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Flex Control Network®

UABS-I

(Universal Automation Backup System - I)

Installation Manual

Rev. 1.00

REVISION HISTORY

052308 1.00 First release

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1. OVERVIEW

A. Universal Automation Backup System, UABS-I Overview

The Universal Automation Backup System (UABS) provides affordable, simple, easy-to-use, reliable playout control. UABS utilizes the existing playlists from your automation or traffic system. It controls program and commercial channel playout. You can manually build playlists and modify existing lists. UABS is a reliable hardware based solution standing by 24/7, to make sure that you stay on the air.

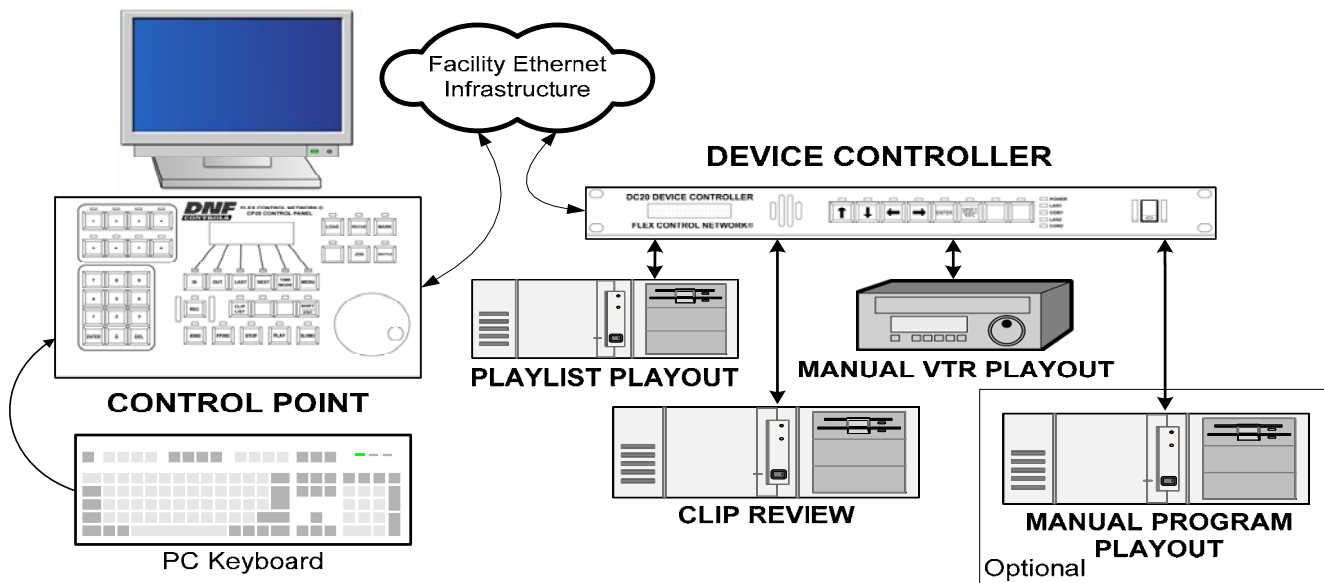
In an emergency, UABS allows you to manually roll Program (clip or tape) and still automate commercial break playout, **OR** automate both program and commercial playout.

UABS supports one playlist, for a full or partial broadcast day, which contains time triggered, follow-along, and manually controlled elements. Also supports program segment playout and secondary GPOs. The playlist can be modified at any time—adding and removing elements, appending playlists — even while the list is playing out.

UABS-I FEATURES

- Import playlist files from most major automation and traffic systems
- Playout program and commercial on one video server channel
- Manually roll program clips (or tape) on one video server channel and automate commercial breaks on a second server channel
- Supports time triggered, follow along, and manual playout elements
- Supports program segments and secondary GPOs
- Manually build playlists on UABS or import from text editor
- Supports As-Run Log and Discrepancy List
- Consists of one Control Point and one Device Controller

B. UABS-I Configuration



The Universal Automation Backup System is comprised of one DC20 Device Controller and one CP20 Control Panel. (The VGA monitor, PC keyboard, video server and Ethernet infrastructure is provided by the customer.)

The DC20 Device Controller is connected to two video server channels for playlist playout, clip review, and has two additional channels available for manual program play out on a video server channel or VTR. The CP20 Control Panel is connected to the DC20 Device Controller thru an Ethernet connection.

In Master Control, the CP20 Control Panel, with external VGA monitor and keyboard, is used for on-air playlist playout control and playlist editing.

2. DC20 INSTALLATION

CAUTION

Do NOT apply AC voltage to power supply, then connect power supply to DC20 Device Controller. Component damage may occur.

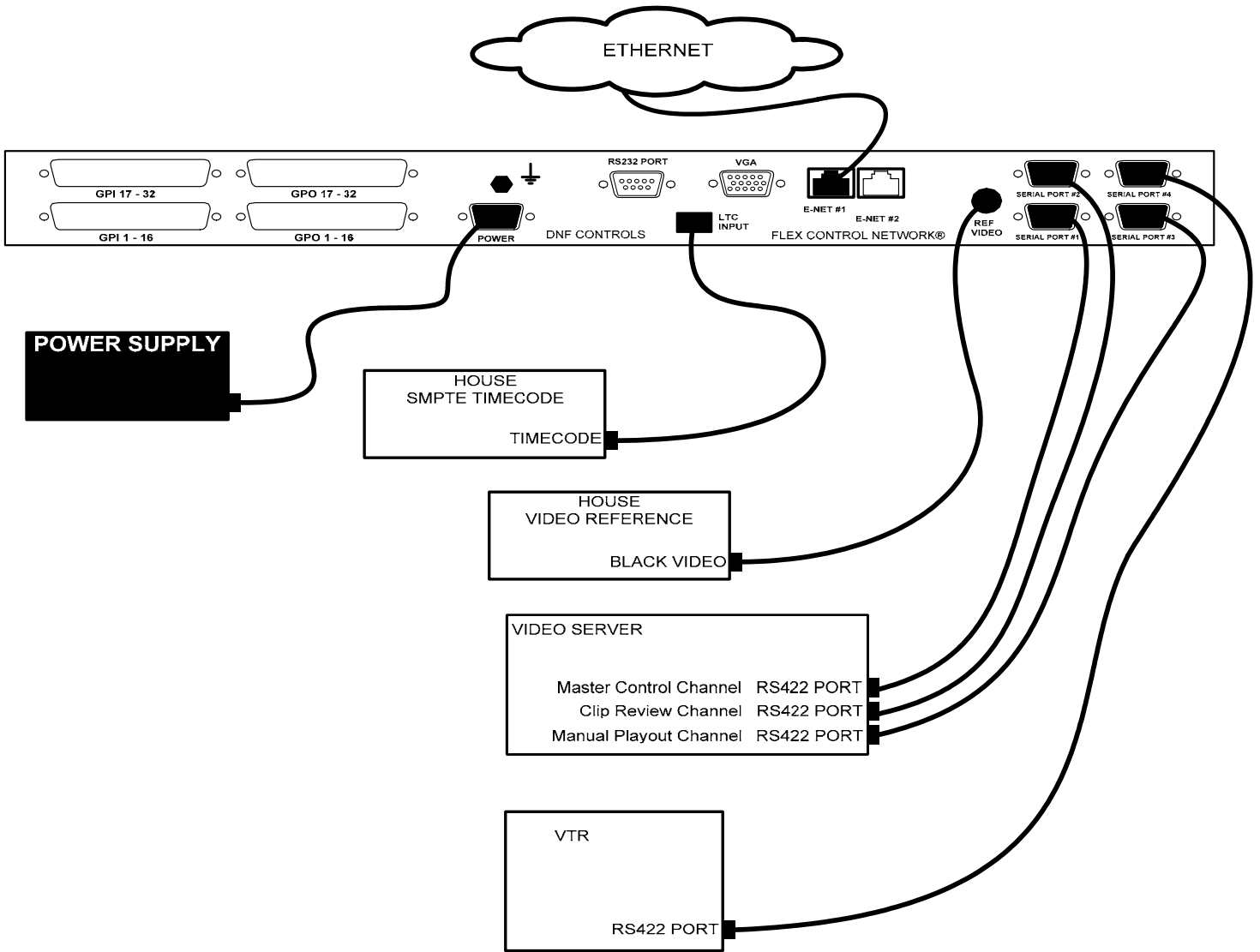
- 1) Connect Cat 5 cable to DC20 connector labeled "E-NET #1". Connect other end of Cat 5 cable to customer supplied Ethernet hub.
- 2) Plug one end of a standard 9-conductor, RS422 serial cable into the Serial Port #1 connector on the rear of the DC20.
- 3) Plug the other end of the 9-conductor, RS422 serial cable into the remote control connector on the VTR, DDR, or Video Server. Repeat steps 2 and 3 for each serial port to be used for machine control.
- 4) Connect facility video reference to REF video connector on rear of DC20. This is required for accurate play timing.
- 5) Connect facility time-of-day LTC to LTC Input Connector on rear of DC20. This is required for accurate gang synchronization.
- 6) Connect power supply DB9 female connector to DC20 connector labeled "POWER".
- 7) Connect female side of power cable to supplied power supply.
- 8) Connect male side of power cable to AC voltage, 100 – 240.
- 9) Push DC20 power switch, located on front panel, to ON position. The "O" on the power switch is the OFF position.
- 10) Front panel LEDs will flash during power up. When power up and system initialization completes, the front panel LEDs will turn off and the front panel display will show Model Number and Software Version. Allow 45 seconds for power up and system initialization to complete.

No connection is required to the DIAGNOSTIC or VGA connectors on the rear of the DC20.

CAUTION

Do NOT apply AC voltage to power supply, then hot plug power supply to DC20 Device Controller. Component damage may occur.

3. DC20 CONNECTION DIAGRAM



4. DC20 CONFIGURATION

Configuration is required after initial installation.

A. IP Address Setup

- 1) On the DC20 front panel, use **↑↓** keys to select "Current IP".
- 2) Press ENTER key. Display will show current IP address with cursor in far left column.
- 3) Use the **↑↓** keys to change number.
- 4) Use **← →** keys to move cursor position.
- 5) Press ENTER to save new IP address.

OR

Press ESC to exit without saving.

NOTE- New IP Address will take effect on next power up.

B. Subnet Mask Setup

- 1) On the DC20 front panel, use **↑↓** keys to select "Current Mask".
- 2) Press ENTER key. Display will show current Subnet Mask with cursor in far left column.
- 3) Use the **↑↓** keys to change number.
- 4) Use **← →** keys to move cursor position.
- 5) Press ENTER to save new Subnet Mask.

OR

Press ESC to exit without saving.

NOTE- New Subnet Mask will take effect on next power up.

C. Gateway Address Setup

- 1) On the DC20 front panel, use **↑↓** keys to select "Current Gateway".
- 2) Press ENTER key. Display will show current Gateway address with cursor in far left column.
- 3) Use the **↑↓** keys to change number.
- 4) Use **← →** keys to move cursor position.
- 5) Press ENTER to save new Gateway address.

OR

Press ESC to exit without saving.

NOTE- New Gateway Address will take effect on next power up.

D. Ethernet Link Speed Setup

- 1) On the DC20 front panel, use **↑↓** keys to select "Ethernet Status".
- 2) Press ENTER key. Display will show current speed selection.
- 3) Use the **↑↓** keys to change selection.
- 4) Select AUTO to use highest available speed.
- 5) Select 10Mbps for long Ethernet cable runs.
- 6) Press ENTER to save new IP address.

OR

Press ESC to exit without saving.

NOTE- New Ethernet speed selection will take effect immediately.

5. DC20 SETUP

Setup is required after initial installation. This step may be performed at any other time, as required.

Setup is performed using a computer running an off-the-shelf web browser such as "Microsoft Internet Explorer" or "Netscape". Connect the CAT5 cable from the computer to the same Ethernet hub that the DC20 Device Controller is connected to.

After launching the web browser, enter the IP address of the DC20 to be setup. The DC20 Home Page will be displayed.

The screenshot displays the DC20 Flex Control Network web interface. At the top left is the DNF CONTROLS logo. To its right is the text "Flex Control Network™". On the top right, there is a table of device information:

Model NO: DC20	Serial NO: 500299
Software Ver: 4.0	Label: 10.239
Serial Ports: 4	GPI/GPO: 8/8

Below this table is a "Logout" link. A navigation menu is located below the header, containing the following items: [Protocol Assignment](#), [GPI](#), [GPO](#), [Event Monitoring](#), and [System](#). The main content area shows the "IP Configuration" section with the following details:

IP Address	192.168.10.239
Subnet Mask	255.255.255.0
Gateway	0.0.0.0

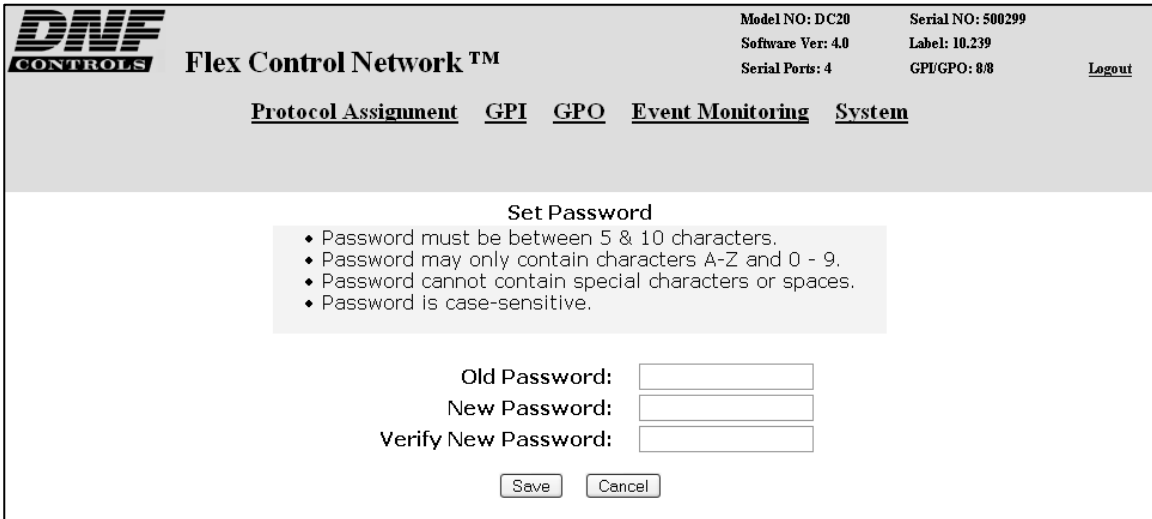
At the bottom left, there is a "goahead WEB SERVER" logo. At the bottom center, there is an "ARS" logo with the text "RTC/MLTnet" below it.

A. Set Password

The default password, when shipped from the factory, is "controls", all lower case. The password is used to access all configuration screens.

Using the web browser-

- 1) From the DC20 Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set Password". The Set Password page will be displayed.



The screenshot shows the DNF Controls Flex Control Network web interface. The top navigation bar includes the DNF logo, the product name "Flex Control Network™", and system information: Model NO: DC20, Software Ver: 4.0, Serial NO: 500299, Label: 10.239, Serial Ports: 4, and GPI/GPO: 8/8. A "Logout" link is also present. Below the navigation bar, there are links for "Protocol Assignment", "GPI", "GPO", "Event Monitoring", and "System". The "Set Password" page is displayed, featuring a list of password requirements: "Password must be between 5 & 10 characters.", "Password may only contain characters A-Z and 0 - 9.", "Password cannot contain special characters or spaces.", and "Password is case-sensitive.". Below the requirements are three input fields labeled "Old Password:", "New Password:", and "Verify New Password:". At the bottom of the form are "Save" and "Cancel" buttons.

- 3) In the "Old password" entry box, enter the current password.
- 4) Note- When shipped from the factory, the default password is "controls", all lower case.
- 5) Enter the new password in the "New Password" entry box.
- 6) Enter the new password in the "Verify New Password" entry box.
- 7) Click on "Save" to save the new password.

OR, click on "Cancel" to exit without changing passwords.

Note- If the "New Password" entry and the "Verify New Password" entry do not match, an error will be displayed.

B. Set System Label

The System Label is used to uniquely identify a DC20. This name is associated with the IP address.

Using the web browser-

- 1) From the DC20 Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set System Label". The Set System Label page will be displayed.

DNF
CONTROLS Flex Control Network™

Model NO: DC20 Serial NO: 500299
Software Ver: 4.0 Label: DC20
Serial Ports: 4 GPI/GPO: 8/8 [Logout](#)

[Protocol Assignment](#) [GPI](#) [GPO](#) [Event Monitoring](#) [System](#)

Set System Label

- Label may contain any alpha, numeric, or special characters.
- Max length of label is 16 characters.

System label: DC20
New System Label:

- 3) Enter any name made up of letters, numbers, or special characters, up to 16 characters.
- 4) Click on "Save" to save the name entered in step 3).
OR, click on "Cancel" to exiting without changing the System Label.

C. Set System Time

The system time is only used for error and event time stamping.

Using the web browser-

- 1) From the DC20 Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set System Time". The Set System Time page will be

The screenshot shows the DNF Controls Flex Control Network web interface. The top navigation bar includes links for [Protocol Assignment](#), [GPI](#), [GPO](#), [Event Monitoring](#), and [System](#). The 'System' link is selected. The page title is 'Set System Time'. The current time is displayed as 'Current Time: August / 21 / 2007 14:41:49'. Below this, there are six drop-down menus for setting the date and time: Year (2007), Month (August), Day (21), Hour (14), Min. (41), and Sec. (49). At the bottom, there are 'Save' and 'Cancel' buttons.

displayed.

- 3) Using the drop down menus, set the current date and time.
- 4) Click on "Save" to save the entered date and time.
- 5) **OR**, click on "Cancel" to exit without saving.

D. Additional Setups


No additional setups are required in "Event Diagnostic" or "System Maintenance" for normal operation. The LOGOUT link is used to log out of the DC20 thereby disallowing any changes that are password protected.

6. DC20 SERIAL CHANNEL SETUP

Serial Channel Setup is required after initial installation. This step may be performed at any other time, as required.

Serial Channel Setup is performed using a computer running an off-the-shelf web browser such as "Microsoft Internet Explorer" or "Netscape". Connect the CAT5 cable from the computer to the same Ethernet hub that the DC20 Device Controller is connected to.

- 1) After launching the web browser, enter the IP address of the DC20 to be setup. The DC20 Home Page will be displayed.
- 2) Click on the "Protocol Assignment" link at the top of the page. The Protocol Assignment Table will be displayed.



Flex Control Network™

Model NO: DC20
 Software Ver: 4.7
 Serial Ports: 4

Serial NO: 500431
 Label: DC20
 GPI/GPO: 0/0

[Logout](#)

[Protocol Assignment](#) [Playlist](#) [System](#)

Protocol Assignment

- ◆ Function licenses and allowed control functions are as follows:
 - For Payout Devices:
 - Basic License: Basic Control
 - Clip Control License: Basic Control, Clip Control
 - Playlist License: Basic Control, Clip Control, Playlist Control
 - Station Payout License: Basic Control, Clip Control, Playlist Control, Master Control, Ingest Record Control, Ingest Review
 - For Router Devices:
 - Router Control
 - For Graphic Devices:
 - Graphics Control
- ◆ Use Device Config -> Edit to edit Control Function (if applicable).

[Edit Protocol Assignment Table](#)

Last Updated: September / 25 / 2007 02:11:54

PROTOCOL ASSIGNMENT TABLE

Channel	Physical Connector	Channel Label	Control Protocol	Control Function	Device Config	PHY Config		Event Definitions	Status	
1	Serial_1	Master Control	vdc	Master Control	View	Edit	View	Edit	N/A	Pause/Still
2	Serial_2	Ingest Record	vdc	Ingest Review	View	Edit	View	Edit	N/A	Tape Out
3	Serial_3	Ingest Review	vdc	Ingest Record	View	Edit	View	Edit	N/A	Tape Out
4	Serial_4	Ingest Source	sony	Ingest Source	View	Edit	View	Edit	N/A	Stop

List of licensed protocols and functions:


Protocols: sony, vdc, menu,

Functions: Station Payout,
AS_RUN_LOG,

[Edit Protocol Assignment Table](#)

A. Serial Protocol Assignment

- 1) Click on "Edit Protocol Assignment Table". An editable version of the table will be displayed.

**Flex Control Network™**Model NO: DC20
Software Ver: 4.7
Serial Ports: 4Serial NO: 500431
Label: DC20
GPI/GPO: 0/0[Logout](#)

[Protocol Assignment](#) [Playlist](#) [System](#)

PROTOCOL ASSIGNMENT TABLE

Channel#	Physical Connector	Channel Label	Currently Licensed Control Protocol
1	Serial_1	<input type="text" value="Master Control"/>	<input type="text" value="vdcp"/>
2	Serial_2	<input type="text" value="Ingest Record"/>	<input type="text" value="vdcp"/>
3	Serial_3	<input type="text" value="Ingest Review"/>	<input type="text" value="vdcp"/>
4	Serial_4	<input type="text" value="Ingest Source"/>	<input type="text" value="sony"/>

- 2) On Channel #1:
 - a) Enter a channel label (up to 20 characters) for the Master Control channel.
 - b) select "vdcp" from the Currently Licensed Control Protocol drop down menu.
- 3) On Channel #2:
 - a) Enter a channel label (up to 20 characters) for the Clip Review channel.
 - b) select "vdcp" from the Currently Licensed Control Protocol drop down menu.
- 4) On Channels #3 and #4, enter a channel label.
- 5) On Channels #3 and #4, select the proper control protocol, for the device under control.
- 6) Click on "SAVE" to save the entered values
OR
Click on "BACK" to exit without saving.

B. Serial Device Configuration

- 1) Click on the "Protocol Assignment" link at the top of the page. The Protocol Assignment Table will be displayed.
- 2) Click on "Edit" field under the "Device Configuration". An edit widow will be displayed.

Protocol Assignment Table

Channel Label	Ch	Control Protocol	Control Function		Device Internal Latency				Preroll Delay			
VDCP	1	vdcp	Master Control ▼		hour	min	sec	frame	hour	min	sec	frame
					00	00	02	00	00	00	05	00
<input checked="" type="checkbox"/> Disk Preroll On												
VDCP Port	Extended IDs	Time Base	TSO PLUS	TSO MINUS	Server Type			Server IP address				
2	<input checked="" type="checkbox"/> Use Extended Clip IDs <input type="checkbox"/> Close Port	NTSC-DF ▼	% of PLAY 10	% of PLAY 10	Omneon ▼							

Omneon Configuration

MediaPort Name	MediaPort01
Clip Directory	/fs0/clip.dir
File Extension	.mov

- 3) Click on drop down arrow field under the "Control Functions" field and choose the control functionality (depending on licensed protocols).
- 4) Select: "Master Control" for the playlist layout channel
"Ingest Review" for the Clip Review channel
- 5) In the "Device Internal Latency" field, enter the play latency, from the chart below, for your video server model.

DISK PREROLL Setup Chart for VDCP Protocol		
Server	Menu Settings	
	Disk Preroll	Play Latency
360 systems	ON	10 frames
Avid Airspeed	OFF	8 frames
Doremi	ON	16 frames
EVS XT	ON	2 frames
GV PDR, XP	ON	40 frames
GV K2	ON	10 frames
GV M-series, Turbo	ON	20 frames
Leitch NX400	OFF	11 frames
Leitch NX3600, NX4200	OFF	6 frames
Omneon	ON	60 frames

- 6) Check the "Disk Preroll On" box as indicated in the chart above.
- 7) Click on field under "VDCP Port" and enter the VDCP port number.
NOTE- VDCP protocol requires that a Port number be assigned. This port number is defined by the video server manufacturer.
- 8) Click on the dropdown arrow under "VDCP Port" and select INPUT for record channels and OUTPUT for playback channels.
- 9) Check the "Extended IDs" box if the video server is configured to support clips names greater than 8 characters in length.
- 10) Click on the dropdown arrow under "Time Base" and select DF or NDF. Select the type of timecode used by the Video Server's internal timecode generator.
- 11) Under, select the model of video server that you are connected to. If your video server is not listed in the drop down menu, select Other.
- 12) If connecting to a video server over Ethernet, enter the IP address of the video server.
- 13) If using an Omneon video server, enter the name of the MediaPort you are connecting to, the clip directory assigned to that MediaPort, as well as the file extension being used.
- 14) Click on "SAVE" to save the entered values

OR

Click on "BACK" to exit without saving entered values.

C. PHYSICAL SERIAL (PHY) PORT CONFIGURATION

- 1) Click on the "Protocol Assignment" link at the top of the page. The Protocol Assignment Table will be displayed.
- 2) Click on "Edit" field under the "PHY Configuration". An edit widow will be displayed.

Serial PHY Configuration

Channel	Baud Rate	Stop Bit	Parity	Char Size	Operation Mode
1	38400 ▼	1 ▼	ODD ▼	8 ▼	CONTROLLER ▼

- 3) Click on the drop down arrow under "Baud Rate" and chose "38400".
 - 4) Click on the drop down arrow under "Stop Bit" and chose "1".
 - 5) Click on the drop down arrow under "Parity" field and chose "ODD".
 - 6) Click on the drop down arrow under "Char Size" field and chose "8".
 - 7) Click on drop down arrow field under the "Operation Mode" field and chose "CONTROLLER". (If the video server port is configured as a controller port, then select "DEVICE".)
 - 8) Click on "SAVE" to save the entered values
- OR
- Click on "BACK" to exit without saving entered values.

7. CP20 INSTALLATION

CAUTION

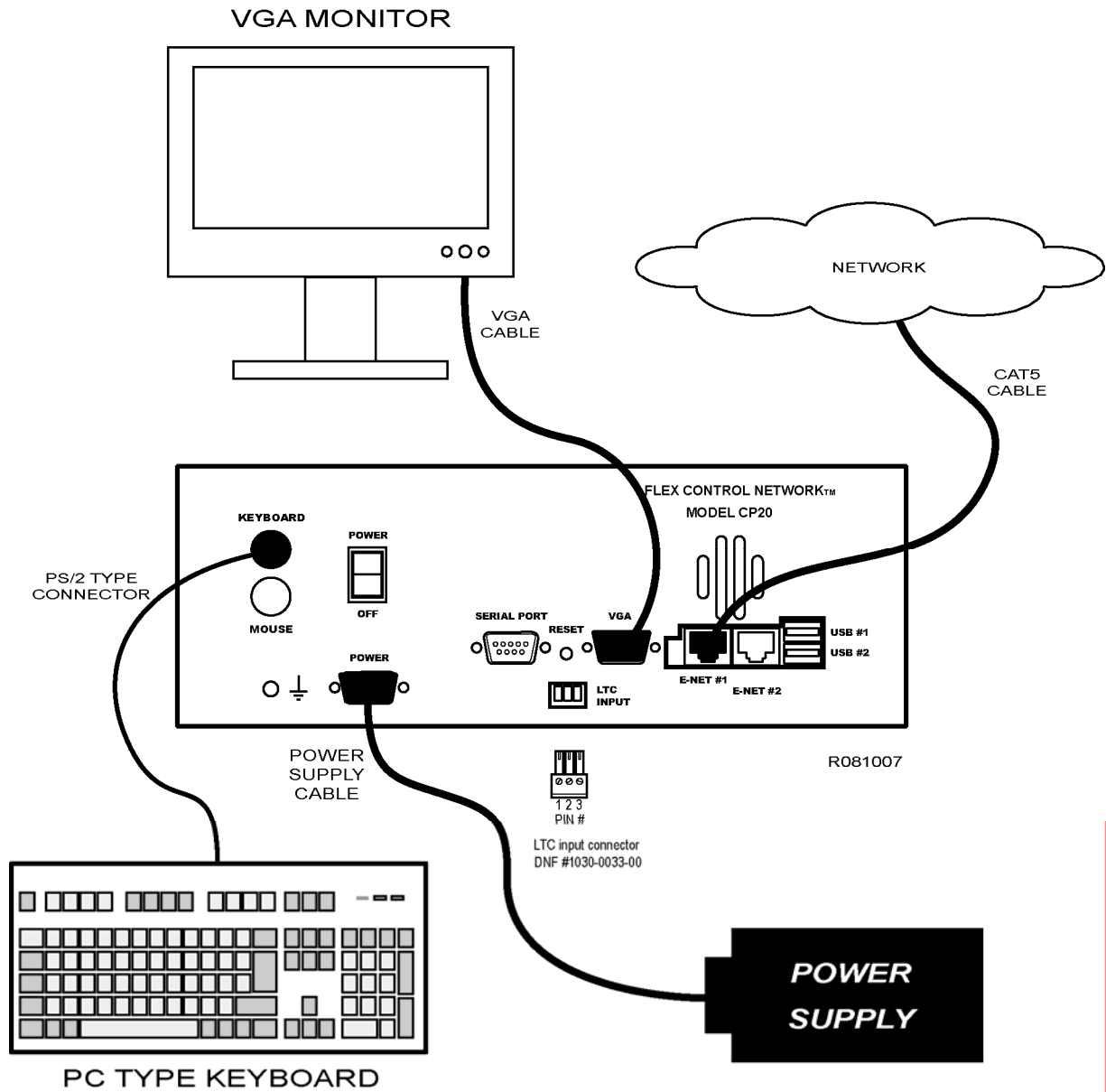
Do NOT apply AC voltage to the power supply, before connecting the power supply to CP20 CONTROL PANEL. Component damage may occur.

- 1) Connect a Cat 5 cable to CP20 CONTROL PANEL connector labeled "E-NET #1". Connect other end of the Cat 5 cable to customer supplied Ethernet hub.
- 2) Connect power supply DB9 female connector to the CP20 CONTROL PANEL connector labeled "POWER".
- 3) Connect female side of AC power cable to the supplied power supply.
- 4) Connect male side of AC power cable to 100 – 240VAC.
- 5) Push the CONTROL PANEL power switch, located on rear panel, to ON position. "O" on the power switch is the OFF position.
- 6) When power up and system initialization completes, the front panel display will show Model Number and Software Version. Allow 25 seconds for power up and system initialization to complete.

CAUTION

Do NOT apply AC voltage to power supply, then hot plug the power supply to the CP20 CONTROL PANEL. Component damage may occur.

8. CONNECTION DIAGRAM






9. CP20 SETUP

Setup is required after installation. This step may be performed at any other time, as required.

Setup is performed using a computer running an off-the-shelf web browser such as "Microsoft Internet Explorer" or "Netscape". Connect the CAT5 cable from the computer to the same Ethernet hub that the CP20 is connected to.

After launching the web browser, enter the IP address of the CP20 to be setup. The Home Page will be displayed.

	Flex Control Network™	Model NO: CP20	Serial NO: 500420	
		Software Ver: 4.0B6	Label: CP20	
		Serial Ports: 0	GPI/GPO: 0/0	Logout
<u>Channel Assignment</u>		<u>System</u>		
IP Configuration				
IP Address		192.168.10.54		
Subnet Mask		255.255.255.0		
Gateway		0.0.0.0		
				

A. Set Password

The default password, when shipped from the factory, is "controls", all lower case. The password is used to access all configuration screens.

Using the web browser-

- 1) From the Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set Admin Password". The Set Password page will be displayed.

The screenshot shows the DNF Controls Flex Control Network web interface. The header includes the DNF Controls logo, the product name "Flex Control Network™", and system information: Model NO: CP20, Serial NO: 500373, Software Ver: 3.1B3, Label: CP20-10.90, Serial Ports: 0, and GPL/GPO: 0/0. A "Logout" link is also present. Below the header, there are two tabs: "Channel Assignment" and "System". The "System" tab is active, and the "Set Password" page is displayed. The page contains a list of password requirements, three input fields for "Old Password", "New Password", and "Verify New Password", and "Save" and "Cancel" buttons.

DNF
CONTROLS Flex Control Network™

Model NO: CP20 Serial NO: 500373
Software Ver: 3.1B3 Label: CP20-10.90
Serial Ports: 0 GPL/GPO: 0/0 [Logout](#)

Channel Assignment System

Set Password

- ◆ Password must be between 5 & 10 characters.
- ◆ Password may only contain characters A-Z and 0 - 9.
- ◆ Password cannot contain special characters or spaces.
- ◆ Password is case-sensitive.

Old Password:

New Password:

Verify New Password:

- 3) In the "Old password" entry box, enter the current password.
- 4) Note- When shipped from the factory, the default password is "controls", all lower case.
- 5) Enter the new password in the "New Password" entry box.
- 6) Enter the new password in the "Verify New Password" entry box.
- 7) Click on "Save" to save the new password.

OR

Click on "Cancel" to exit without changing the password.

Note: If the "New Password" entry and the "Verify New Password" entry do not match, an error will be displayed.

B. Set System Time

The system time is only used for error and event time stamping.

Using the web browser-

- 1) From the Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set System Time". The Set System Time page will be

The screenshot shows the DNF Controls Flex Control Network web interface. At the top left is the DNF Controls logo. To its right is the text "Flex Control Network™". Further right, system information is displayed: Model NO: CP20, Software Ver: 3.1B3, Serial Ports: 0, Serial NO: 500373, Label: CP20-10.90, and GPI/GPO: 0/0. A "Logout" link is located at the top right. Below this information, there are two tabs: "Channel Assignment" and "System". The "System" tab is selected. Under the "System" tab, the "Set System Time" page is displayed. It shows the "Current Time" as February / 2 / 2007 16:34:9. Below this, there are six drop-down menus for setting the date and time: Year (2007), Month (February), Day (2), Hour (16), Min. (34), and Sec. (9). At the bottom of the form are "Save" and "Cancel" buttons.

displayed.

- 3) Using the drop down menus, set the current date and time.
- 4) Click on "Save" to save the entered date and time.

OR

Click on "Cancel" to exit without saving.

C. Set System Label

The System Label is used to uniquely identify a CP20. This name is associated with the IP address.

Using the web browser-

- 1) From the Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set System Label". The Set System Label page will be

DNF
CONTROLS Flex Control Network™

Model NO: CP20 Serial NO: 500373
Software Ver: 3.1B3 Label: CP20-10.90
Serial Ports: 0 GPI/GPO: 0/0 [Logout](#)

Channel Assignment System

Set System Label

- ◆ Label may contain any alpha, numeric, or special characters.
- ◆ Max length of label is 16 characters.

System label: CP20-10.90
New System Label:

displayed.

- 3) Enter any name made up of letters, numbers, or special characters, up to 16 characters.
- 4) Click on "Save" to save the entered name.

OR

Click on "Cancel" to exiting without changing the System Label.

D. Set DNF Port Number

The DNF Port Number is only changed from its default value (50000) when the customer's IT department has assigned a different port number to allow the CP20 and DC20 communication to pass through their computer network's firewalls. Please consult the IT department for the port number value.

NOTE- All Flex Control Network units, on the same system, must be assigned the same Port Number setting. If not, the units will not be able to communicate with each other.

Using the web browser-

- 1) From the Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "Set DNF Port Number". The Set DNF Port Number page will

The screenshot shows the DNF Flex Control Network web interface. At the top left is the DNF CONTROLS logo. To the right of the logo, the text "Flex Control Network™" is displayed. Further right, system information is shown: Model NO: CP20, Serial NO: 500373, Software Ver: 3.1B3, Label: CP20-10.90, Serial Ports: 0, and GPI/GPO: 0/0. A "Logout" link is also present. Below this information, there are two navigation links: "Channel Assignment" and "System". The "System" link is underlined and appears to be the active page. The main content area is titled "Set DNF Port Number" and contains a bulleted list of instructions: "This port is used for communicating to other DNF systems.", "Default value is 50000.", "Illegal values are 0 and 0xffffffff", and "Reboot is required after Save operation.". At the bottom of the page, there is a label "DNF Port Number:" followed by a text input field containing the value "50000". To the right of the input field are two buttons: "Save" and "Back".

be displayed.

- 3) Enter a valid Port Number.
- 4) Click on "Save" to save the entered DNF port number.

OR

Click on "Back" to exit without saving.

E. Set Ethernet Speed

The default password, when shipped from the factory, is "controls", all lower case. The password is used to access all configuration screens.

Using the web browser-

- 1) From the Home Page, click on the "System" link. The System page will be displayed.
- 2) Click on "System Maintenance" Link, the System Maintenance page will be displayed.
- 3) Click on "Set Ethernet Speed" Link, the Ethernet Speed Setting page will be displayed.

The screenshot displays the DNF Controls Flex Control Network web interface. At the top left is the DNF Controls logo. To its right, the text "Flex Control Network™" is displayed. In the top right corner, system information is provided: Model NO: CP20, Serial NO: 500420, Software Ver: 4.0B6, Label: CP20, Serial Ports: 0, and GPI/GPO: 0/0. A "Logout" link is also present. Below the header, there are two navigation tabs: "Channel Assignment" and "System". The "System" tab is active. The main content area is titled "Ethernet Speed Settings". It shows the current configuration: Current Speed: 100Mbps, Current Duplex Mode: full, and Current Link Status: Up. Below this, there are three radio button options: "Auto Negotiate Speed and Duplex Mode" (which is selected), "10Mbps/Full duplex", and "10Mbps/Half duplex". At the bottom of the settings area, there are two buttons: "Apply" and "Back".

- 4) Click on the Radio button to select the Ethernet speed, and then click on the Apply button.

OR

Click on the Back button to exit without making any changes.

F. Install FTP Server Software on PC Computer

The CP20 can import a playlist from a computer folder and append it to its on-air playlist. The computer folder is located on a Windows® computer and contains a copy of the primary automation system's on-air playlist. The CP20 connects to this remote computer and displays the contents of the computer folder, allowing the Master Control Operator to view and select a playlist file.

As Windows does not provide an FTP Server, the FTP Server software "Filezilla Server" must be installed on the Windows computer. To download this free FTP Server, go to www.filezilla-project.org. Click on the link "Download Filezilla Server windows only". Follow the instructions to download and install the software.

G. Configure FTP Client On CP20

- 1) On the computer used to configure the CP20 and DC20, use NOTEPAD or other simple text editor to create a "txt" file with the following content:

On line #1, FTP SERVER's IP address

On line #2, FTP Server's Logon User name
(created as part of Filezilla installation)

On line #3, FTP Server's Logon Password
(created as part of Filezilla installation)

For example:

192.168.10.118

myname

mypassword

- 2) Save the file as "FTP.txt" in a convenient location on the computer.
- 3) On the same computer, using a web browser, enter the IP address of the **CP20** to go to its home web page.
- 4) From the home page, click on SYSTEM link and enter the login password "controls", all lower case, without the double quotes ("").
- 5) Click on the SYSTEM MAINTENANCE link and then the SYSTEM SNAPSHOT link. Wait 60 seconds for the page to open. Do not re-click on SYSTEM MAINTENANCE.
- 6) To the left of the UPLOAD link, click on the Destination drop down arrow and select "config".
- 7) Click on UPLOAD link, at the bottom of the page.
- 8) Click on ADD FILES and then navigate to the [FTP.txt](#) file created in step #1. Highlight [FTP.txt](#) and click on OPEN. [FTP.txt](#) will be displayed in the file list to the right of ADD FILES.
- 9) Enter the FTP Password "st5controls", all lower case, without the double quotes ("").
- 10) Click on UPLOAD FILES to copy FTP.txt into the CP20.

NOTE- The CP20 does NOT need to be rebooted.

11) Test the FTP Server as follows:

- a) Start Filezilla on the computer.
- b) On the CP20 numeric keypad-
- c) Press '1', View/Edit Playlist
- d) Press '7', File
- e) Press '7', View Files
- f) Press '3', Get Remote File
- g) The CP20 VGA will display "ftp:" followed by the IP address in [FTP.txt](#).


The VGA will also show the directory of the remote computer. Use the CP20 wheel and press '1' to view the contents of a directory.

H. Channel Assignment

The Channel Assignment Table Setup is performed using a computer running an off-the-shelf web browser such as "Microsoft Internet Explorer" or "Netscape". Connect the CAT5 cable from the computer to the same Ethernet hub that the CONTROL PANEL is connected to.

After launching the web browser, enter the IP address of the CP20 to be setup. The Home Page will be displayed.

- 1) Click on the "Channel Assignment" link at the top of the page. The Channel Assignment Table will be displayed.



Flex Control Network™

Model NO: CP20 Serial NO: 500420
 Software Ver: 4.0B6 Label: CP20
 Serial Ports: 0 GPI/GPO: 0/0

[Logout](#)


Channel Assignment
System

Channel Assignment Table

Local Channel	Remote IP	Remote channel	Control Function	Connection Status	Registration Status
1	192.168.10.239	1	Basic Control	Connected	Registered
2	192.168.10.239	2	Basic Control	Connected	Registered
3	192.168.10.239	3	Basic Control	Connected	Registered
4	192.168.10.239	4	Basic Control	Connected	Registered
5	192.168.10.232	1	Basic Control	Connected	Registered
6	192.168.10.232	2	Basic Control	Connected	Registered
7	192.168.10.233	1	Basic Control	Connected	Registered
8	192.168.10.233	2	Basic Control	Connected	Registered
9	0.0.0.0	1	Basic Control	N/A	N/A
10	0.0.0.0	1	Basic Control	N/A	N/A
11	0.0.0.0	1	Basic Control	N/A	N/A
12	0.0.0.0	1	Basic Control	N/A	N/A
13	0.0.0.0	1	Basic Control	N/A	N/A
14	0.0.0.0	1	Basic Control	N/A	N/A
15	0.0.0.0	1	Basic Control	N/A	N/A
16	0.0.0.0	1	Basic Control	N/A	N/A
17	0.0.0.0	1	Basic Control	N/A	N/A
18	0.0.0.0	1	Basic Control	N/A	N/A
19	0.0.0.0	1	Basic Control	N/A	N/A
20	0.0.0.0	1	Basic Control	N/A	N/A
21	0.0.0.0	1	Basic Control	N/A	N/A
22	0.0.0.0	1	Basic Control	N/A	N/A
23	0.0.0.0	1	Basic Control	N/A	N/A
24	0.0.0.0	1	Basic Control	N/A	N/A
PBIO	0.0.0.0	4	PBUS control	N/A	N/A
CUE SERVER 1	192.168.10.230	N/A	Cue Point Server	Connected	Registered
CUE SERVER 2	0.0.0.0	N/A	Cue Point Server	N/A	N/A

[Edit / Backup / Restore Channel Assignment Table](#)

- 2) Click on the "Edit Channel Assignment Table" link at the bottom of the page. The Edit Channel Assignment Table will be displayed.



Flex Control Network™

Model NO: CP20 Serial NO: 500373
 Software Ver: 3.1B3 Label: CP20-10.90
 Serial Ports: 0 GPU/GPO: 0/0 [Logout](#)

Channel Assignment
System

Channel Assignment Table		
Local Channel	Remote IP	Remote channel
1	<input type="text" value="192.168.10.91"/>	1 ▼
2	<input type="text" value="192.168.10.91"/>	2 ▼
3	<input type="text" value="192.168.10.91"/>	3 ▼
4	<input type="text" value="192.168.10.91"/>	4 ▼
5	<input type="text" value="0.0.0.0"/>	1 ▼
6	<input type="text" value="0.0.0.0"/>	1 ▼
7	<input type="text" value="0.0.0.0"/>	1 ▼
8	<input type="text" value="0.0.0.0"/>	1 ▼

- 3) On Local Channel #1, click in the Remote IP address field and enter the DC20's IP address.
- 4) Click on the Remote Channel drop down arrow and select "1".
- 5) On Local Channel #2, click in the Remote IP address field and enter the DC20's IP address.
- 6) Click on the Remote Channel drop down arrow and select "2".
- 7) If DC20 channels #3 and 4 are used, assigned them to any of the other Local Channels.
- 8) Click on "Save" to save the entered data.

OR

Click on "Back" to exit without saving.

I. Additional Setups

No additional setups are required in "System Maintenance" for normal operation.

10. DNF CONTROLS LIMITED WARRANTY

DNF Controls warrants its product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser from DNF Controls.

In order to enforce the rights under this warranty, the customer must first contact DNF's Customer Support Department to afford the opportunity of identifying and fixing the problem without sending the unit in for repair. If DNF's Customer Support Department cannot fix the problem, the customer will be issued a Returned Merchandise Authorization number (RMA). The customer will then ship the defective product prepaid to DNF Controls with the RMA number clearly indicated on the customer's shipping document. The merchandise is to be shipped to:

DNF Controls
12843 Foothill Blvd., Suite C
Sylmar, CA 91342
USA

Failure to obtain a proper RMA number prior to returning the product may result in the return not being accepted, or in a charge for the required repair.

DNF Controls, at its option, will repair or replace the defective unit. DNF Controls will return the unit prepaid to the customer. The method of shipment is at the discretion of DNF Controls, principally UPS Ground for shipments within the United States of America. Shipments to international customers will be sent via air. Should a customer require the product to be returned in a more expeditious manner, the return shipment will be billed to their freight account.

This warranty will be considered null and void if accident, misuse, abuse, improper line voltage, fire, water, lightning or other acts of God damaged the product. All repair parts are to be supplied by DNF Controls, either directly or through its authorized dealer network. Similarly, any repair work not performed by either DNF Controls or its authorized dealer may void the warranty.

After the warranty period has expired, DNF Controls offers repair services at prices listed in the DNF Controls Price List. DNF Controls reserves the right to refuse repair of any unit outside the warranty period that is deemed non-repairable.

DNF Controls shall not be liable for direct, indirect, incidental, consequential or other types of damage resulting from the use of the product.

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