



12843 Foothill Blvd.,  
Suite D  
Sylmar, CA 91342  
818 898 3380 voice  
818 898 3360 fax  
[www.dnfcontrols.com](http://www.dnfcontrols.com)

# ST420 -EVS

## Shotbox

### USER MANUAL

Manual Version ..... 2.0 120803  
Document No. .... ST420-EVS\_User\_Manual

## **1. REVISION HISTORY**

120803      Rev. 2.0      Company header information revised.  
Added DNF Controls Limited Warranty.

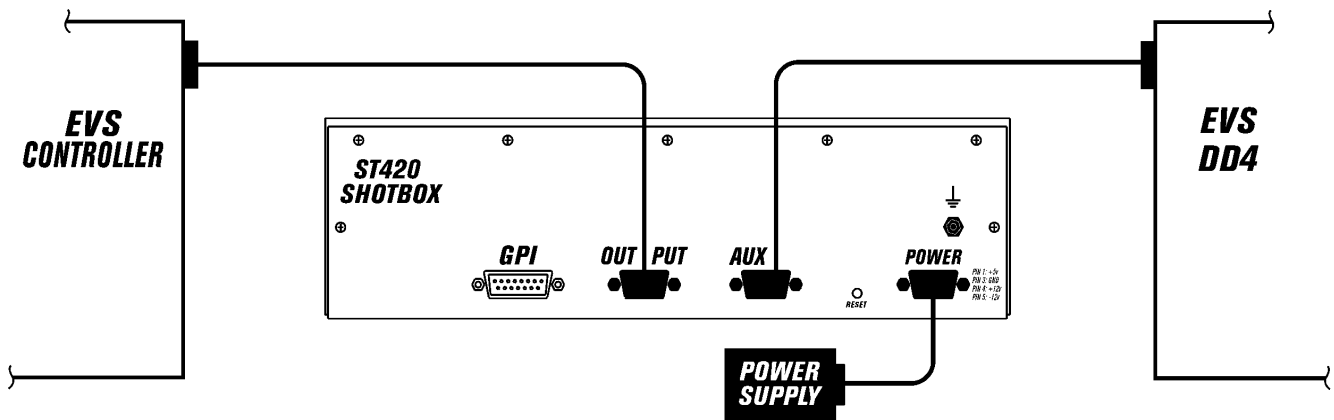
## **2. FEATURES**

**Now, control your EVS from the ST420 Shotbox:**

- ▣ Quick and Easy “Shotbox” operation of EVS.**
- ▣ Select a Page**
- ▣ Select a Playlist**
- ▣ Cueup a Playlist**
- ▣ Transport Control of a Playlist**
- ▣ Load Clips**

### 3. INSTALLATION

1. Plug one end of the standard 9-pin cable into EVS DDR connector on the back of the ST420. Plug the other end into RS422 REMOTE connector on the EVS DDR.
2. Plug one end of the standard 9-pin cable into EVS CONTROLLER connector on the back of the ST420. Plug the other end into D9 connector on the EVS remote control panel.
3. Connect power to the ST420. **DO NOT HOTPLUG!!**



Installation is complete.

4. On power up, the ST420 displays the version number and prompts the user to select the version of LSM software.

Switchers displaying “OLD 1 CAM”  
“New 1 CAM”  
“NEW 2 CAM” are blinking.

5. Press the switch appropriate to the version of LSM you are running.

**NOTE:** Differences between OLD and NEW systems:

OLD has 4 pages, 40 Playlists.  
NEW has 3 pages, 30 Playlists.

## 4. OPERATIONS

### a. SELECT A PAGE.

1. Press [**PAGE1**] to select page 1.
2. Page 1 LED will turn on indicating that desired page was selected.
3. Press [**PAGE2**], [**PAGE3**], [**PAGE4**] to select page 2, 3 and 4 respectively.  
(New systems have 3 pages; [**PAGE4**] doesn't do anything)

### b. SELECT A BANK

1. The LCD keys 1-10 display BANK1-BANK0 of the LSM.
2. The currently active bank has its LED switch displayed in RED.
3. To select a BANK, press one of the LCD keys 1-10.  
The selected BANK key will turn RED.

### c. SELECT A PLAYLIST

1. The LCD keys on the ST420 show 20 playlists at a time.  
  
Keys 11- 20 always represent playlists 11-20. (11-10 for new style LSM)  
  
Keys 21- 30 represent playlists 21-30 in normal mode. (21-20 for new style LSM)
2. To access playlists 31-40 (31-30 for new style LSM), press [**MORE PLAYLISTS**] on the ST420.  
  
The LED on that key will turn on and the keys 21- 30 will display the rest of the Playlists.
3. Press a key with a desired playlist number to select a playlist.  
  
The key will turn RED indicating that the command to select that playlist was sent to the EVS DDR.

### d. CUEUP A PLAYLIST

Select a playlist as described in the previous step.

Press [**RECUE**].  
The selected playlist will be cued up and ready to play.

**e. TRANSPORT CONTROL OVER A PLAYLIST.**

Select and cueup a playlist as described in previous steps.

Press [**PLAY**]. The playlist will start playing out.

Press [**STOP**] to stop a playback at any time.

Press [**PLAY**] to resume a playback.

Press [**RECUE**] to RECUE a currently selected playlist to the beginning.

**f. LOAD A CLIP (CUE #)**

Press [**CUE#**].

The ST420 will display a numeric keypad.

Enter a 3-digit clip #.

The display on the right side of the ST420 keyboard will display entered numbers.

Press [**ENTER**] to load an entered clip.

**OR**

Press [**CANCEL**] to exit that mode without loading a clip.

Upon loading a clip, ST420 will leave the CUE mode and go back to playlist mode.

Press [**PLAY**] to play a clip.

Press [**STOP**] to stop a clip.

For the new 2-Cam system:

1. Enter 3-digit clip #.
2. Press [**ENTER**] to load both A & B Clips.  
**OR**
3. Press [**A**] to load clip A.  
**OR**
4. Press [**B**] to load clip B.

### **Select Version:**

1. Press [**LEARN**], [**STOP**] and [**RECUE**] simultaneously.
2. The Shotbox shows select mode: “Old 1Cam,” “New 1Cam,” “New 2Cam.”
3. The currently selected mode is RED; other modes are green.
4. Press the desired mode of operation to select it and leave the select mode.  
**OR**
5. Press [**ESC**] to leave without changing the mode.

## 5. SPECIFICATIONS

Power: 90 VAC to 265 VAC adapter supplied with IEC connector

Size: [L" x W" x H"] 11.5" x 6 .5" x 1.75" (front) 3.5" (rear)

Weight: 4 lbs.

Rear Panel Connectors:	Out	(DB9F)
	GPI	(DBF15F)
	Power	(DB9M)
	Aux	(DB9F)

### “Aux” Port Connector EVS Controller

#### RS422 SERIAL CONNECTOR, 9-Pin D-type, female (DB9F)

Pin #	1	Frame Ground	6	Receive Common
	2	Receive A ←	7	Receive B ←
	3	Transmit B →	8	Transmit A →
	4	Transmit Common	9	Frame Ground
	5	Spare		

### “Output” Port Connector EVS DDR

#### RS422 SERIAL CONNECTOR, 9-Pin D-type, female (DB9F)

Pin #	1	Frame Ground	6	Receive Common
	2	Transmit A →	7	Transmit B →
	3	Receive B ←	8	Receive A ←
	4	Transmit Common	9	Frame Ground
	5	Spare		

#### POWER CONNECTOR, 9-in D-type, female (DB9M)

Pin #	1	+5v DC	6	+5 VDC
	2	+5v DC	7	Ground
	3	Ground	8	Ground
	4	+12 VDC	9	Ground
	5	-12 VDC		

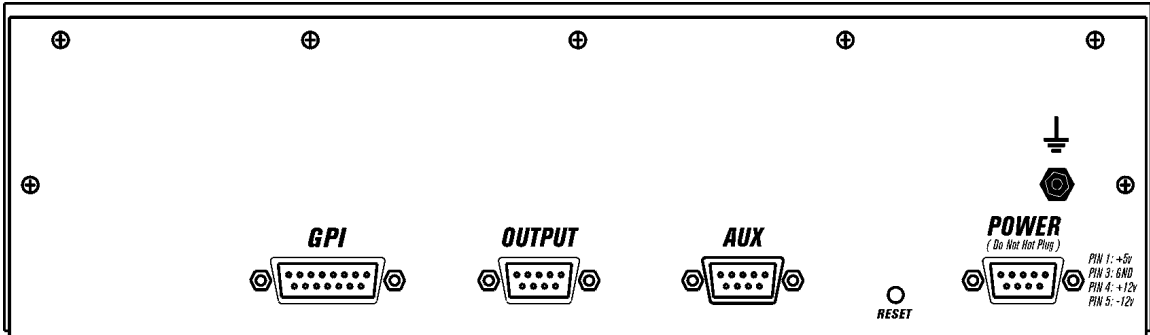
## **GPI IN/OUT CONNECTOR, 26-Pin D-type, female (DB26F)**

Pin #	1	GPI 1 Out	
	2	GPI 2 Out	
	3	GPI 3 Out	
	4	GPI 4 Out	
	5	GPI 5 Out	
	6	GPI 6 Out	
	7	GPI 7 Out	
	8	GPI 8 Out	
	9	Common Ground	
	10	GPI 1 In	PLAY
	11	GPI 2 In	STOP
	12	GPI 3 In	
	13	GPI 4 In	
	14	GPI 5 In	
	15	GPI 6 In	
	16	GPI 7 In	
	17	GPI 8 In	
	18	Common Ground	
	19	+ 5 VDC	
	20	+ 5 VDC	
	21	No Connection	
	22	No Connection	
	23	No Connection	
	24	No Connection	
	25	No Connection	
	26	No Connection	

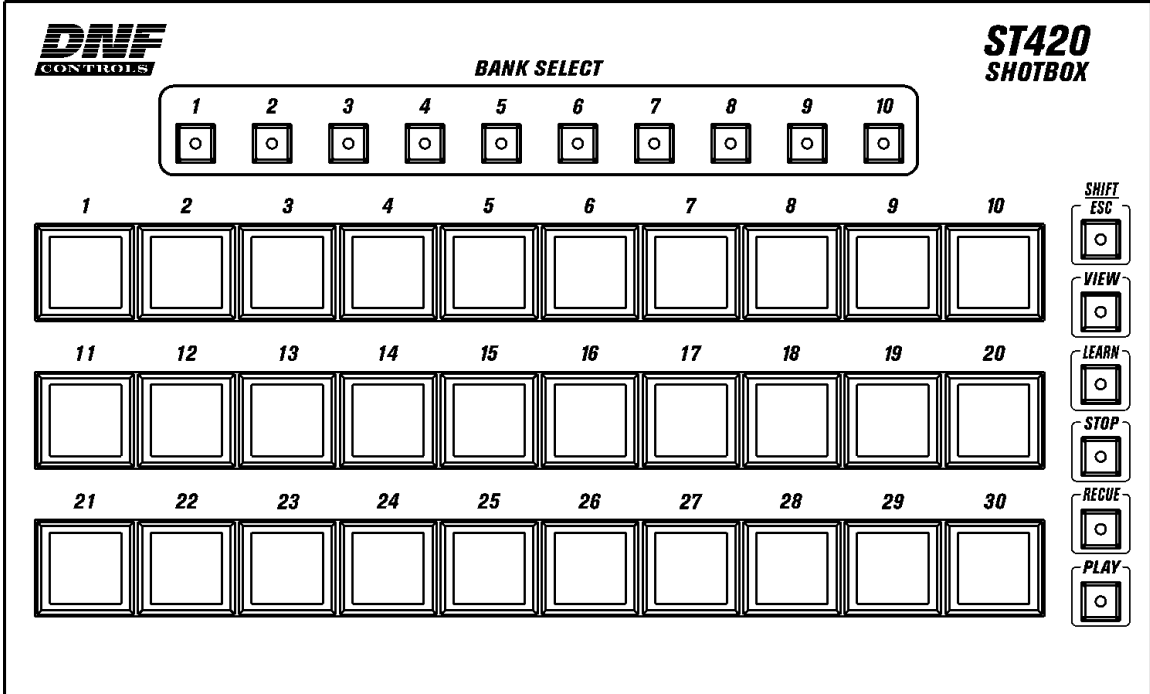
Note: GPI's not implemented in V 1.0



# Rear Panel



# Top Panel



## **6. 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 D  
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.

###