.

Installing SN103 or SN104 software from an SN100 or SN102.

SN103 and SN104 network nodes do not have a floppy disk, video output or keyboard connection. New software must be down loaded via the Shownet network from a PC or from a SN100 or SN102.

The DMX configuration can also be downloaded using the Shownet Configuration Software running on a Windows 95 PC or using a SN100 or SN102 console.

Details are given in the Networker Operators Manual in the chapter "Networker for SN10X Software Installation".

The sub section "Remote Installation from a SN100 / SN102" will not work correctly because all SN10x network nodes operate without a keyboard map and the "\" key can not be used.

Version 2.0a software for the SN10x allows a "/" key to be used in the place of a "\".

To download new software first run the SN10x as usual.
Press CTRL X to exit to DOS.

Insert the SN10x install floppy disk in the drive. Make sure the DOS prompt identified the current location as C:\220os and type the following lines.

```
copy  A:/remsetup.*  D:/
ioftpdos LOGIN nodeid PUT d:/remsetup.z  d:/remsetup.z LOGOUT
ioftpdos LOGIN nodeid PUT d:/remsetup.ins  c:/220os/install.bat LOGOUT
```

Replace *nodeid* with the node address of the SN10x to be loaded.

Installing the TCP/IP for Windows 95.

Before the software can be downloaded make sure the TCPIP driver has been installed and that you know the IP address of the PC.

To install and configure the driver click on START on the toolbar.

Click on menu option SETTINGS.

Click on menu option CONTROL PANEL.

Click on the Network icon.

Ensure the "Configuration" card has been selected at the top of the window. The windows should already include a configuration for the network card hardware. This would have been auto-detected when the card was installed. If the list does not include TCP/IP as an option it must be added.

Click on ADD, then select the icon for PROTOCOL then click ADD again. Select "Microsoft" in the left window and the option TCP/IP will appear on the right window. Select this option and click on OK.

If it has not been installed before Windows 95 will ask for the install disks or CD ROM.

TCP/IP now appears on the main configuration list. Select this icon and click on properties.

Enter a unique IP address. This can start 193.195.164 to match the shownet network. The final number can be between 1 and 254 but must not conflict with a shownet node.

The netmask must be 255.255.255.0

Select OK then exit from the program.

Download new software.

Connect the PC to the shownet network.

Open a DOS box then create a temporary directory on the Windows 95 PC and copy the file IOFTP32.EXE to this directory.

In same temporary directory create new file 220NODE.CFG.

Type EDIT 220NODE.CFG <enter> to edit the file.
Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

The 220NODE.CFG file must contain the lines.

```
my_nodeaddr = 193.195.164.??
my_nodetype = IOFTP
my_nodename = IOFTP
netmask     = 255.255.255.0
```

Where the line my_nodeaddr is the IP address of the PC.

From within the temporary directory enter the following commands.

```
IOFTP32  who
```

This program will list every node on the network including its node name and IP address.

Next type these commands to transfer the files.

```
ioftp32 LOGIN nodeid PUT a:\remsetup.z  d:\remsetup.z LOGOUT
ioftp32 LOGIN nodeid PUT a:\remsetup.ins  c:\220os\install.bat LOGOUT
```

Replace *nodeid* with the IP address of the SN10x to be loaded.

Within 5 minutes the SN10x will exit from the program, install the new files and re-start the program.

Copying a SN10x 220NODE.CFG file from Windows 95.

All SN103 and SN104 units are supplied from the factory with a default IP address of 193.195.164.70 and a default node name of SN100_1.

Before the configuration can be transmitted by Shownet Configuration Software each unit must be given a unique IP address and node name.

One at a time each SN10x must be conected and a new 220NODE.CFG file created. This is done by copying a new file from a PC.

Follow the procedure for loading installing the TCP/IP driver in Windows 95. Copy the IOFTP32.EXE file to the temporary directory and create a 220node.cfg file. Details in the section above.

Create a new file called 220NODE.SN. This should be the replacement file for the 220NODE.CFG in the SN10x and should have the new IP address and new node name.

Create a second file called INSTALL.BAT. This file must contain the single line.

```
OS
```

Copy the files to the SN10x using the following commands.

```
ioftp32 LOGIN SN100_1 PUT 220node.sn c:\220os\220node.cfg LOGOUT
ioftp32 LOGIN SN100_1 PUT install.bat c:\220os\install.bat LOGOUT
```

The SN100 will power off then on again and load the new configuration.

PC Backup Section 4

This section covers the installation and configuration of PC backup software in a PC.

The PC backup software comes with a Genius Pro operating software disk. A utilities disk, a keyboard template, a dongle and a manual.

The PC backup must match the main console. A main console with a pentium must be supported by a PC with a pentium. The PC must also have a minimum of 8Mbytes of memory.

If two or more video displays are being used on the main desk the PC must be fitted with a Strand dual VDU card in place of the supplied video card.

Software installation.

Insert the Genius Operating software disk in the PC and type the following commands.

A:\GPINSTAL <enter>

The console will ask you to enter the directory for the program. The default is C:\GENIUSP

The console will ask you to enter the directory for the saved show files. The default is C:\SHOWS.

If you choose to enter a new directory the software can not create a new directory more than one level below the root directory.

C:\level1	Can be created by the GPINSTAL program.
C:\level1\level2	Can not be created by GPINSTAL program.

To solve this problem create the directory first using the commands
MD C:\level1 <enter>
MD C:\level1\level2 <enter>

Now the required directory can be entered in the GPINSTAL program.

Answer YES when the GPINSTAL program asks if the PC is to be used as a PC Backup installation.

The PC will return to DOS after installation.

Install the Dongle on the PC parallel port then type GENIUSP<enter> to start the program.

If the program fails to run and gives a warning “EXIT code 8” the program has not found enough memory. Remove the line which includes SMARTDRV.EXE from the program **C:\AUTOEXEC.BAT** and switch the computer off then back on before trying again.

Next install the Utilities disk. Insert the disk in the floppy drive then select the Archive screen using CTRL F8. Select SOFT using F6. Select OPER using F5. Select LOAD using F1 and confirm by pressing F1 again.

Application installation.

The dongle will enable 100 channels and the networker application. To increase the facilities to be the same as the main desk additional application software must be purchased.

The additional application disks must be registered and a password will be issued by the software registration centre. The console security number held within the dongle must be entered on the registration form. Press CTRL F12 to view the security number on the REPORT screen.

PC Backup configuration.

To configure the PC edit the file 220NODE.CFG.
Type EDIT 220NODE.CFG <enter> to edit the file.
Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

There are five basic steps required to setup a PC as a backup. All other options should be configured as described in section 2 under the headings “Login screen off” “To configure a main console”

1. The configuration line **my_nodeaddr** in the file **220NODE.CFG** must be set to a unique number.

2. The configuration line **backup_mode** in the file **220NODE.CFG** must be set to “1”.

3. The configuration line **my_nodename** must be unique. Any 8 digit name can be used.

4. The configuration line **console_addr** must be set to the address of the main console.

5. The configuration line **my_nodetype** must be set to **BACKUP_PC**

The login screen can only be enabled if SERVER application software has been registered on the PC.

Configure the login options in the way described in section 2 under the headings “Login screen on” “To configure a main console

Transmission of DMX. Section 5.

Genius Plus version 1.5 supports 1,536 frames of DMX data.

Genius Pro version 2.0 supports 4,096 frames of DMX data.

All SN10x network nodes can all be setup to transmit or receive DMX data.

All consoles must have Networker application software installed before the console can transmit DMX out. Communiqué Pro application software must be also be installed before the console can receive DMX in.

Before a console can transmit DMX via the network the SETUP option NETWORK must be set to ON. If the console does not have networker application software, or the console has not found a working network card, the option appears yellow and can not be turned ON. Only green setup options can be changed.

DMX is transmitted on Shownet as a broadcast message

The transmission can be compared to a train with 4096 carriages. The network nodes can be setup to place data onto any range of carriages on the train or can read the data held in any range of carriages.

Each carriage is a NET SLOT. If a range of DMX values are to be transmitted or received the NET SLOT setup field refers to the first slot in the range.

Console output.

The operator must choose which output levels are to be transmitted through the Shownet Network. The network section of the SETUP pages are shown below.

Setup example (Genius Plus version 1.5)

	Dimmer	Start	End	Net Slot
DMX1 (NET)	OUT	1	512	1
DMX2 (NET)	OUT	513	1024	513
DMX3 (NET)	OFF	1025	1536	1025

Setup example (Genius Pro version 2.0)

	Dimmer	Start	End	Net Slot
NET 1	DMX OUT	1	1024	1
NET 2	DMX OUT	1025	2048	1025
NET 3	OFF	1025	2048	2049
NET 4	OFF	1025	2048	3073

The Start and End columns select a range of output values from the PATCH screen.

The Net Slot column selects the starting slot for the range of output values. This number can be between 1 and 4096.

SN10x Basic Output

Each SN10x can be configured to output a specific range of DMX levels on each connector.

Example

#DMX = Port	Direction (in/out)	Start	End	NetSlot
DMX = 1	Out	1	512	1
DMX = 2	Out	1	512	513
DMX = 3	Out	1	512	1025
DMX = 4	Out	1	512	1513

Each connector can transmit between 1 and 512 DMX levels.

The start column is usually set to 1. If the number 10 is entered the first 9 DMX output levels will be 0%.

The End column is used to specify the length of the DMX data transmitted.

The NetSlot column is specifies the first NET SLOT address. The DMX levels are taken from the range of NET SLOTS starting from this address.

Details of how to edit this file can be found later in this section.

SN10x Advanced Output.

Each SN10x DMX connector can be configured to combine different groups of net slot data.

This can only be done using the EDIT program on the SN10x or copying a new 220NODE.CFG file. The Shownet configuration software can not transmit this configuration.

#DMX = Port	Direction (in/out)	Start	End	NetSlot
DMX = 1	Out	1	100	1
DMX = 1	Out	101	200	450
DMX = 1	Out	201	300	830
DMX = 2	Out	1	512	1025

DMX connector 1 will transmit 300 levels. These levels are taken from three different parts of the 4096 available net slots.

It is possible that three different consoles placed data into these different ranges of net slots and the SN10x combines the levels.

SN10x input.

The DMX input via the SN10x shares network slots with the DMX output. If a console and an SN10x are transmit data to the same NET SLOT the levels will flicker between the levels of the different sources.

DMX inputs must use NET SLOT addresses which are different from the DMX output.

All of the SN100 range of nodes will support DMX input without any additional software. A adapter to convert the 5 pin XLR Male to Female is needed for DMX input.

If the DMX input cable terminates at the SN10x the termination switch below the DMX connector must be turned on.

Example configuration.

#DMX = Port	Direction (in/out)	Start	End	NetSlot
DMX = 1	Out	1	512	1
DMX = 2	In	1	512	513
DMX = 3	Out	1	512	1025
DMX = 4	Out	1	512	1513

The DMX input data can be read from the Net Slots by any console with Communiqué Pro application software, or converted back to a DMX output using another SN10x.

Console input.

To understand how to setup a console to accept network DMX input the user must first understand the operation of the Communiqué Pro options DMX Channel and DMX Dimmer.

A Submaster or a Super Submaster can be set to either DMX Channel or DMX Dimmer. Only one of these can be selected on a desk at one time. The Submaster or Super Submaster fader provides the master level control for the incoming DMX levels.

DMX DIMMER.

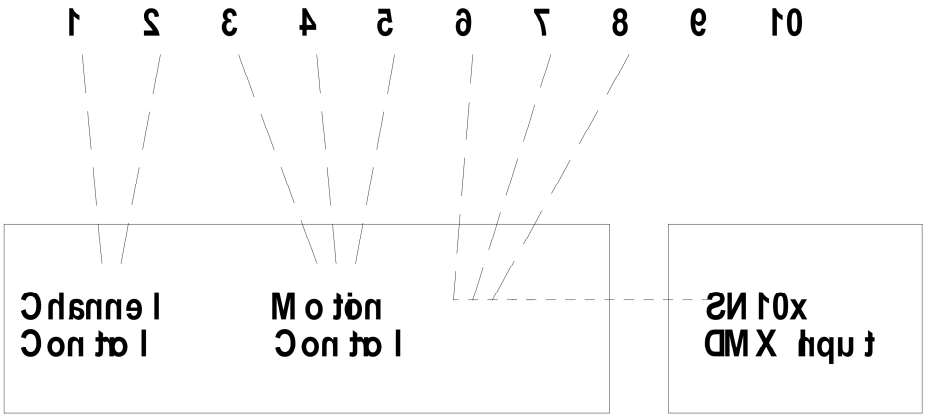
The objective of the PATCH is to allow each output level from the desk to be controlled by either a channel or an attribute. When DMX Dimmer is enabled each output level can now be controlled by a channel, an attribute or a level taken from any DMX input.

None of the DMX input levels appear on the output screen and all of the configuration is done on the PATCH screen and the SETUP screen.

The following example shows a complex patch.

MUX O/P	1	2	3	4	5	6	7	8
CHAN	1	2	2.2	2.3	2.4	1D	2D	3D

The output levels 1 to 8 are now under the following control.



The example shows output 6, 7 and 8 under control of DMX inputs from the SN10x via net slots 1025 to 1536

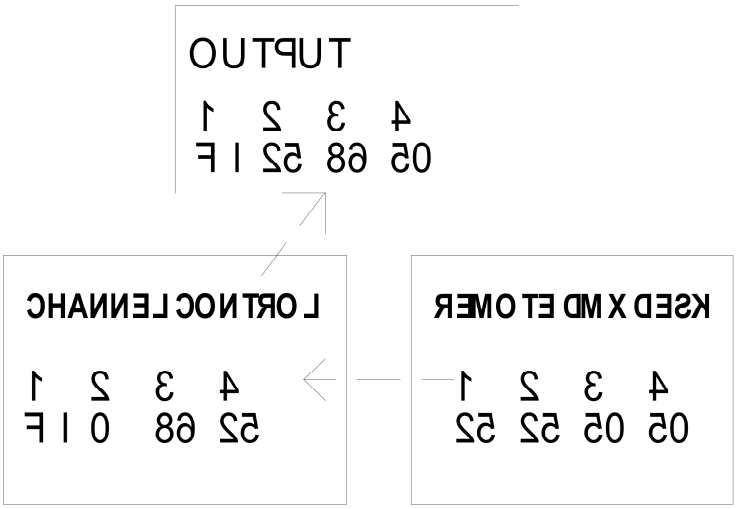
	Dimmer	Start	End	Net Slot
NET 1	DMX OUT	1	1024	1
NET 2	OFF	1025	2048	1025

NET 3	OFF	1025	2048	2049
NET 4	DMX IN	1	512	1025

DMX CHANNEL.

The DMX input levels appear on the output screen and are superimposed on a highest takes precedence basis with existing channels. All of the configuration is done on the SETUP screen.

Note. The PATCH is not used to configure the input.



The setup below will superimpose the 512 DMX input levels over the first 512 channel levels on the output of the console. The submaster set to DMX CHAN will control the master level of the DMX input.

	Dimmer	Start	End	Net Slot
NET 1	DMX OUT	1	512	1
NET 2	OFF	1025	2048	1025
NET 3	OFF	1025	2048	2049
NET 4	DMX IN	1	512	1025

EDIT on SN100 and SN102

To change the configuration of an SN100 or SN102 first connect a keyboard using the keyboard adapter which came with the SN10x.

Insert DOS disk 1 in the floppy drive. A set of DOS install disks were supplied with the SN10x.

Exit from the SN10x program to DOS using CTRL X.

The EDIT command is on the floppy drive. Type the command PATH=A: <enter>

Type EDIT 220NODE.CFG <enter> to edit the file.
Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

Remove the DOS floppy disk and power the unit off then on to use the new configuration.

Shownet Configuration Software. Section 6

Shownet Configuration software is a windows 95 program and must be run on a PC with a VGA monitor and a network card.

Shownet configuration software only runs under Windows 95 or Windows NT. A TCP/IP driver must be loaded and configured on the PC before the Shownet software will communicate with the SN10x.

Windows 95 setup.

After switching on the Windows 95 PC run the following operations.

Click on START on the toolbar.

Click on menu option SETTINGS.

Click on menu option CONTROL PANEL.

Click on the Network icon.

Ensure the “Configuration” card has been selected at the top of the window. The windows should already include a configuration for the network card hardware. This would have been auto-detected when the card was installed. If the list does not include TCP/IP as an option it must be added.

Click on ADD, then select the icon for PROTOCOL then click ADD again. Select “Microsoft” in the left window and the option TCP/IP will appear on the right window. Select this option and click on OK.

If it has not been installed before Windows 95 will ask for the install disks or CD ROM.

TCP/IP now appears on the main configuration list. Select this icon and click on properties.

Enter a unique IP address. This can start 193.195.164 to match the shownet network. The final number can be between 1 and 255 but must not conflict with a shownet node.

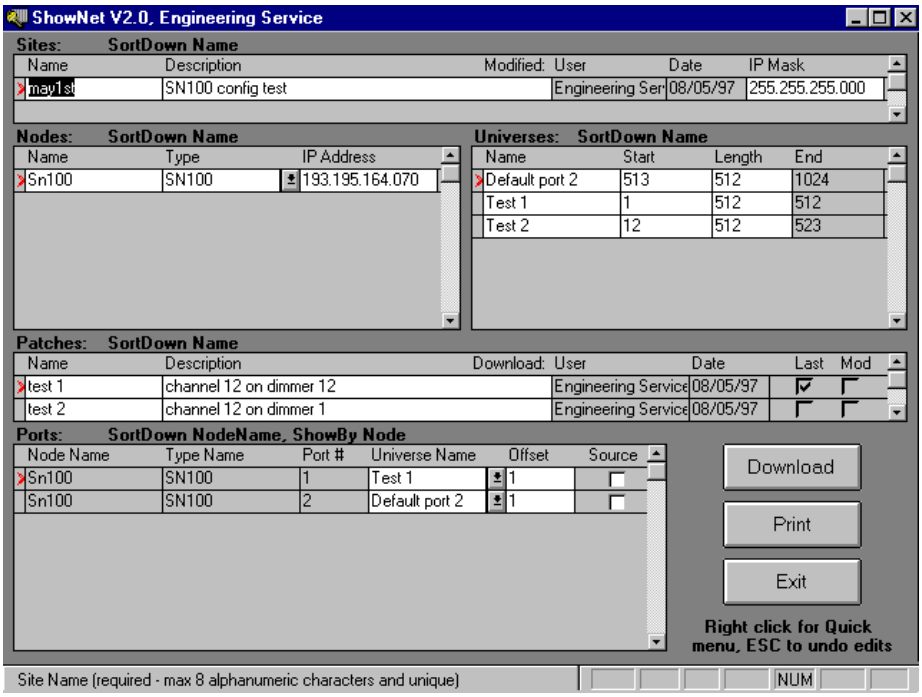
The netmask must be 255.255.255.0

Select OK then exit from the program.

Shownet Operation and Installation.

Instert the first Shownet install disk and click on START the RUN. Type A:\SETUP <enter>

Follow the loading instructions.



This software can be used to program any SN10x node.

The “Sites” window allows the user to setup multiple sites. Each site can be given a description which can be more than the one line shown.

The “Nodes” window is used to list the network hardware on the site. Each node has a unique network address. For details of network addresses see Section 10.

The “Universe” window is used to define each group of levels on the network. One range may be for dimmer control, another for scrollers and another for moving lights. This window is used to ensure each DMX level put onto the network is only used for one purpose.

The “Patches” window is used to allow each node to have one or more different configurations.

The “Ports” window is used to assign each connector as input or output and assign a “Universe” range to the port.

When all of the windows have been completed each node can be selected and the data can be downloaded to the network devices.

The software replaces the file 220NODE.CFG on the SN10x with a new file. This file has a different format to the original .

DMX = Port	In/Out	StartDim	EndDim	Offset	# UniverseName
DMX = 1	out	1	512	1	# name 1
DMX = 2	out	1	512	513	# name 2

The full 220NODE.CFG file can be found in appendix A.

Transmission of Video. Section 7

Video pictures can be transmitted to all SN10x devices from any console on the network.

Additional video pictures are transmitted from the main console to a remote console.

SN10x Video.

On the Shownet section of the SETUP screen select NET VIDEO = OFF to disable the video output or select a net video number between 1 and 8.

If the number 1 is selected then an exact copy of the first screen is transmitted on video slot 1 and a copy of screen 2 is transmitted on video slot 2.

If the console has an additional video card then copies of screens 3 and 4 are transmitted on video slots 3 and 4.

A backup console, remote console or backup PC can also transmit video screens to SN10x devices. These consoles or the PC must not use the same video slots as the main console or the SN10x picture will flicker between the two transmitted pictures.

Video slots 1 to 8 are broadcast and all SN10x devices will receive and can display any of the 8 screens.

The SN10x will always display screens from video slots 1 and 2. Alternative screens must be selected manually using the arrow keys on the SN10x.

When none of the consoles or PC's are transmitting video pictures the SN10x will display an information message. This details the network configuration and a warning when the SN10x is not transmitting DMX.

Remote console video

The main desk transmits all of the video screens seen on a remote console.

This video information is transmitted point to point. Only the remote console can receive the video pictures from the main desk.

If the main desk develops a fault and stops transmitting on the network the remote desk screen will return to the login screen. If the login screen is disabled the screen will blank and beep each time it tries to re-establish communication.

If the main desk is supported by a backup console or a PC backup then the remote screens will be transmitted by the backup.

The main desk can examine the video currently being displayed on the remote desk using the button combination.

SHIFT MORE.

Shownet operation. Section 8

This section covers the procedure for synchronising the backup and connecting the remote console.

Remote console.

There are no commands required to connect the remote console.

The main console and the remote console must be configured correctly and the network must be enabled on SETUP screen of the main desk.

When the remote is selected on the login screen, or the console has been configured to power up as a remote console without a login screen, the display is blank except for the message “Connecting to main console”.

If the main console is not found the desk will re-try and beep every 5 seconds. To exit to DOS press the ESC key and wait for the DOS prompt.

When the main console is found on the Shownet network the message changes to “Waiting for video” then the output video screen appears.

The console name appears on the command line in green and all channels under channel control appear green.

All commands on the remote console are transmitted to the main console. The main console makes the required changes and transmits a new screen back to the remote. The main console can view the video screens being transmitted to the remote console by pressing SHIFT MORE.

If the connection fails between the main desk and the remote the remote will return to the login screen. If the login screen is disabled the screen will try to re-establish the connection every 5 seconds.

If the main desk is connected to a backup console and it fails then backup desk takes over control of the remote desk.

Backup commands

The following operation commands apply to a backup console and a backup PC.

Connect the main console and the backup to the Shownet network. Enable the network on the SETUP screen. If the connection is correct both consoles will display “Main OK, Backup OK, No sync” in the bottom right corner of output screen 1.

If necessary load the show into either the main console or the backup.

Next select the MORE display (ALT R on the PC) then the “BACKUP CMDS” softkey.

If the main console contains the show use the M GIVE SYNC softkey. If the backup contain the show use the M TAKE SYNC softkey. These keys can be selected on either the main console or the backup.

The show is saved on one system as a show file called SYNC.SSF in a temporary directory. This show file is then transferred to the other system over the Shownet network. The show file is finally loaded on the destination system.

Finally the two desks are reset so that the playbacks and effects are cleared. The main desk always takes control.

The output displays should show “Main active, In Sync”.

All network video and network DMX is being controlled by the main desk. If, for any reason control is to be transferred to the backup the softkey “M GIVE SYNC” should be used. All network activity now comes from the backup. The output displays now show “Backup active, In Sync”

If the connection to the main console is lost the backup desk takes over control. The output display shows “Backup Active - No Main”

If the main desk returns the backup remains in control. This ensures that any changes which were made on the backup are not lost.

Whilst the main desk and the backup are synchronised the network enable on the setup screen can not be switched off. To disconnect the main desk and backup use the backup command “Break Sync”.

Networker Pro software is not supplied with a network card as the new 500 series consoles already have a network connection installed. If a customer with an older console buys Networker Pro the customer must also buy a 3COM network card.

PC Backup software is always supplied with a 3COM Network card.

3COM Etherlink III 3C509 B - COMBO.

It has a Co-Axial connector for 10 Base 2, an RJ45 connector for 10 Base T and an AUI connector for 10 Base 5.

If it is not setup correctly it will not communicate with the network and it may also cause the console to lock up.

Details of the setup procedure are in networker instruction manual and details of installation are in the 3COM manual.

Installing the 3COM network card.

The card should be installed by an experienced PC Engineer or by a Strand Lighting Service Agent. This card is very static sensitive and without anti static precautions the card and the PC motherboard may be damaged.

There are no links to change when fitting the card. A slot on the back of the console is already labeled for the network card.

Remove the blanking plate from the rear of the slot then insert the network card in the extension card slot. Secure the network card using the screw which held the blanking plate.

On older consoles, do not fit the network card into the top ISA slot on the left side of the expansion card. When the console lid is lifted the Co-axial connector is pushed down and may break.

Card configuration.

A brand new network card could have any setting in its memory. If the card has Interrupt 11 set then the console will lock up as soon as the Logo screen appears.

This is because of a conflict on interrupt 11 between the network card and the Control Surface Interface Card on the console.

To configure the network card switch the console on then press F5 on the computer keyboard when the message “Starting MSDOS” appears.

The computer will not run the Genius Plus / Lightpalette software.

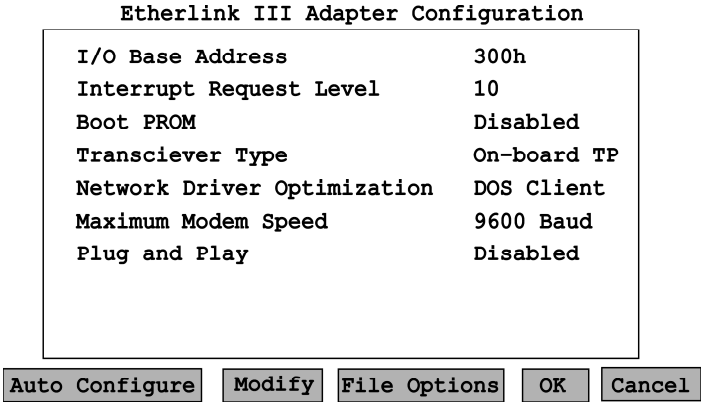
Insert the 3COM setup disk and type the following commands.

A: <enter>
3C5X9CFG <enter>

These commands will start the network card setup program.

Do not run the install program on the floppy disk as this is designed to install network drivers for standard networks like Novell.

The configuration screen.



Use TAB to move the highlight through the options.

If the network card is old it will not have the Plug and Play option. A new network card will have Plug and Play enabled by default.

Go to the Plug and Play option and disable it. Then choose OK. The software will warn you that the computer must be switched off then on before the option will change.

Do not run the tests, go to the file menu and choose exit. Switch off the console then switch on again. Follow the instructions above to return to the configuration screen.

This time make sure the network card is set to I/O address = 300h

The Interrupt must be set to 10.

The Boot PROM must be disabled.

The Transceiver type must not be left at Auto Select as the selection is made when the network card is enabled. At that time there is probably nothing talking on the network so it will guess and may choose the wrong option. Always select On-board Co-axial or On-board TP.

If the network card is set to 10 Base 2, and the Network is enabled in the console software, the desk will run very very slowly if a terminated network cable is not fitted.

The Network drive optimization is not used.

The maximum modem speed is also not used.

Select OK then the card will suggest you run the tests. These tests can be run without the network attached.

Finally exit the program. The card is ready for use.

Network port selection on new consoles.

The new consoles have an RJ45 connector for 10 Base T and a Coax connector for 10 Base 2.

The default interface is RJ45. To select the Coax interface the user must go to DOS then change to the working directory.

CD C:\220os <enter>

Create a new file using the edit program.

Type EDIT BNC_IF.FLG <enter>

The content of the file is not important.

Type ALT F then ALT S to save the changes.
Type ALT F then ALT X to exit the program

To use the new configuration the console must be powered off then on again.The presence of the file BNC_IF.FLG informs the system to use the BNC Coaxial interface.

Delete the file then power off and on to return to the RJ45 interface.

Network port selection on the SN10x.

To change the selection of the port on the SN100 and SN102 press the TEST switch on the unit.

The SN10x will create a file on the RAM disk which is used at power up do ensure the correct port is used.

Genius Pro Configuration Files. Appendix A

All of the following files are used in a standard installation of Genius Pro plus the Utilities disk for Networker.

All files were created by the installation process.

220NET.CFG

This file is found on all consoles but it is no longer used on SN10x network nodes. If found the SN10x install program deletes this file.

```
#
#       Copyright (c) Strand Lighting Ltd 1994-97. All rights reserved.
#
#       Sample networker configuration file
#
#       @(#)220net.cfg    60.1
#
#       This file lists all nodes on the network.
#       There must be an identical copy of this file on all nodes.
#
#       Each line must be laid out like this:
#
# IPaddress     NodeName        NodeType        Comment
#
#               8 chars max     (430/
#               (case ignored)   520/530/550/
#                                520i/530i/550i/
#                                SN100/SN102/SN104/
#                                DESIGNER_PC/
#                                BACKUP_PC/
#                                CS_PC)
#

# Remove leading # to enable to following lines
#193.195.164.67  BackupPC        BACKUP_PC       Backup PC       #
#193.195.164.68  Console1        530             530 Console     #
#193.195.164.69  Console2        430             430 Console     #
#193.195.164.70  SN100_1         SN100           SN100 node      #

#
#       End of file
#
```

220NODE.CFG for consoles.

```
#
#           Copyright (c) Strand Lighting Ltd 1994-97.  All rights reserved.
#
#           Networker node configuration file
#
#           @(#)220node.cfg    60.1
#
#           Defines details specific to this node on the network.
#
#           You can edit this file, but be aware that the system can rewrite
#           it to change some of the fields.
#
#           You can add comment lines starting with #, or change the order
#           of the lines.
#

# Address, name & type of this node on the network (user-edited)
# my_nodeaddr = xxx.xxx.xxx.xxx
# my_nodetype =    (430/520/530/550/520i/530i/550i/SN100/SN102/SN104/
#                        DESIGNER_PC/BACKUP_PC/CS_PC/NET_MON)
# my_nodename is 8 characters max (case ignored)
my_nodeaddr = 193.195.164.68
my_nodetype = 530
my_nodename = console1

# TCP/IP Netmask (user-edited)
netmask = 255.255.255.0

# File server IP address - 0.0.0.0 indicates not used (user-edited)
file_server_addr = 0.0.0.0

# IP address of main console to connect to (user-edited)
console_addr = 193.195.164.68

# Enable (= 1) or disable (= 0) the login display (user-edited)
login_display = 0

# Define how this node starts up: (user- and system-edited)
# 0 (offline) or 1 (online)
on_line = 1

# Define how this node starts up: (user- and system-edited)
# 0 (remote) or 1 (backup) or 2 (main console)
backup_mode = 2

# Which show to load at startup (user- and system-edited)
# 0 (current show) or 1 -> 5 (listed in <username>.usr file)
user_show = 0

# last logged in user (user- and system-edited)
user_name =

# password of last logged in user (user- and system-edited)
user_pw =

#
#           End of file
#
```

220NODE.CFG for SN10x

```
#
#           Copyright (c) Strand Lighting Ltd. 1994-97.  All rights reserved.
#
#           Networker configuration file
```

```
#
#           @(#)220node.cfg    60.1
#
#           Node Internet address, must be unique for each node on the network
#

# Address, name & type of this node on the network
# my_nodeaddr = xxx.xxx.xxx.xxx
# my_nodetype = (430/520/530/550/520i/530i/550i/SN100/SN102/SN104/
#                       DESIGNER_PC/BACKUP_PC/CS_PC/NET_MON)
# my_nodename is 8 characters max
my_nodeaddr = 193.195.164.70
my_nodetype = sn100
my_nodename = sn100_1


# TCP/IP Netmask
netmask   = 255.255.255.0


# DMX   = Port     Direction(in/out)    Start      End       NetSlot
DMX     = 1       out                            1         512       1
DMX     = 2       out                            1         512       513
DMX     = 3       out                            1         512       1025
DMX     = 4       out                            1         512       1537

# Configuration end
```

220NODE.CFG for SN10x created by Shownet

This file replaces the original 220NODE.CFG on the SN10x after a new configuration is transmitted from a PC running Shownet Configuration Software.

```
# Patch: test 1, channel 12 on dimmer 12
# Node configuration file (Sn100.Cfg)
# This file specifies the patching for all ports on one node
# ------------------------------------------------------------------
# Node Info
# ------------------------------------------------------------------
my_nodename = SN100                  # Node Name
my_nodetype = SN100                 # Node Type
my_nodeaddr = 193.195.164.070        # Node IP Address (unique)
netmask     = 255.255.255.000        # Site IP Mask
# ------------------------------------------------------------------
# DMX = Port  In/Out  StartDim  EndDim  Offset  # UniverseName
# ------------------------------------------------------------------
DMX = 1     out     1       512     1       # Name 1
DMX = 2     out     1       512     513      # Name 2
# ------------------------------------------------------------------
```

ADMIN.USR

Used on consoles where there a network login screen is enabled. The ADMIN.USR file must be copied to a new file which matches the name of the new login user.

This name does not relate to the220NODE.CFG item “my_nodename”.

```
#
#       Copyright (c) Strand Lighting Ltd 1994-97.  All rights reserved.
#
#       Networker User configuration file
#
#       @(#)admin.usr       60.1
#
#       Defines details specific to this user on the network.
#
#       You can edit this file, but be aware that the system can rewrite
#       it to change some of the fields.
#
#       You can add comment lines starting with #, or change the order
#       of the lines.
#

# encrypted password (blank if no password defined)
user_pw =

# User Access rights fields (blank to leave unchanged)
acc_record =
acc_patch_fix =
acc_spec_grps =
acc_stp_user =
acc_stp_show =
acc_stp_cons =
acc_cons_mode =
acc_printer =
acc_show_loc =
acc_show_svr =
acc_chan_ctrl =
acc_playback  =

# User Setup fields (blank to leave unchanged)
stp_buz_vol =
stp_lcd_cont =
stp_lcd_backlt =
stp_lang =
stp_wheel_mas =
stp_cc_mode =
stp_num_screens =
stp_chan_disp =
stp_smart_chan_disp =
stp_auto_chan_page =
stp_on_level =
stp_cue_fade_up =
stp_cue_fade_dn =
stp_cue_delay_up =
stp_cue_delay_dn =
stp_cue_wait =
```

ADMIN.USR continued.

```
stp_fx_step_time =
stp_x_back_time =
stp_x_cut_time =
stp_printer_type =
stp_paper_size =
stp_scr_layout =
stp_wheel_sens =
stp_printer_port =
stp_stop_key =
stp_vga_swapped =
stp_patch_by_chan =
stp_chan_fmting =
stp_undo_time =
stp_subs_layout =
stp_keys_layout =
stp_fx_step_in =
stp_fx_step_dwell =
stp_fx_step_out =
stp_fx_up_time =
stp_fx_dn_time =
stp_scr_menus =
stp_xpb_colours =
stp_xpb_order =
stp_xpb_format =
stp_show_last_rec_cue =
stp_goose_bright =
stp_up_down_inc =
stp_printer_netnode =
stp_cc_hold_mode =
stp_prnt_changes =
stp_prnt_atts =
stp_prnt_new_page =
stp_prnt_new_line =
stp_prnt_landscape =
stp_prnt_pat_by_chan =
stp_patch_by_op =

# List of 5 recently used show files (blank if no file saved)
# (eg \\SERVER\f:\newshows\thebig--,10:00,01/01/97,Show Title)
show_1 =
show_2 =
show_3 =
show_4 =
show_5 =

# Channel Partion Group (ranges 'a > b'. Blank to use all channels)
# (there may be more than one of these)
ch_part_group =
ch_part_group =

#
#           End of file
#
```

AUTOEXEC.BAT

This file is only copied to the C: root directory on consoles and not on a PC Backup or Off Line Editor.

```
@echo off
Rem @(#)autoexec.nrm        60.1
Rem
*********************************************************************
*
Rem Strand Lighting console startup
Rem D O   N O T   E D I T   T H I S   F I L E ! !
Rem Edits will be lost the next time software is installed
Rem You can supply the file USEREXEC.BAT to customise your console startup
Rem
Rem
*********************************************************************
*
Rem       For Users of International Keyboards.
Rem Use one of the following in USEREXEC.BAT to envoke country-specific
Rem keyboards
Rem
Rem Germany:
Rem                 keyb      gr
Rem United Kingdom:
Rem                 keyb    uk
Rem France:
Rem                 keyb      fr
Rem Sweden:
Rem                 keyb      sv
Rem United States:
Rem                 keyb      us
Rem
Rem
*********************************************************************
prompt $p$g
path c:\dos
if exist c:\220os\userexec.bat call c:\220os\userexec.bat
c:
cd \220os
os
```

CONFIG.SYS

This file is only copied to the C: root directory on consoles and not on a PC Backup or Off Line Editor.

```
Rem @(#)config.sys          60.1
Rem Strand Lighting console configuration
Rem D O   N O T   E D I T   T H I S   F I L E ! !
Rem Edits will be lost the next time software is installed
Rem
device=c:\dos\himem.sys
dos=high,umb
devicehigh=c:\dos\setver.exe
shell=c:\dos\command.com /p /e:1024
files=30
buffers=10
country=044,850,c:\dos\country.sys
device=c:\dos\ansi.sys
break=on
lastdrive=e
```

Genius Plus Configuration Files. Appendix B

The following configuration files were used by Genius Plus versions 1.5, 1.53 and 1.55.

Version 1.5 & 1.53

Version 1.5 is the oldest Genius Plus software that supports Strand Shownet. Genius Plus maintenance release version 1.53 used the same configuration files.

Customers who upgrade to Genius Pro from version 1.5 or 1-53 and have created a RECOVER.BAT file (See Section 1) will have these Genius Plus files instead of the correct Genius Pro files. This does not usually cause any problems (see Section 2).

220NET.CFG

This file lists all network hardware on the shownet installation.

```
#
#       Copyright (c) Strand Lighting Ltd. 1994, 95. All rights reserved.
#
#       Networker node configuration file.  This file must be common to all
#       nodes.
#
#       @(#)220net.cfg      45.1
#
#       Lists of nodes on the network.
#
# IP              NodeName        NodeType        Comment
#
#               16 chars max    (430/530/550/
#                                SN100/SN101/
#                                BACKUP_PC/
#                                NET_MON)
#

193.195.164.67  BackupPC1       BACKUP_PC       Backup PC       #
193.195.164.68  Console1        530             530 Console     #
193.195.164.69  Console2        430             430 Console     #
193.195.164.70  SN100_1         SN100           SN100 node      #


193.195.164.254 netmon          NET_MON         NetworkMonitor  #

#
#       End of file.
#
```

220NODE.CFG

This file allowed control of an SN100 only. No console to console communication was allowed.

```
#
#       Copyright (c) Strand Lighting Ltd. 1994, 95.  All rights reserved.
#
#       Networker configuration file
#
#       @(#)220node.cfg    45.1
#
#       Node Internet address, must be unique for each node on the network
#

my_ip = 193.195.164.68

# TCP/IP Netmask

netmask = 255.255.255.0

# Configuration end
```

Version 1.55

Genius Plus maintenance release version 1.55 includes configuration files which contain more of the values which are used in Genius Pro. Customers who upgrade to Genius Pro from version 1.55 and have created a RECOVER.BAT file (See Section 1) will have these Genius Plus files instead of the correct Genius Pro files. This does not usually cause any problems (see Section 2).

220NET.CFG

```
#
#       Copyright (c) Strand Lighting Ltd 1994-96. All rights reserved.
#
#       Networker configuration file
#
#       @(#)220net.cfg      53.1
#
#       This file lists all nodes on the network.
#       There must be an identical copy of this file on all nodes.
#
#       Each line must be laid out like this:
#
# IPaddress         NodeName        NodeType          Comment
#
#                   8 chars max     (430/
#                   (case ignored)   520/530/550/580/
#                                    520i/530i/550i/580i/
#                                    SN100/SN101/SN102/SN103/SN104/
#                                    DESIGNER_PC/
#                                    BACKUP_PC/
#                                    CS_PC/
#                                    NET_MON)
#

193.195.164.67    BackupPC        BACKUP_PC         Backup PC       #
193.195.164.68    Console1        530               530 Console     #
193.195.164.69    Console2        430               430 Console     #
```

```
193.195.164.70      SN100_1          SN100          SN100 node      #

193.195.164.254     netmon           NET_MON        NetworkMonitor  #

#
#           End of file
#
```

220NODE.CFG

```
#
#           Copyright (c) Strand Lighting Ltd 1994-96.  All rights reserved.
#
#           Networker node configuration file
#
#           @(#)220node.cfg    53.1
#
#           Defines details specific to this node on the network.
#
#           You can edit this file, but be aware that the system can rewrite
#           it to change some of the fields.
#
#           You can add comment lines starting with #, or change the order
#           of the lines.
#

# Address of this node on the network (user-edited)
my_ip = 193.195.164.68

# TCP/IP Netmask (user-edited)
netmask = 255.255.255.0

# IP address of main console to connect to (user- and system-edited)
console_ip = 193.195.164.68

# Enable (= 1) or disable (= 0) the login display (user- and system-edited)
login_display = 0

# Define how this node starts up: (user- and system-edited)
# 0 (main console) or 1 (backup) or 2 (remote) or 3 (offline editor)
backup_mode = 0

#
#           End of file
#
```