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Model 3040P/DLO-L

**3040P Playlist Playout Controller with
3040P Download Utility and
Asrun Utility**

Playlist Playout System

For

Louth Protocol

User Manual

Revision 1.93

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1. REVISION HISTORY

020503 Rev. 1.1	Added Sections PLAYLIST VALIDATION and EDITING A PLAYLIST, and modified for Phase 2 release.
051403 Rev. 1.2	Modified for Phase 3 release.
070803 Rev. 1.3	Added Section 12.d., COPY AND PASTE AN ELEMENT.
100103 Rev. 1.4	Modified Section 12.c., ADD A NEW ELEMENT TO THE LIST. Added Section 6.h., CLIP ID KEYWORD.
112103 Rev. 1.5	Added DNF Controls Limited Warranty.
012604 Rev. 1.6	Added Search, Gang, Specification sections.
020705 Rev. 1.7	Revised to conform to software V5.3 011705.
031005 Rev. 1.8	Corrected GPI pin-out.
020806 Rev. 1.9	Minor corrections.
030106 Rev. 1.91	Replaced connection diagram.
110206 Rev. 1.92	Added Asrun Option Section.
072707 Rev. 1.93	Added SP2 pins 7 & 8 warning..

2. DESCRIPTION

The 3040P-L Playlist Payout System with Download Option consists of the ST400 controller with expanded memory, an internal timecode reader, and Playlist Payout software. The system also includes "3040P Download Utility," a Microsoft Windows PC based application. This PC application allows playlists to be downloaded directly into the 3040P through a COM port on the PC.

The 3040P-L Playlist Payout System with Download Option will support simultaneous payout of up to 4 playlists, one per channel. It also provides basic control of up to 2 VTRs.

Each playlist may contain up to 2000 elements. Playlist elements may be COMMENT type, HARD TRIGGERED type, FOLLOW ALONG type, MANUAL TRIGGERED type, or a combination of types. The playlist may be played out automatically using hard triggers, semi-automatically (a stack of clips played out back to back), or as single events (play out single clip, then stop).

A playlist element consists of the following fields:

Element Type:	1 = Manual triggered playback element (ML) 2 = Hard triggered playback element (HT) 3 = Break element 4 = Follow-Along playback element (FA) 5 = Unknown element (UN) 6 = Manual record element (MR) 7 = Hard-triggered record element (HR) 8 = Follow-along record element (FR) 9 = Comment element
Trigger Time (required for Hard Triggered and Follow-Along elements):	This is the time at which payout will begin, referencing the incoming LTC signal.
Clip ID:	Clip ID of video clip that will payout. Clip IDs up to 32 characters are supported. Only the first 16 characters are displayed.
Clip Start Time (SOM):	Starting payout point of clip. Set to FF FF FF FF when undefined.
Clip Duration:	Payout duration of clip. May be less than the actual length of the clip. Set to FF FF FF FF when undefined.
Title/Comment:	This field is used for display purposes only. It may be up to 32 characters in length. Only the first 16 characters are displayed.

If an element is a MANUAL TRIGGERED type, then the displayed TIME TRIGGER will be blank. The contents of the TIME TRIGGER field will not be altered.

If an element is a COMMENT type, then only the Clip ID and Comment fields will be displayed for that element.

DEFINITIONS

- Words surrounded by brackets in bold type, **[ENTER]**, are keys on the ST400.
- Words surrounded by brackets in bold italic type, ***{LOAD}***, are softkeys on the ST400.
- **[XXX] + [XXX]** means hold the two keys down simultaneously.

3. INSTALLATION

- a. Plug one end of a 9-conductor, RS422 serial cable into the VTR 1, VTR2, VTR3, or VTR4 connector on the rear of the 3040P.
- b. Plug the other end of the 9-conductor, RS422 serial cable into the remote control connector on the Video Server.
- c. Connect Video Reference (Black Video) to the REF VIDEO connector on the rear of the 3040P.
- d. Connect the facility LTC signal to the LTC Input BNC connector on the rear of the 3040P.
- e. Plug the power supply into an outlet, 90 VAC to 240 VAC.

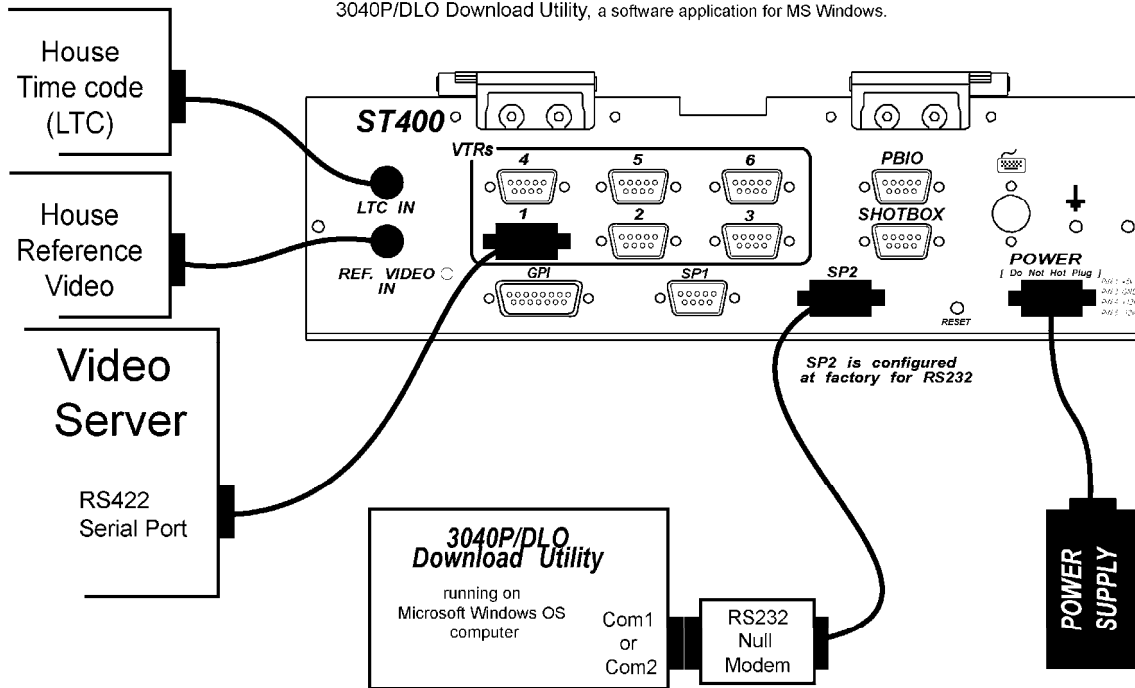
4. INSTALLATION DIAGRAM

3040P/DLO System Installation Diagram

System consists of:

3040P/DLO Playlist Payout Controller with Download Option.

3040P/DLO Download Utility, a software application for MS Windows.



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5. VIDEO SERVER SETUP

Select “Louth” or “VDCP” control protocol on the video server. Refer to the manufacturer’s documentation for configuration instructions and other setups required before usage.

6. 3040P SETUP

Press [MENU]. The current settings of the 3040P are displayed.
Press {EXIT} or [ESC] at any time to exit the Setup Menu.
Turn the wheel to select the setting to change.

a. LOUTH PORT SETUP

Set the Louth Port Number on the video server to be controlled

- 1) Press [MENU]. The current settings of the 3040P are displayed.
- 2) Turn the wheel to select LOUTH PORT.
- 3) Press {CHANGE}.
- 4) Using the numeric keypad, enter the Louth Port number to be controlled by the 3040P.
- 5) Press {OUTPUT} to select a playout channel. The display will return to the Main Menu Screen and show the entered setting. Press {EXIT}.
- 6) Repeat steps 1-4 for each VTR/Port

b. NTSC/PAL/DF SETUP

Set the Video Standard. This setting affects all time computations.

- 1) Turn the wheel to select STANDARD.
- 2) Press {CHANGE} to change the current setting. Follow the displayed prompts.
- 3) Press the {BACK} key to return to the Setup Menu screen.

c. WIND SPEED & MODE

Set the speed and mode of the FFWD and Rewind key. If Hold mode is selected, the video will move only while the FFWD or RWD key is held down. In Latch mode, the video will move until [STOP] is pressed.

- 1) Turn the wheel to select STANDARD.
- 2) Press {CHANGE} to change the current setting. Follow the displayed prompts.
- 3) Press {BACK} to return to the Setup Menu screen.

d. EXTENDED CLIP IDS

Set the clip ID size supported by the video server. Set Extended Clips = ON if clips IDs are greater than 8 characters in length. Set Extended Clips = OFF if All clip IDs are no more than 8 characters in length.

- 1) Turn the wheel to select EXTENDED IDs.
- 2) Press {CHANGE} to change the current setting. Follow the displayed prompts.
- 3) Press {BACK} to return to the Setup Menu screen.

e. DSK – PREROLL UPDATE

- 1) OFF – Will not send update command to server.
- 2) ON – Will send update command to server.

f. PLAY PREROLL

Set the play command latency for the current channel. The default value is 5 frames. For Sony MAV-70 use 72 frames. For Profile-XP use 40 frames.

- 1) Turn the wheel to select PLAY PREROLL.
- 2) Press {CHANGE} to change the current setting. Follow the displayed prompts.
- 3) Press {BACK} to return to the Setup Menu screen.

g. RECORD PREROLL

- 1) Turn the wheel to select RECORD PREROLL.
- 2) Press {CHANGE} to change the current setting. Follow the displayed prompts.
- 3) Press {BACK} to return to the Setup Menu Screen.

h. DELETE MODE

For Automatic Playout Mode only. When DELETE MODE is ON, the playlist element will be deleted from the playlist after it is played out.

- 1) Turn the wheel to select DELETE MODE.
- 2) Press **{CHANGE}** to change the current setting. Follow the displayed prompts.
- 3) Press **{BACK}** to return to Setup Menu Screen.
- 4) If DELETE MODE= ON, turn the wheel to select “Keep __ Elements after playout.”
- 5) Press **{CHANGE}** to change the current setting. Follow the displayed prompts. Using the numeric keypad, enter the number of elements to keep after playout.
- 6) Press **{BACK}** to return to the Setup Menu screen.

i. NUMBER OF ELMTS

If “DELETE MODE =ON,” enter number of elements to remain in the list after playout. (10 max.)

j. AUTOMATIC MODE MANNED/UNMANNED

For Automatic mode only. In Unmanned mode, Hard Triggered and Follow-Along elements are treated as Hard Triggers and played at the entered Trigger Time. All Manual elements are skipped.

In Manned mode, Hard Triggered elements are played out at their entered Trigger Times, Follow-Along elements play out back to back, and Manual elements require a PLAY key press to playout.

- 1) Turn the wheel to select Automatic mode.
- 2) Press **{CHANGE}** to change current setting. Follow the displayed prompts.
- 3) Press **{BACK}** to return to the Setup Menu screen.

k. AUTOMATIC DURATION

- 1) Turn wheel to select automatic duration.
- 2) Press *{CHANGE}* to change current settings.
Follow display prompts.
 - a) Select *{LIST}*.
Clips will play using the list's "Start Time" and "Duration."
 - b) Select *{SERVER}*.
Clips will play using the clip length time from the server.
- 3) Press *{BACK}* to return to the Setup Menu screen.

l. CLIP ID KEYWORD

When an element has a clip ID that is in the list of Clip ID keywords, the 3040P will not attempt to load and play such element.

- 1) Turn the wheel to select Clip ID keyword.
- 2) Press *{CHANGE}* to view current list of keywords.
- 3) Press *{EXIT}* to return to Setup Menu.
OR
Press *{MODIFY}* to change the keyword list.
 - a) Following the instructions on the screen, enter up to 10 keywords.
 - b) Press *{EXIT}* to return to the Setup Menu screen.

m. ERROR LED ALERT

When ERROR LED ALERT is set to ON, the 6 LED's above the softkeys will begin to flash when an error occurs. The operator may clear the flashing LEDs by accessing the Error screen (*[SHIFT/ESC] + [MENU]*) and pressing *{LED OFF}*.

n. *{SERVICE}*

1) *{DEFAULTS}* Reset to factory settings.

 [ENTER] to accept.

 [ESC] to cancel.

2) *{DEL-LST}* Delete playout list for selected channel.

 [ENTER] to accept.

 [ESC] to cancel.

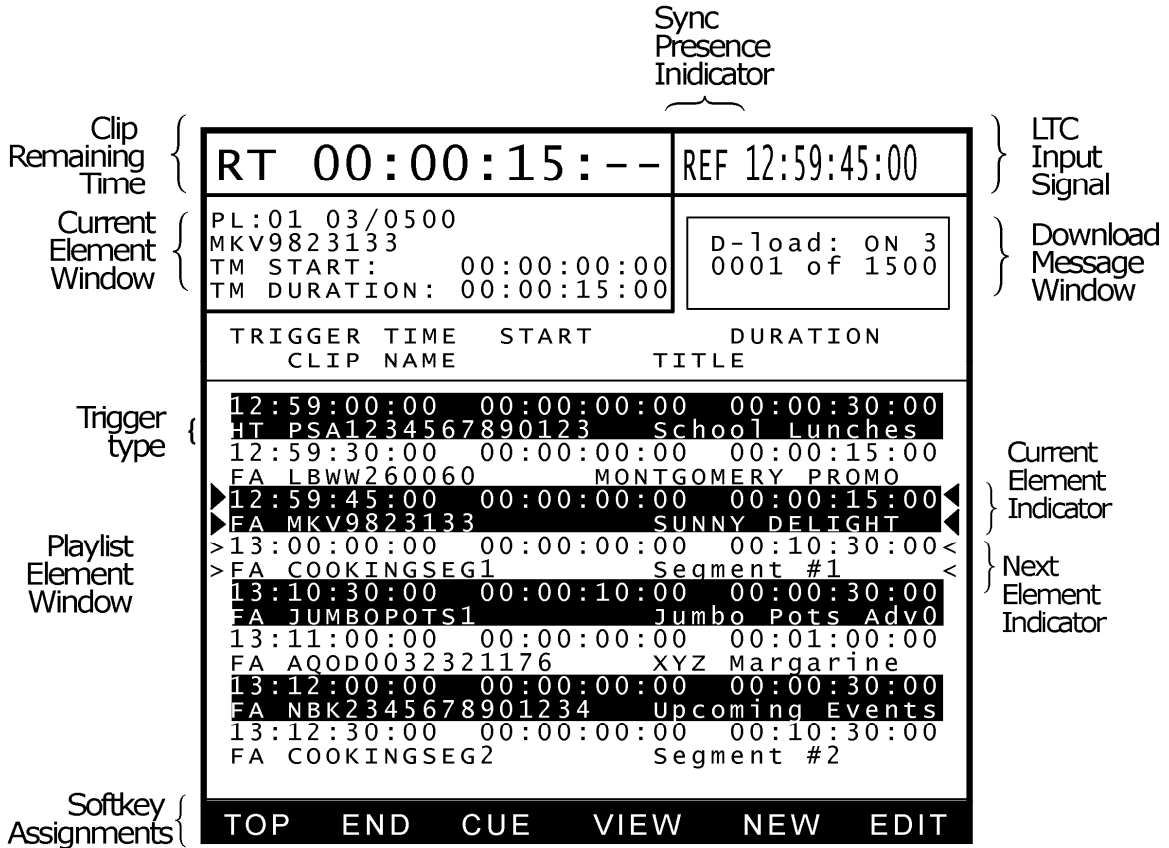
3) *{CLEANUP}* Delete all playlists.

 [ENTER] to accept.

 [ESC] to cancel.

4) *{BACK}* Return to previous menu.

7. FIGURE 1 - 3040P-L DOWNLOAD MAIN SCREEN LAYOUT



8. 3040P MAIN SCREEN LAYOUT

The 3040P main screen is made up of 7 individual windows. Refer to Figure 1, 3040P Download Main Screen Layout (Section 7).

a. CLIP REMAINING TIME

This window is located in the upper left-hand corner of the display. During Automatic, Semi-Automatic, and Single Element Playout Modes, this display shows the Remaining Playout Time of the clip. It counts down from the clip duration time to 00:00:00:00, when playout completes.

When Automatic, Semi-Automatic, and Single Element Playout Modes are disabled, this window will show the Elapsed Time of the clip in play, wind, jog, and shuttle modes.

b. SYNC PRESENCE INDICATOR

This window is located just to the right of the CLIP REMAINING TIME window. It will display a non-flashing “REF” when video reference is connected to REF VIDEO IN connector on the rear of the 3040P. It will display a flashing “REF” when video reference is not detected.

Video reference is required for Semi-Automatic Playout Mode.

c. LTC INPUT TIME

This window is located in the upper right hand corner of the display. It displays the LTC INPUT time, the reference time used during Automatic Playout Mode. If the LTC INPUT signal is disconnected for more than 1 second, the display will show “NO TC INPUT.”

LTC is required for Automatic-Playout Mode.

d. CURRENT ELEMENT WINDOW

This window is located in the upper left hand corner, just below the CLIP REMAINING TIME window. This window displays the Playlist number (PL) for the currently selected channel. PL01 is assigned to VTR1. PL02 is assigned to VTR2. PL03 is assigned to VTR3. PL04 is assigned to VTR4.

This window also displays the total number of elements in the playlist, as well as the number of the element that is currently playing or last played out. The Clip ID, Start Time, and Duration for this element are also shown.

e. DOWNLOAD MESSAGE WINDOW

This window is located in the upper right-hand corner, just below the LTC INPUT TIME window. All download status messages are displayed here. When a download is in process, the display will show the total number of elements to download as well as the number of elements downloaded.

f. SOFTKEY WINDOW

This window is located on the last row of the display. It shows the currently active functions assigned to the softkeys, which are located just below the display.

g. PLAYLIST ELEMENT WINDOW

This window is located in the middle of the display and shows a maximum of 8 playlist elements. The Trigger Time, Start Time (SOM), Duration, Trigger Type (two-letter abbreviation), Clip Name, and Title fields for each playlist element are displayed.

Also, the window has a closed arrow indicator to indicate the Current Element, which is the currently playing element or the last played element, if playout has completed. It has an open arrow indicator to indicate the Next Element, the next element to playout. These indicators are active during Automatic, Semi-Automatic, and Single Playout Mode.

While in any of these modes, pressing [NEXT] or [LAST] will activate VIEW Mode.

To view any element in the playlist, press [NEXT] or [LAST] to step forward or backwards, respectively. Press [SHIFT] + [NEXT] or [SHIFT] + [LAST] to move one screenful of elements forward or backward, respectively. Press [ALT] + [NEXT] or [ALT] + [LAST] to move 100 elements forward or backward, respectively. In the VIEW Mode, the closed arrow indicator indicates the currently selected playlist element.

Press {VIEW OFF} to exit VIEW mode and display the portion of the playlist that is currently playing out.

9. **PLAYOUT A PLAYLIST**

a. **AUTOMATIC PLAYOUT/RECORD**

1) **PLAYING A LIST**

Under Automatic Payout, the list plays out using element time triggers and the LTC Input time signal.

Hard Trigger elements will begin payout when the LTC Input time matches the element's trigger time. Follow-Along elements will begin payout when the preceding element completes payout. Manual elements will wait for a manual PLAY key press to begin payout. Refer to Section 6i, AUTOMATIC MODE MANNED/UNMANNED, for a description of how Follow-Along and Manual elements are handled.

- a) Confirm that LTC time is visible in the upper right hand corner of the display. If "No LTC Input" is displayed Automatic Payout will not operate. Check your LTC cable connections.
- b) Select channel by pressing VTR key "1", "2", "3", or "4".
- c) In the Setup Menu, set Automatic Mode= Manned or Unmanned. Refer to Section 6g for more information.
- d) In the Setup Menu, set Delete Mode= ON or OFF. If Delete Mode= ON, enter the number of elements to keep after payout. Refer to Section 6h for more information.
- e) If the channel's playlist is empty, download a playlist into this channel (Section 10) or manually enter a playlist using the EDIT functions (Section 12).
- e) Press [AUTO] to enable Automatic Payout Mode. The AUTO led will turn on.

The first element in the list with a trigger time just after the current LTC Input time will be the "Next Element." On the display, open arrows will be placed on both sides of this element.

Payout of the list will continue until all elements are played out or payout is stopped.

At anytime, press the [SHIFT] + [AUTO] key to stop and disable Automatic Payout. The AUTO LED will turn off.

2) **RECORDING A LIST**

- a) Select Input Louth Port in the Menu.
- b) Follow the same steps as in the previous section to record clips at their trigger times.

NOTE: 1) There should be at least 5 seconds interval between the elements so they don't get down-cut.

2) The elements should be of record type or they will be skipped.

b. **SEMI-AUTOMATIC PLAYOUT**

Semi-automatic Playout mode is back to back playout of Hard Trigger and Follow Along playlist elements. The LTC Input signal is not used.

Playout begins at the currently selected element. When this element completes playout, the next element in the list is automatically played out. This process continues until a BREAK or UNKNOWN element type is reached, or the end of the playlist is reached.

- 1) Confirm that Reference Video is connected to the REF VID IN connector on the rear of the 3040P/DLO. The REF indicator, on the display, to the right of the LTC Input time, will be on and NOT flashing. If the REF indicator is flashing, reference video is missing. Semi-Automatic Playout will not operate.
- 2) Select channel by pressing VTR key "1", "2", "3", or "4".
- 3) In the Setup Menu, set Delete Mode= ON or OFF. If Delete Mode= ON, enter the number of elements to keep after playout. Refer to Section 6h for more information.
- 4) If the channel's playlist is empty, download a playlist into this channel (Section 10) or manually enter a playlist using the EDIT functions (Section 12).
- 5) Use the [TOP], [NEXT], [LAST], [SHIFT] + [NEXT], [SHIFT] + [LAST], [ALT] + [NEXT], or [ALT] + [LAST] keys to select the first element to playout.
- 6) Press [SEMI AUTO] to enable this playout mode. The SEMI AUTO LED will turn on.
- 7) Press [PLAY] to begin playout.

At anytime, press [STOP] to terminate playout.

At anytime, press [SHIFT] + [SEMI AUTO] to disable Semi-Automatic Playout Mode. The SEMI AUTO LED will turn off.

c. SINGLE ELEMENT PAYOUT/RECORD

1) PLAYING A SINGLE ELEMENT

Single Element Payout plays out only one element at a time. When the end of the element is reached, play out stops and the next element in the list is cued.

- a) Confirm that Reference Video is connected to the REF VID IN connector on the rear of the 3040P/DLO. The REF indicator, on the display, to the right of the LTC Input time, will be on and NOT flashing. If the REF indicator is flashing, reference video is missing. Single Element Payout will not operate.
- b) Select channel by pressing VTR key “1”, “2”, “3”, or “4”.
- c) In the Setup Menu, set Delete Mode= ON or OFF. If Delete Mode= ON, enter the number of elements to keep after payout. Refer to Section 6f for more information.
- d) If the channel’s playlist is empty, download a playlist into this channel (Section 10) or manually enter a playlist using the EDIT functions (Section 12).
- e) Use the [NEXT], [LAST], [SHIFT] + [NEXT], [SHIFT] + [LAST], [ALT] + [NEXT], and [ALT] + [LAST] keys to select the playlist element to play.
- f) Press [SINGLE] to enable this payout mode. The SINGLE LED will turn on.
- g) Press [PLAY] to begin payout.

At anytime, press [STOP] to terminate payout.

At anytime, press [SHIFT] + [SINGLE] to disable Single Payout Mode. The SINGLE LED will turn off.

2) RECORDING A SINGLE ELEMENT

- a) Select an Input Louth Port in the setup menu.
- b) Follow steps a-f in the previous section to enable Single Payout Mode. Element’s trigger type has to be record type.
- c) Press [REC] to start recording the highlighted element.

10. DOWNLOADING A PLAYLIST INTO THE 3040P

Playlist downloads may occur at any time, whether or not a playlist is playing out. The downloaded playlist is appended to the end of the currently loaded playlist.

If the playlist in the 3040P is empty, Automated Playout Mode may be enabled after the first element in the playlist file is downloaded into the 3040P.

Each channel will support a playlist containing up to 2000 elements. If the currently available space in the playlist is less than the number of elements in the download file, the download process will abort and an error message will be displayed in the download message box on the 3040P's display.

All downloads into the 3040P/DLO must be initiated from the 3040P Download Utility application on the PC.

- a. Launch the 3040P Download Utility application if it is not already running.
- b. Select a Serial Port to use for communication with the 3040P. Using a mouse, click on "LTP serial Port" option, then select a Com port from a drop-down list.
- c. Using a mouse, click on the START DOWNLOAD button.
- d. Using a mouse, click on one of the "Channel #" buttons. Select the channel you wish to download the list into.
- e. The "Select a File to Download" dialog box will be displayed. Using the mouse, click on the file that you wish to download. The file name will be highlighted.
- f. Using the mouse, click on the OPEN button.
The download process will begin.

On the 3040P, the Download message box will show:

"D-load: ON yy"	Download process is running on Channel yy (01 thru 04)
"0000 of xxxx"	Element 0 of xxxx, the total is being downloaded.

- g. Allow the download to proceed until completion.
To abort download prior to completion, press [**SHIFT**] + [**DOWNLOAD**] on the 3040P.

11. PLAYLIST VIEW MODES

To view any element of the playlist in the Playlist Element Window:

Press **{VIEW}** soft key. If unit is in any play mode, press the **[NEXT]** or **[LAST]** key to enter VIEW mode.

Press **[NEXT]** to step forward through the playlist.

Press **[LAST]** to step backwards through the playlist.

Press **[SHIFT]** + **[NEXT]** to move forward one screenful of elements.

Press **[SHIFT]** + **[LAST]** to move backward one screenful of elements.

Press **[ALT]** + **[NEXT]** to move forward 100 elements.

Press **[ALT]** + **[LAST]** to move backward 100 elements.

If Automatic, Semi-Automatic, or Single Playout Mode is selected and the list is playing out, the Playlist Element Window will display the selected part of the playlist without affecting playout of the playlist.

Press **{VIEW OFF}** softkey to exit VIEW mode and display the portion of the playlist that is currently playing out.

If Automatic, Semi-Automatic, and Single Playout Mode are NOT selected, the currently selected playlist element in the Playlist Element Window will be automatically loaded on the channel for playout using the basic transport control keys.

12. EDITING A PLAYLIST

a. DELETE ELEMENT(S) FROM THE LIST

1) Press **[ALT]** + **[DEL]**.

2) On the display, a prompt will ask you to select an element(s) to delete.

Press **[1]** key to delete the selected element. The display will show the content of an element you've chosen to delete.

Press **[ENTER]** to delete or **[ESC]** to cancel.

OR

Press **[2]** key to delete all elements after highlighted element.

The display will show "Delete all elements after XXXX." Where XXXX – selected element number.

Press **[ENTER]** to delete, or **[ESC]** to cancel.

OR

Press **[3]** key to delete all elements before the highlighted element. (Only available when the list is not playing.)

The display will show "Delete all elements before XXXX." Where XXXX – selected element.

Press **[ENTER]** to delete, **[ESC]** to cancel.

b. EDIT AN EXISTING ELEMENT

- 1) Press *{EDIT}* softkey.
- 2) The display shows the content of an element you've chosen to edit.
- 3) The following softkeys are also displayed:

{←} Select previous element field to edit
When this softkey is pressed the highlight moves to the previous element field.

{→} Select the next element field to edit
When this softkey is pressed the highlight moves to the next element field.

{C-LIST} View the list of clips available on the server.
When this softkey is pressed, a list of clips is displayed. Use the wheel to scroll through the list of clips, press **[ENTER]** to save a clip name as part of the element, or **[ESC]** to return to editing the element

{MOVE} Moves the element relative to the trigger time in the list.

{RPLACE} Replace highlighted element with the edited one.
Does not alter the trigger time of an element.

NOTE: For all Hard Triggered and Follow-Along type elements the list is automatically sorted by Trigger Time.

{TOGGLE} Lets you change the element's trigger type.

- 4) Using numeric keyboard on the 3040P or PC keyboard, edit all parts of an element, then press one of the softkeys to replace the element in the list, or to move the element to the highlighted position.

Press **[ESC]** at any time to exit Edit.

c. **ADD A NEW ELEMENT TO THE LIST**

- 1) Press *{NEW}* softkey.
- 2) The display will prompt you to enter data for a new element.
- 3) The new element trigger type defaults to Follow Along if output port, or Follow Along Record if input port.
- 4) The 3040P/DLO will automatically calculate the trigger time of the element, based on the last element's trigger time and duration.
- 5) Once the clip name has been entered, the 3040 will get the clip duration from the server. If there is no communication between 3040P/DLO and server **OR** if the clip does not exist, then the duration will default to 30 secs.
- 6) The following softkeys are also displayed:

{←} Select previous element field to edit
When this softkey is pressed the highlight moves to the previous element field.

{→} Select the next element field to edit.
When this softkey is pressed the highlight moves to the next element field.

{C-LIST} View the list of clips available on the server.
When this softkey is pressed a list of clips is displayed. Use the wheel to scroll through the list of clips, press **[ENTER]** to save a clip name as part of the element, or **[ESC]** to return to editing the element.

{INSERT} Insert the edited element relative to the trigger time in the list.

{APPEND} Append the edited element to the end of the list.

NOTE: For all Hard Triggered and Follow-Along type elements the list is automatically sorted by Trigg Time.

{TOGGLE} Lets you change the element's trigger type.

- 7) Using the numeric keyboard on the 3040P or PC keyboard, edit all parts of an element, then press one of the softkeys to Replace the element in the list, Insert or Append the element.

Press **[ESC]** at any time to exit Edit.

13. PLAYLIST VALIDATION

a. START VALIDATING A PLAYLIST

To start validating a playlist, simply press [**VALIDATE**]. A prompt on the display will instruct you to enter “1” or “2”.

- ❑ PRESS “1” KEY TO VALIDATE ALL UNPLAYED ELEMENTS

This option will validate all elements that have not been played out by the server.

OR

- ❑ PRESS “2” KEY TO VALIDATE A NUMBER OF ELEMENTS STARTING FROM THE CURRENT SELECTED ELEMENT

This option will validate the number of elements you enter beginning with the element currently selected by the arrows.

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

Once playlist validation has begun, a validate message text will show the validate progress.

While validating a playlist, you are not allowed to go into the Menu nor are you allowed to use the [**JOG**] or [**SHUTTLE**] keys. However, you are allowed to play, rewind, fast forward, and stop a clip. You are also allowed to start and stop playing a playlist.

b. STOP VALIDATING A PLAYLIST

To stop the validating process, simply press **[SHIFT] + [VALIDATE]**. When the validate ends, the validate window will clear itself.

c. PLAYLIST VALIDATION DETECTS THE FOLLOWING PROBLEMS WITH AN ELEMENT

- ✓ Clip name: When the name of the clip does not exist in the video server.
- ✓ Clip Long: When the clip on the server is five frames or more longer than the one registered in the 3040P.
- ✓ Clip Short: When the clip on the server is five frames or more shorter than the one registered in the 3040P.
- ✓ Clip Empty: When the duration of the clip in the 3040P is zero frames.
- ✓ Clip Overlap: When the duration of a clip is so long that it overlaps the next clip to play.

When the clip duration is undefined, the 3040P will copy the duration from the server into the element.

Since a small portion of the display is used to display an error, when there are two or more errors, only one will be shown. It is recommended that once the clip is in error the user verify the other aspects (i.e. trigger time, clip name, etc.) of the clip.

When the 3040PL displays “Many Errors,” it means that the clip has a problem with the clip name and also with one of its times (i.e. trigger time and/or duration).

14. SEARCH BY TRIGGER TIME

- a. Press **[SEARCH]**.
- b. The window is displayed that prompts you to enter the trigger time to search by.
- c. Enter the trigger time using a numeric keypad.
- d. Press **[ENTER]** to search for the element with the entered trigger time.
- e. The Element with the entered trigger time becomes the Current Element. If the exact time is not found, the list is positioned to the element with the closest time after the entered time.

15. GANG SETUP

- a. Press [**GANG**] key.
- b. The Window appears prompting to select Channels to add to / clear from gang.
- c. Press [**VTR1**] thru [**VTR4**] keys to add the VTR to the gang or clear it from gang.
- d. Press [**ESC**] when done.

When VTRs are ganged, all transport functions apply to all ganged VTRs.

16. VTR CONTROL

Channels 5 and 6 of the 3040P-DLO-L may be used for basic Transport control of Tape Machines. To control a VTR from Channel 5 (6):

- a. Plug 9-pin standard cable into VTR's "Remote" connector and into VTR 5 (VTR 6) connector on the back of the 3040.
- b. Press VTR [**5**] (or VTR [**6**]) key.
- c. Use [**PLAY**], [**STOP**], [**REW**], [**FWD**], [**JOG**], [**SHUTTLE**] keys for transport control of a VTR.
- d. Use [**RECUE**] key to enter time to search to.
- e. Use *{TC/TM}* softkey to toggle between TC and TM time modes.

17. OPTIONS

The 3040P/DLO ASRUN Tool

Overview:

The 3040P/DLO ASRUN Tool is used to upload a text file (CSV format) to a PC (computer). Once the file has been uploaded to the PC the information is no longer available from the 3040P/DLO. The file contains information about the clips that have played-out from the server that is connected to the 3040P/DLO. The system is set to upload a list from each channel, therefore there are four "Asrun" files. There is no action required on the 3040P/DLO to initiate the "Asrun" upload.

Refer to the connection diagram to connect the 3040P/DLO to the PC.

Asrun File format:

Element number, Trigger type, Clip ID, Title, SOM (Time Code), scheduled time (Time of day), Actual time, Scheduled duration, Actual Duration, Status.

Status:

1. 'G' = GOOD; Element PLAYED OUT properly, received play status from server.
2. 'S' = SHORT; Payout duration of the element was SHORT.
3. 'A' = ABORTED; Payout for this element was stopped by user.
4. 'F' = FAIL; Element DID NOT PLAY OUT or did not get play status from server.

Using the 3040P/DLO ASRUN Tool:

1. From the "Com Port" dropdown menu at the top of the screen, select a COM port. Ensure that the 3040P/DLO controller is connected to the selected port.
2. Click the "UPLOAD LIST" button to begin the upload process.
3. Select an upload channel (1, 2, 3, or 4) from the popup window.
4. Enter a file name using the popup Save As dialog to save the uploaded data. This is the only chance to save the file as the data is no longer available from the 3040P/DLO.
5. The upload status will appear on the PC screen and in the status box on the 3040P/DLO.
6. Click the "VIEW LIST" button to view the list you uploaded (OPTIONAL).
7. You may upload a new file for each of the other channels..
OR.
8. Click the "Exit" button to exit the program.

3040P/DLO Asrun Tool software installation.

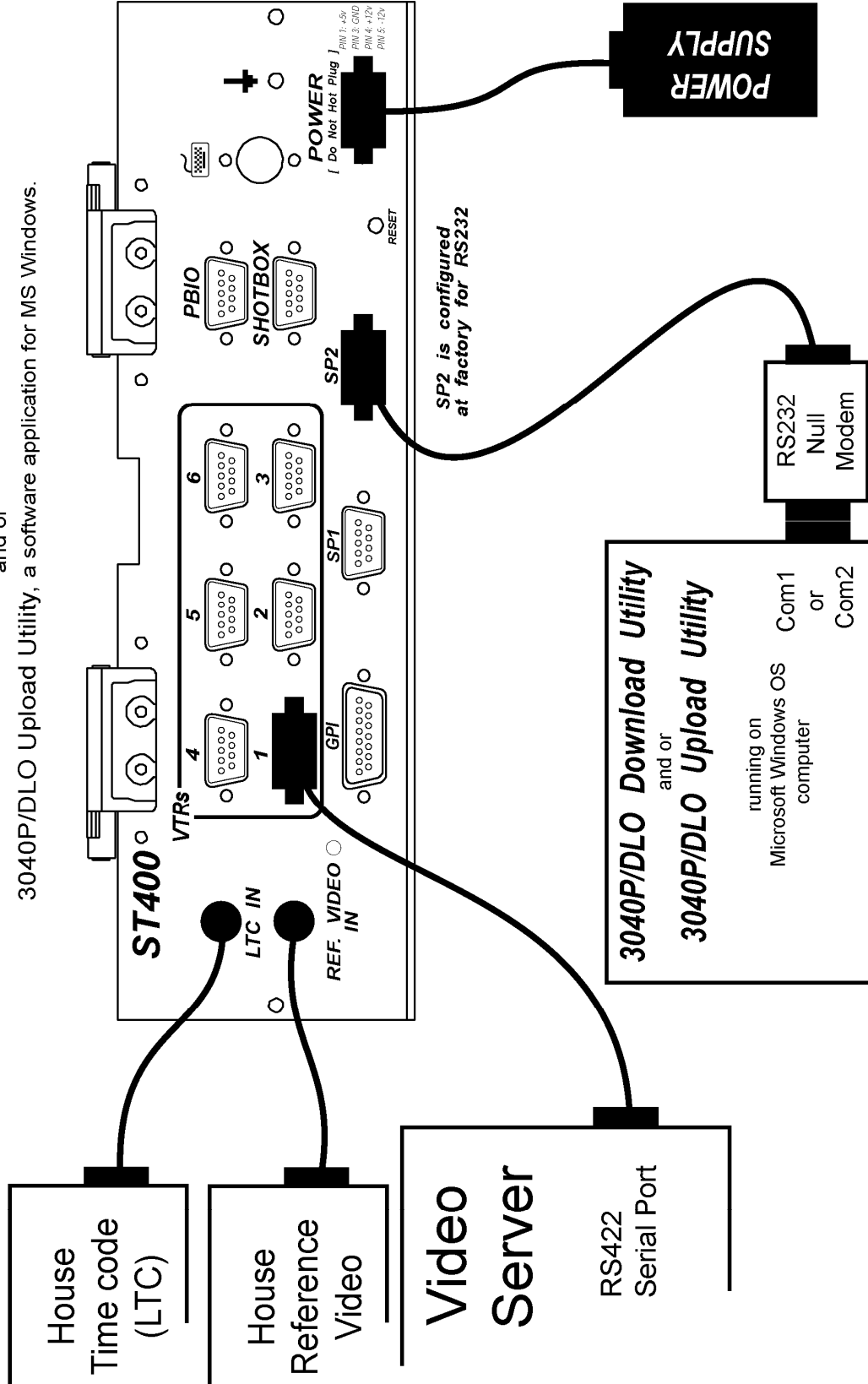
Rev 013106

1. Insert the supplied CD-ROM into the cd-rom reader in the computer that will be used to run the “3040P/DLO Upload Utility” program.
2. The installation will start automatically if the auto-run feature in “Windows” has been set. If the program does not start by itself double click on the SETUP.EXE file in the CD-ROM directory.
3. At the “Welcome to the 3040P-DLO UPLOADLOADER TOOL ASRUN SETUP WIZARD” Screen, click on NEXT
4. At the “Select Destination Folder” screen, click on NEXT to install into the default directory (recommended). Click on the BROWSE button to install into a directory other than the default directory.
5. At the “Select Start Menu Folder” screen, click on NEXT to select the default name (recommended). Click on the BROWSE button to select a name other than the default name.
6. At the “Ready to install the application” screen, click on INSTALL to continue the installation. Click on cancel to abort the installation procedure.
7. At the “Completing the 3040P-DLO Uploader Tool Asrun Setup Wizard” screen, click on FINISH to complete the installation procedure.
8. The installation is now complete. You do not need to restart your computer before using the “3040P/DLO Upload Utility” program. The default location is C:\PROGRAMS\DNFControls\3040P/DLO Uploader Tool Asrun.

3040P/DLO System Installation Diagram

System consists of:

- 3040P/DLO Playlist Playback Controller with Download Option.
- 3040P/DLO Download Utility, a software application for MS Windows.
- and or
- 3040P/DLO Upload Utility, a software application for MS Windows.



18. FUNCTION TABLE

3040P FUNCTIONS		
Function	Key Press	Description
FFWD	[FFWD]	Activate fast forward transport function. Set WIND SPEED in MENU for wind speed. Set WIND MODE in MENU for momentary or latch. Not available when playlist is playing.
JOG	[JOG]	Select JOG mode and enable Wheel. Not available when playlist is playing.
PLAY	[PLAY]	Play a single Clip or a playlist (if Semi-Auto or Single LED is ON).
REWIND	[RWD]	Activate rewind transport function. Set WIND SPEED in MENU for wind speed. Set WIND MODE in MENU for momentary or latch. Not available when playlist is playing.
SHUTTLE	[SHUTTLE]	Select SHUTTLE mode and enable Wheel. Not available when playlist is playing.
ENABLE AUTOMATED PLAYOUT/ RECORD	[AUTO]	Press this key to enable automated playout of the playlist based upon element time triggers. The AUTO LED will turn on. An LTC signal must be connected to the input LTC BNC connector on the rear of the 3040P.
DISABLE AUTOMATED PLAYOUT/ RECORD	[SHIFT] + [AUTO]	Press this key to disable automated playout of the playlist. The AUTO LED will turn off.
DELETE ELEMENTS	[ALT] + [DEL]	Delete element(s) from the Playlist.
ENABLE SEMI-AUTOMATIC PLAYOUT	[SEMI AUTO]	Press to enable the playout of clips back to back. Semi Auto LED turns on. Black Burst must be connected to ref. Video connector on the 3040.
DISABLE SEMI-AUTOMATIC PLAYOUT	[SHIFT] + [SEMI AUTO]	Press to disable semiautomatic playout. The Semi Auto LED will turn off.
ENABLE SINGLE PLAYOUT/ RECORD	[SINGLE]	Press to enable the playout of clips back to back. Single LED turns on. Black Burst must be connected to ref. Video connector on the 3040.
DISABLE SINGLE PLAYOUT/ RECORD	[SHIFT] + [SINGLE]	Press to disable single playout. The Single LED will turn off.
VALIDATE ELEMENTS	[VALIDATE]	Verify the existence of clips in the list as well as their duration. Validate LED turns on.

3040P FUNCTIONS		
Function	Key Press	Description
ABORT VALIDATION	[SHIFT] + [VALIDATE]	Stop validation of the playlist. Validate LED turns off.
STOP	[STOP]	Stop playout of the clip or of the playlist (in Semi-Auto or Single mode).
ABORT DOWNLOAD	[SHIFT] + [DOWNLOAD]	Stop downloading a playlist.
RECORD	[RECORD]	Record a Single Clip.
GANG	[GANG]	Sets/clears VTRs from gang.
SEARCH By Trigger Time	[SEARCH]	Search for element by trigger time.
MONITOR PLAYLIST PLAYOUT	{VIEW}	Press this key to enter view mode. Use the [NEXT], [LAST], or [SEARCH] key to view the list.
VIEW NEXT PLAYLIST ELEMENTS	[NEXT]	Step forward through the playlist, one element at a time until the end of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
VIEW LAST PLAYLIST ELEMENTS	[LAST]	Step backward through the playlist, one element at a time, until the beginning of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
VIEW NEXT PAGE OF PLAYLIST ELEMENTS	[SHIFT] + [NEXT]	Page forward through the playlist, one screen full of elements at a time until the end of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
VIEW LAST PAGE OF PLAYLIST ELEMENTS	[SHIFT] + [LAST]	Page backward through the playlist, one screen full of elements at a time until the beginning of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
JUMP FORWARD 100 ELEMENTS	[ALT] + [NEXT]	Jump forward 100 elements from the current location in the playlist, until the end of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
JUMP BACKWARDS 100 ELEMENTS	[ALT] + [LAST]	Jump backward 100 elements from the current location in the playlist, until the beginning of the playlist is reached. If in any playout mode, this will enable VIEW mode, if not already enabled. It will not affect playlist playout.
MONITOR PLAYLIST PLAYOUT	{VIEW OFF}	Press this key to exit VIEW mode and monitor the current playout location in the playlist.
TOP	{TOP}	Cue to the top of the list. Only available when list is not playing.

3040P FUNCTIONS

Function	Key Press	Description
CREATE NEW ELEMENT	<i>{NEW}</i>	Press the <i>{NEW}</i> key to enter add element dialogue
EDIT EXISTING ELEMENT	<i>{EDIT}</i>	Press the <i>{EDIT}</i> key to enter edit element dialogue
CUE	<i>{CUE}</i>	Cue the current clip to its Start (SOM) time. Only available when list is not playing.
END	<i>{END}</i>	Cues the last element in the list. Only available when list is not playing.

19. SPECIFICATIONS

Power:	90 VAC to 265 VAC adapter supplied with IEC connector APX Model #AP4108 +5v @ 4A, +12v @ 1.0A, -12V @ 0.6A	
Size:	[L" x W" x H"] 12 3/4" x 8" x 1 3/4" (front) 3 5/8" (rear) [8 5/8" high to top of display]	
Weight:	10 lbs.	
Rear Panel Connectors:	VTR1, 2, 3, 4, 5, 6 GPI Power SHOTBOX PBIO SP1 Keyboard SP2 Ref. Video In Ground LTC IN	(All DB9F) (DBF25F) (DB9M) (DB9F) (DB9F) (DB9F) (6-pin mini DIN) (DB9F) (BNC) Threaded stud (BNC)
Display:	Easy to read, back-lit LCD display	
Jog/Shuttle Wheel:	With mechanical detents	

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, 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		

SP2 CONNECTOR, RS232 PINOUT

NOTE: Do not use pins 7 or 8. These pins are used for internal functions.

9-Pin D-Type, Female

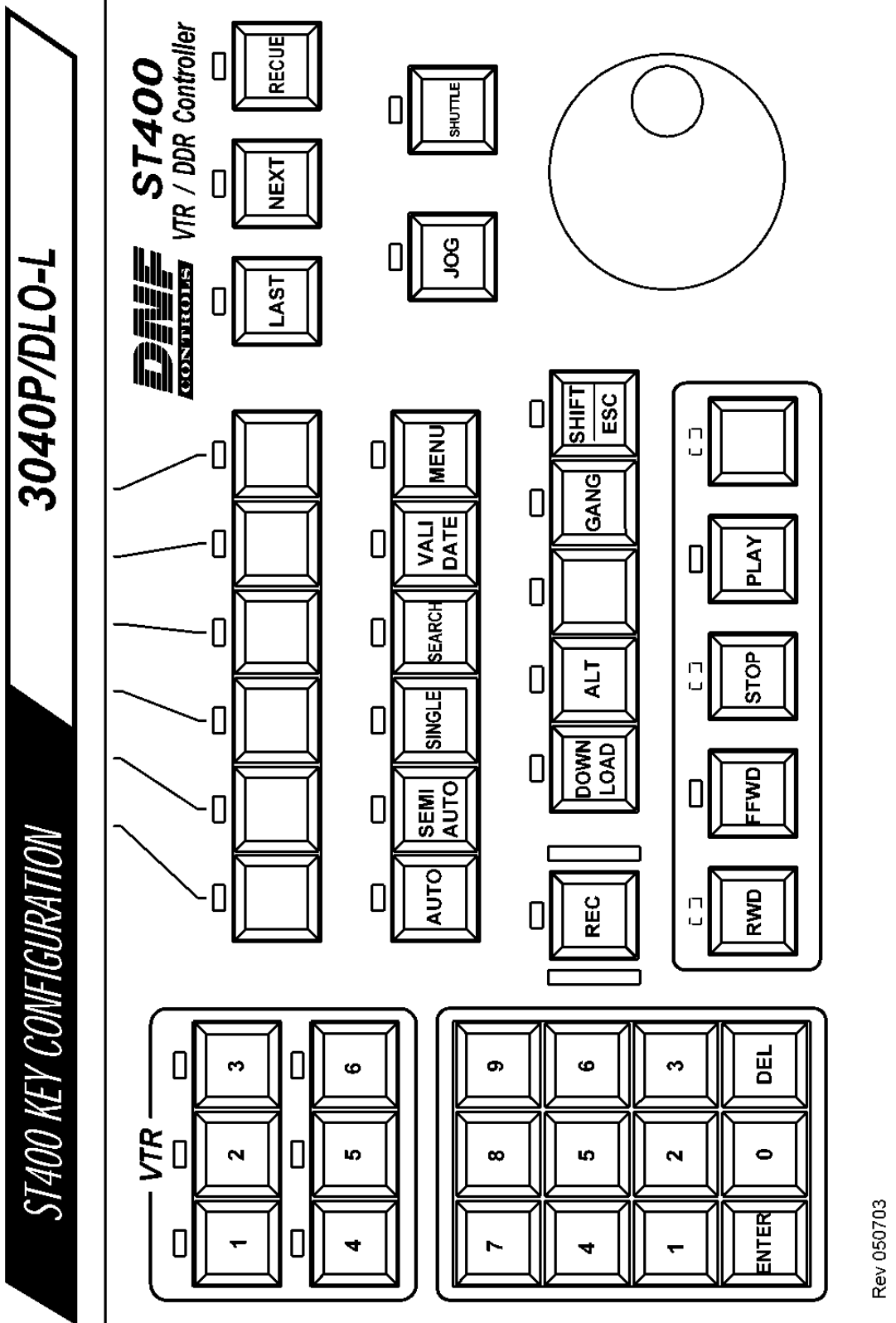
Pin #	1	Do not use	6	Do not use
	2	Receive ←	7	Do not use
	3	Transmit →	8	Do not use
	4	Do not use	9	Do not use
	5	Ground		

GPI IN/OUT CONNECTOR

26-Pin D-Type, Female (DB26F)

Pin #	Function	Pin #	Function
1	Not Used	14	GPI #5 – Stop
2	Not Used	15	GPI #6 – List Top
3	Not Used	16	GPI #7 – Last
4	Not Used	17	GPI #8 – Next
5	Not Used	18	Ground
6	Not Used	19	+5V
7	Not Used	20	+5V
8	Not Used	21	Not Used
9	Ground	22	Not Used
10	GPI #1 – Start Automatic Playout	23	Not Used
11	GPI #2 – Select Semi-automatic Playout Mode	24	Not Used
12	GPI #3 – Select Single Playout Mode	25	Not Used
13	GPI #4 – Play	26	Ground

20. KEY LAYOUT



21. 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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