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Model No. 4000CL-MAV70

400 CLIP FAST ACCESS SYSTEM for MAV70

USER MANUAL

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1. REVISION HISTORY

100903	Rev. 3.1	Company header information revised.
112103	Rev. 3.2	Updated Transmit Cue List & Receive Cue List Function description. Added DNF Controls Limited Warranty.
080604	Rev. 3.3	Added T-bar dimension.

Getting Started . . .

2. SYSTEM DESCRIPTION

The 400 Clip FAST Access System consists of the ST300-SSM VTR Controller and Shotlist Software. The Video Server must support Sony Disk Protocol.

Upon receipt of the Learn command, the ST300 saves the CLIP IDs of the currently loaded clips, the current time of each clip, the VTRs they are loaded on and the current GANG mode into the appropriate Cue Point.

SHOTLIST provides fast access to existing video clips stored on the MAV70.

The SHOTLIST contains up to 400 CLIP IDs, stored in non-volatile memory in the ST300. Remotely view the CLIP IDs that exist in the Video Server under control.

Any clip in the SHOTLIST can be quickly loaded by simply entering the associated 3-digit number of its location, then pressing [**LOAD**]. Press [**PLAY**] to play the clip. Press [**RECUE**] to recue to the beginning of the clip.

DEFINITIONS

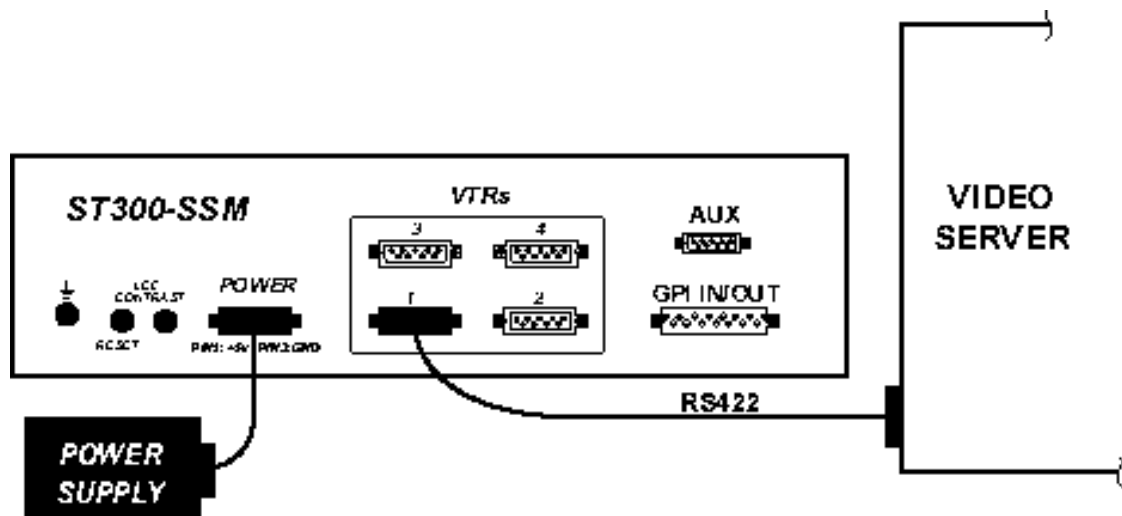
- ❑ Throughout this document the MAV70 will be referred to as “Video Server.”
- ❑ The ST300-S/SM is referred to as “ST300.”
- ❑ Words surrounded by brackets, for example, [**ENTER**], are keys on the ST300. [**XXX**] + [**XXX**] means hold the two keys down simultaneously. XXX= Key name.

3. SYSTEM INSTALLATION

- a. Plug one end of a 9-conductor, RS422 serial cable into the VTR 1 connector on the rear of the ST300. Plug the other end of the cable into the REMOTE 1 connector on the Video Server. Plug VTR2 into Remote 2, VTR3 into Remote 3 and VTR4 into Remote 4.
- b. Connect the +5, +12, -12 VDC POWER SUPPLY into the POWER connector on the rear of the ST300. Plug the Power Supply into an outlet, 90 VAC to 240 VAC.
- c. Check SETUP MENU prior to using the ST300 to confirm proper Record mode and other User settable modes.

Installation is complete.

SYSTEM INSTALLATION DIAGRAM



4. LOAD AND PLAY A CLIP

- a. Press **[CLIP LIST]** to view the list of Clips that exist in the VIDEO SERVER. The display will show “CREATE NEW CLIP.”
- b. Turn the Wheel. The top line of the display will show “xxxxxxx:”
Where “xxxxxxx” is the eight-character CLIP ID.
Turn the Wheel clockwise to scroll forward, or counter-clockwise to scroll backward, through the list of available Clips.
OR
Manually enter a CLIP ID from the ST300 numeric keypad.
Create an ID, with a maximum of eight characters. Press **[ENTER]**.
- c. Press **[LOAD]** to load the current CLIP ID shown on the top line of the display.
- d. Press **[PLAY]**.

5. RECUE THE CURRENTLY LOADED CLIP

- a. Press **[RECUE]** to recue the CLIP to its beginning.
(In RECALL mode, **[RECUE]** will recue to the user defined in time.)
OR
Press **[SHIFT] + [RECUE]**.
The display will show: “xx:xx:xx:xx” (Where xx:xx:xx:xx = Last entered RECUE time.)
“Enter RECUE time”
- b. Enter the desired time to search using the ST300’s numeric keypad.
- c. Press **[ENTER]** to go to the entered time.
OR
Press **[ESC]** to exit without searching

6. VIEW THE CLIP ID OF THE CURRENTLY LOADED CLIP

Press and hold **[SHIFT]**; then press and release **[LOAD]**.

The bottom line will show: “Loaded Clip: xxxxxxxx”
where xxxxxxxx is the CLIP ID.

7. LEARN

- a. Select the desired Cue Point by pressing [**NEXT CUE**], [**LAST CUE**] or by manually entering the Cue Point using the numeric keypad.

The selected Cue Point number is shown on the bottom line of the display.

- b. **LOAD** a clip (see previous section).

- c. Press [**SHIFT**] + [**MARK**] to start the LEARN.
The first line of the display will show "Select VTRs:"
The second line of the display will show "Mark-Lrn, ESC-cancel."

- d. Press VTR [**1**], [**2**], [**3**] or [**4**] to select the VTR to be learned into the current Cue Point.

If the VTRs are ganged, select one VTR that is part of the Gang. The rest of the Gang will learn automatically.

- e. Press [**MARK**] to complete the LEARN.
OR

Press [**ESC**] to exit without LEARNING.

The ST300 will: LEARN (save) the VTR Number (1,2,3,4), loaded CLIP ID and current IN time to the selected Cue Point.

8. RECALL

- a. Select the desired Cue Point by pressing [**NEXT CUE**], [**LAST CUE**].
OR

By manually entering the Cue Point using the numeric keypad.

The selected Cue Point number is shown on the bottom line of the display.

- b. Press [**LOAD**] on the ST300.

The ST300 will automatically load the Learned clips on the Learned VTRs, cue the clips to the Learned time, then set the Learned GANG mode.

Advanced Features . . .

9. CREATE NEW CLIPS

- a. Press **[CLIP LIST]**. The CLIP LIST indicator turns on.
The display will show “CREATE NEW CLIP.”
- b. Press **[LOAD]**. The display will show the default CLIP ID.
- c. Press **[LOAD]** to accept the default CLIP ID.

OR

Use **[NEXT CUE]**, **[LAST CUE]** and Wheel to create a CLIP ID.

Use the **[NEXT CUE]** and **[LAST CUE]** keys to position the cursor.
Turn the Wheel to select the desired letter.

OR

Create an ID using the numeric keypad, with a maximum of eight characters.
Press **[ENTER]**.

- d. Press **[LOAD]** to create the selected CLIP ID.

If the selected CLIP ID already exists, a warning message will be displayed. To load the existing clip, press **[ENTER]**. Press **[ESC]** to exit without loading the existing clip.

10. TRANSFERRING CUELIST

a. TRANSMIT CUE LIST FUNCTION

The TRANSMIT CUELIST function allows you to transmit your list of Cue Points to a PC, using the provided utility software on the PC, or to another ST300. Transfer to a PC requires OpSuite 3.0 software, which runs on a Windows-based computer. Contact DNF Controls for more information.

1) TO TRANSMIT CUE POINTS TO THE ST300

- a) Connect the VTR4 connector on the rear of the ST300 to the VTR4 connector of the receiving ST300 using an RS422 9-pin cable with TX and RX lines crossed.
(A “turnaround” cable)
- b) Press **[MENU]**.
- c) Scroll the wheel until “Transmit CUE List? YES=Enter, Exit=ESC” is displayed.
- d) Press **[ENTER]** to start transmitting.
The Display shows “Waiting to transmit” on the first line.
- e) When the Receiver is ready, transfer starts automatically.
The Display now shows “Transmitting cuelist.”
- f) After the transfer is over, the display shows “Transfer is over” for one second, and then shows “Waiting to transmit” again.
- g) Connect another ST300 to transmit the list again.
OR
Press **[ESC]** to exit the MENU mode.

2) TO TRANSMIT CUE POINTS TO THE PC

- a) Connect the VTR4 connector on the back of the ST300 to one of the COM ports on the PC using a RS422 to RS232 adapter.
- b) Repeat steps b-g of TO TRANSMIT CUE POINTS TO THE ST300 section.

b. RECEIVE CUELIST FUNCTION

The RECEIVE CUELIST function allows you to receive your list of Cue Points from a PC or from another ST300. Transfer to a PC requires OpSuite 3.0 software, which runs on a Windows-based computer. Contact DNF Controls for more information.

1) TO RECEIVE CUE POINTS FROM THE ST300

- a) Connect the VTR4 connector on the back of the ST300 from the VTR4 connector of the transmitting ST300 using RS422 9-pin cable with TX and RX lines crossed. (A “Turnaround” Cable)
- b) Press [MENU].
- c) Scroll the wheel until “Receive CUE List? YES=Enter, Exit=ESC” is displayed.
- d) Press [ENTER] to start receiving.
The Display shows “Waiting to receive” on the first line.
- e) When the Transmitter is ready, transfer starts automatically.
The Display now shows “Receiving cuelist.”
- f) After the transfer is over the display shows “Done-Success! Press any key...”
- g) Press any key. The display shows “Receive cuelist?” message.
- h) Press [ESC] to exit the MENU mode.

2) TO RECEIVE CUE POINTS FROM THE PC

- a) Connect the VTR4 connector on the back of the ST300 to one of the COM ports on the PC using RS422 to RS232 adapter
- b) Repeat steps b-h of the TO RECEIVE CUE POINTS FROM THE ST300 section.

Reference . . .

11. SETUP MENU

Press [MENU]. The MENU indicator will turn on.

Turn the Wheel to select item to change.

Press [MENU] **OR** use the Softkeys to change the desired mode for that option.

Turn the Wheel at anytime to select another item.

Press [ESC] at anytime to exit SETUP MENU. The MENU indicator will turn off.

<u>MENU MODES</u>	<u>(Turning Wheel clockwise)</u>
RECORD	<p>Press [MENU] to select the desired record mode: Lockout, Assemble, Crash (Full) or Insert.</p> <p><u>Only</u> in INSERT mode: Press the associated Softkey, located below the display, to toggle Video(V), Audio1(A1), Audio2(A2), Audio3(A3), Audio4(A4) on/off.</p>
WIND MODE	<p>Press Softkey to select: HOLD (Fast wind is maintained only while key is depressed.) OR LATCH (Fast wind is initiated and maintained with momentary key press.)</p> <p>Select fast wind speed (3.9 to 23.7) by pressing Softkey below SPD.</p>
ST300 SETUP	<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>ST300 SETUP</p> <p>Clear Cues SetDefault</p> </div> <p>Press Softkey beneath ClearCues to clear all Cue Points to 00:00:00:00. Press Softkey [YES] when asked "Are You Sure?"</p> <p>Press Softkey beneath SetDefault to set ST300 to default settings. Press Softkey [YES] when asked "Are You Sure?"</p>
DISPLAY SOFTWARE VERSION	The version number for the currently installed software is displayed.
RECORD	<p>Press Softkey to select single button or 2-button record. RECORD = [REC] Only OR RECORD = [REC] + [PLAY]</p>
TRANSMIT CUELIST	Transmits Cuelist to another ST300 or to a PC.
RECEIVE CUELIST	Receives Cuelist from another ST300 or a PC.

12. FUNCTION TABLE

Function	Key Press	Description
GOTO ENTERED TIME	[SHIFT] + [RECUE]	Search the VTR to the manually entered time. Use the ST300 numeric keypad. Press [ENTER] or [RECUE]. NOTE: GRASS VALLEY GROUP Profile does not support TC or VITC time search.
GANG	[SHIFT]+[VTR #1] OR [SHIFT]+[VTR #2] OR [SHIFT]+[VTR #3] OR [SHIFT]+[VTR #4]	Individually press the VTR keys to be included in the gang; the LED above the key will turn on. Press the VTR key again to remove from the gang; the LED above the key will turn off. Press [ESC] to exit. The VTR LEDs that are on show the gang. The flashing LED shows which VTR is currently selected.
FFWD	[FFWD]	Press and HOLD to shuttle. Release key to stop. Set WIND Speed in MENU.
JOG	[JOG]	Select JOG mode and enable Wheel.
LAST CUE	[LAST CUE]	Step to the previous Cue Point Location.
NEXT CUE	[NEXT CUE]	Step to the next Cue Point Location.
RECORD	[REC]	Places VTR into the Record mode selected by RECORD MODE in the SETUP MENU. Press [RECORD] or [RECORD] + [PLAY].
REWIND	[RWD]	Press and HOLD to shuttle. Release key to stop. Set WIND Speed in MENU.
SHUTTLE	[SHUTTLE]	Select SHUTTLE mode and enable Wheel.
STOP	[STOP]	Press once to STILL frame VTR. Press again to put VTR into STOP mode.
LOOP	[SHIFT] + [PLAY]	Play the currently loaded clip in a continuous loop.
TIME MODE SELECT	[TIME MODE]	Press to toggle between Timecode (TC), VITC (VT) or Tape Timer (TM) display modes.

13. SPECIFICATIONS

Power:	90 VAC to 265 VAC 50/60 adapter (supplied)
Size:	(L" x W" x H") 12" x 6" x 1.5" (front) 3.0" (rear) (T-bar unit is 12.6" long)
Weight:	4 lbs.
Rear Panel Connectors:	VTR1, VTR2, VTR3, VTR4 ... (All DB9F) GPI (DB15F) Power (DB9M) Aux (DB9F)
Display:	Easy to read 2-line, back-lit LCD display (User adjustable contrast)
Jog/Shuttle Wheel:	With mechanical detents.
Optional "T"-bar:	Slo-mo 0-200% of Play Speed

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		

POWER CONNECTOR

9-Pin D-Type, Male (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

15-Pin D-Type, Female (DB15F)

Pin #	Description	Function	Pin #	Description	Function
1	GPI 1 Out		9	GPI 1 In	Play
2	GPI 2 Out		10	GPI 2 In	Stop
3	GPI 3 Out		11	GPI 3 In	Recue
4	GPI 4 Out		12	GPI 4 In	Next Cue
5	GPI 5 Out		13	GPI 5 In	Last Cue
6	GPI 6 Out		14	GPI 6 In	Recall
7	GPI 7 Out		15	GPI 7 In	
8	Ground				

14. 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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