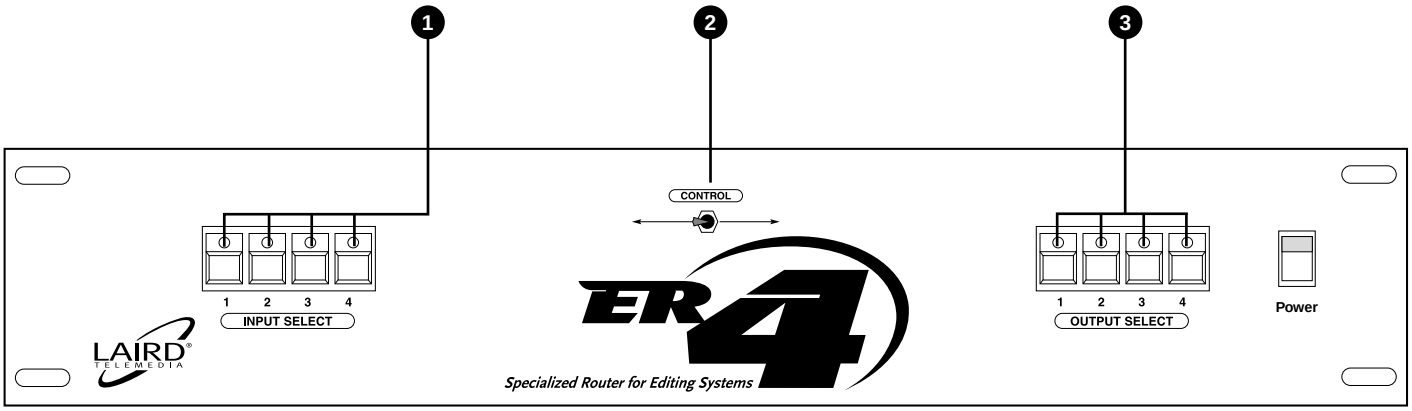
LTM-ER4
4 Machine Signal Router for Non-Linear Edit Systems

FRONT PANEL SECTION DESIGNATIONS



❶ **Input Selection:** Each button, when pushed, selects an input to the 4x1 Router platforms. LED flashes when button is pressed.

❷ **Control Toggle:** Determines which set of push buttons will control RS422 Serial Router. When switch is aimed to the **left**, input selector switches control RS422. When switch is aimed to the **right**, output selector switches control RS422.

❸ **Output Selection:** Each button, when pushed, selects a destination for the 1x4 Assignment Router. LED flashes when button is pressed.

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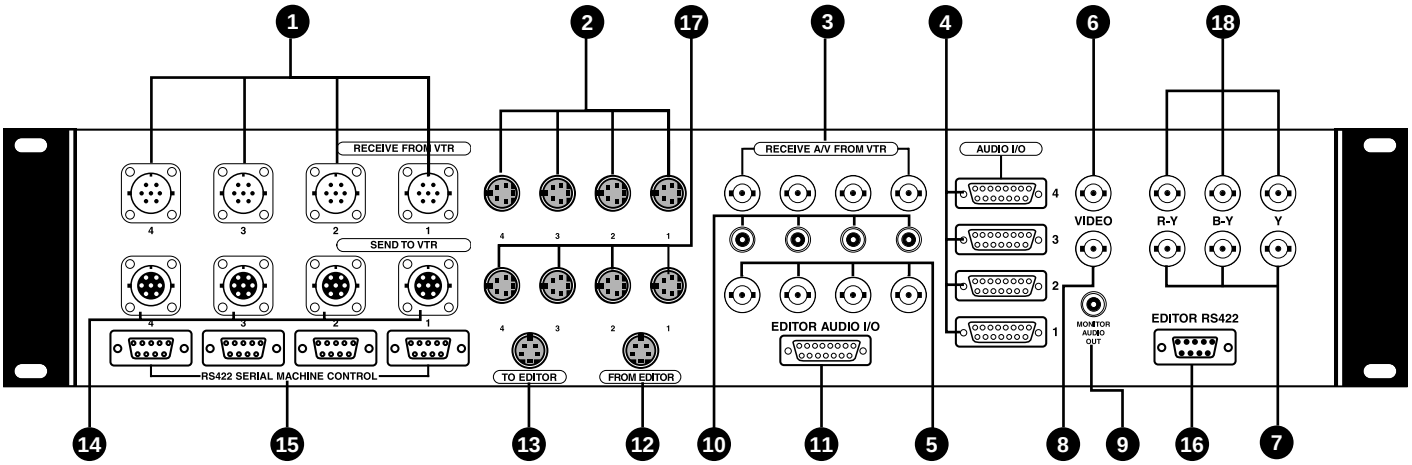
BACK PANEL SECTION DESIGNATIONS



1. **Component Video Inputs** (R-Y, B-Y, Y - YUV)**:** To the LTM-ER4 4x1 Component Video Router using the 4 7-Pin female to BNC breakout cables provided. One cable for each device.
2. **SVHS Video Inputs** (Y/C)**:** 4-Pin DIN connectors - To the LTM-ER4 4x1 SVHS Router
3. **Composite Video Inputs**: BNC Connectors - To the LTM-ER4 4x1 Composite Video Router
4. **Audio Input/Output:** 15-Pin D-Sub Connectors - **Inputs** for LTM-ER4 4x1 balanced audio router (Female XLRs)
   Outputs from LTM-ER4 1x4 balanced audio router (Male XLRs)
   (**4 Sets of 15-Pin to XLR breakout cables** are provided with the LTM-ER4. 15-Pin connector pinout is provided in the technical data section of this manual)
5. **Composite Video Outputs:** BNC Connectors from the LTM-ER4 composite video 1x4 Assignment Router.
6. **Composite Video Output:** BNC Connector from the LTM-ER4 composite video 4x1Router.
7. **Component Video Input** (R-Y, B-Y, Y - YUV)**:** BNC Connectors to the LTM-ER4 1x4 Component video assignment router
8. **Composite Video Input:** BNC Connector to the LTM-ER4 1x4 Composite Video Assignment Router
9. **Unbalanced Audio Output:** RCA Connector from the LTM-ER4 4x1 Unbalanced Audio Router
10. **Unbalanced Audio Inputs:** RCA Connectors to the LTM-ER4 4x1 Unbalanced Audio Router
11. **Balanced Audio Input/Output:** **Output** from the LTM-ER4 4x1 Balanced Audio Router (Male XLRs)
    Normally fed to non-linear input
    Input to the LTM-ER4 1x4 Balanced Audio Assignment Router (Female XLRs)
    Normally from non-linear editor output
12. **SVHS Input:** 4-Pin DIN Connector to the LTM-ER4 1x4 Assignment Router
13. **SVHS Output:** 4-Pin DIN Connector from the LTM-ER4 4x1 SVHS Video Router
14. **Component Video Outputs** (R-Y, B-Y, Y - YUV)**:** From the LTM-ER4 1x4 Component Video Assignment Router using the 4 7-Pin Male to BNC breakout cables provided. One cable for each device.
15. **RS422 Machine Control:** 9-Pin D-Sub Connectors for the LTM-ER4 4x1 RS422 Router connect to each device under control
16. **RS422 Machine Control:** 9-Pin D-Sub Connectors from the LTM-ER4 RS422 4x1 Router. Connect to controller (NLE).
17. **SVHS Outputs:** 4-Pin DIN Connector from the LTM-ER4 1x4 SVHS Assignment Router
18. **Component Video Outputs** (R-Y, B-Y, Y - YUV): BNC Connectors from the LTM-ER4 4x1 Component Video Router

Note: For the purpose of clarity, the back panel graphics and nomenclature of the LTM-ER4 pictured above has been altered.

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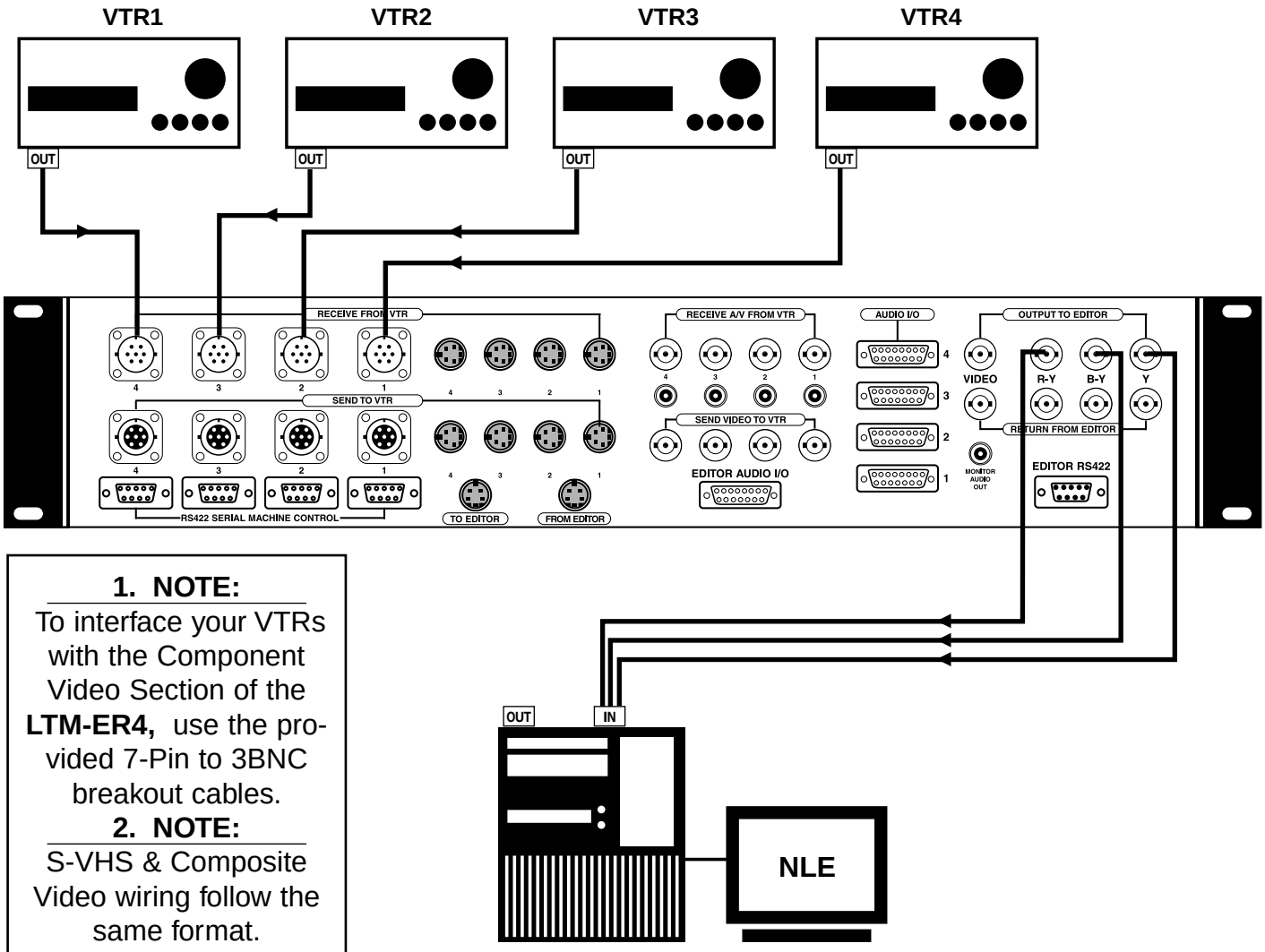
COMPONENT VIDEO INPUT SECTION

The **LTM-ER4** is divided into 2 basic sections: **INPUT SELECTION & OUTPUT DESIGNATION.** The input section operates as 4x1 Multi-format Video router with Audio-Follow video.

INPUT SELECTION: The left front panel pushbuttons control a functioning multi-format audio-follow-video 4x1 router with RS422. By the push of a button, the three video routers, audio routers and RS422 all operate to switch the associated signals of the device connected to that numbered input to the designated output connectors. **(See diagram below)**



1. NOTE:
To interface your VTRs with the Component Video Section of the **LTM-ER4,** use the provided 7-Pin to 3BNC breakout cables.

2. NOTE:
S-VHS & Composite Video wiring follow the same format.

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LTM-ER4
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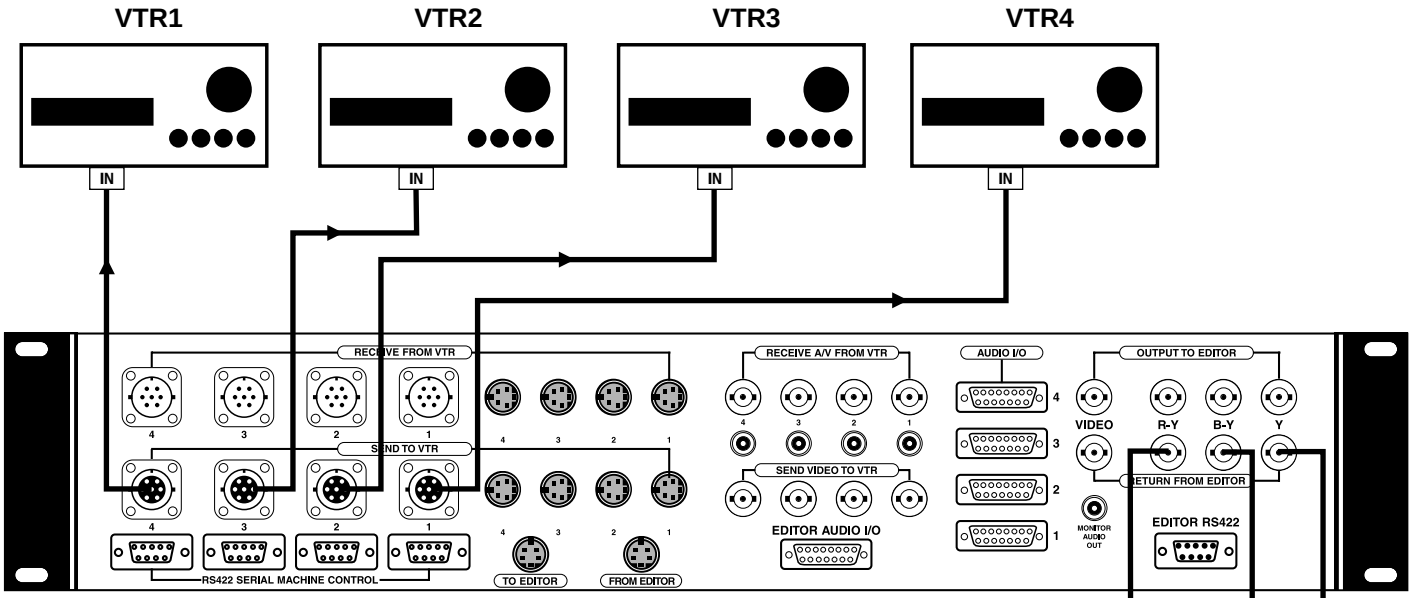
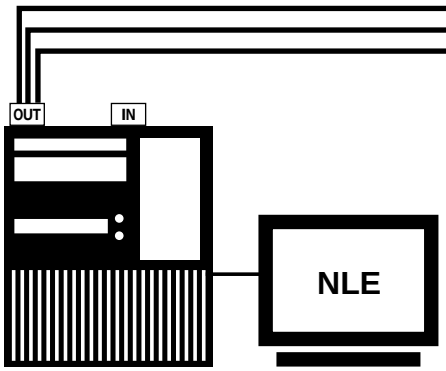
COMPONENT VIDEO OUTPUT SECTION

The **LTM-ER4** is divided into 2 basic sections: **INPUT SELECTION & OUTPUT DESIGNATION.** The output section operates as 1x4 Multi-format Video assignment router with Audio-Follow video.

OUTPUT SELECTION: The right front panel pushbuttons control a functioning multi-format audio-follow-video 1x4 assignment router with RS422. The 1x4 router allows signals re-entering the ROUTE4 to be assigned to any one of four recording or monitoring devices (one at a time). **(See diagram below)**





1. NOTE:
To interface your VTRs with the Component Video Section of the **LTM-ER4,** use the provided 7-Pin to 3BNC breakout cables.

2. NOTE:
S-VHS & Composite Video wiring follow the same format.

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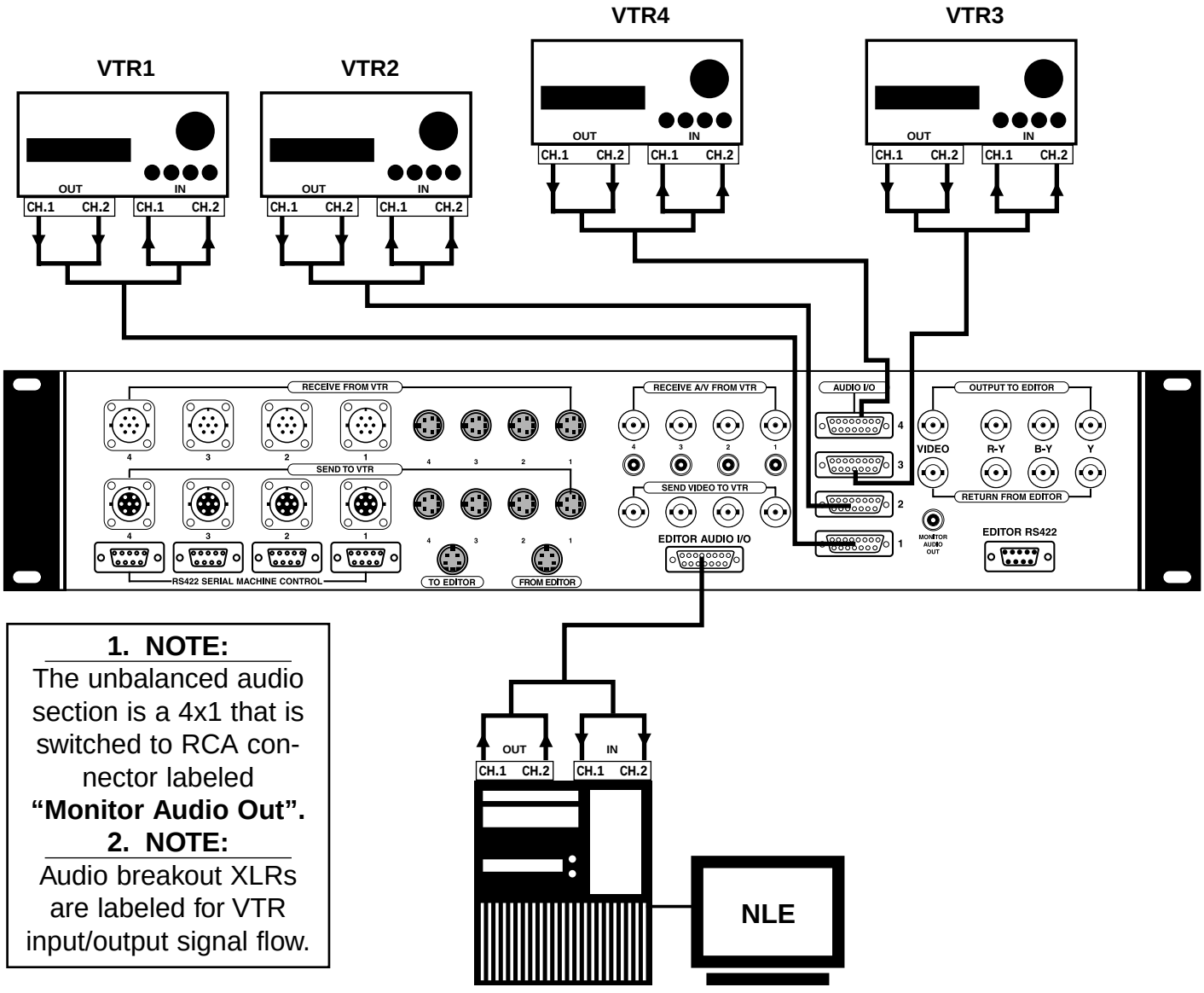
AUDIO INPUT/OUTPUT SECTION

The **LTM-ER4** balanced audio section features 15-Pin D-Sub connectors. It is shipped with:

1. One (1) 15-Pin female to XLR breakout cable. **EDITOR I/O**
2. Four (4) 15-Pin Male to XLR breakout cables. **VTR I/O**



1. NOTE:
The unbalanced audio section is a 4x1 that is switched to RCA connector labeled **"Monitor Audio Out".**

2. NOTE:
Audio breakout XLRs are labeled for VTR input/output signal flow.

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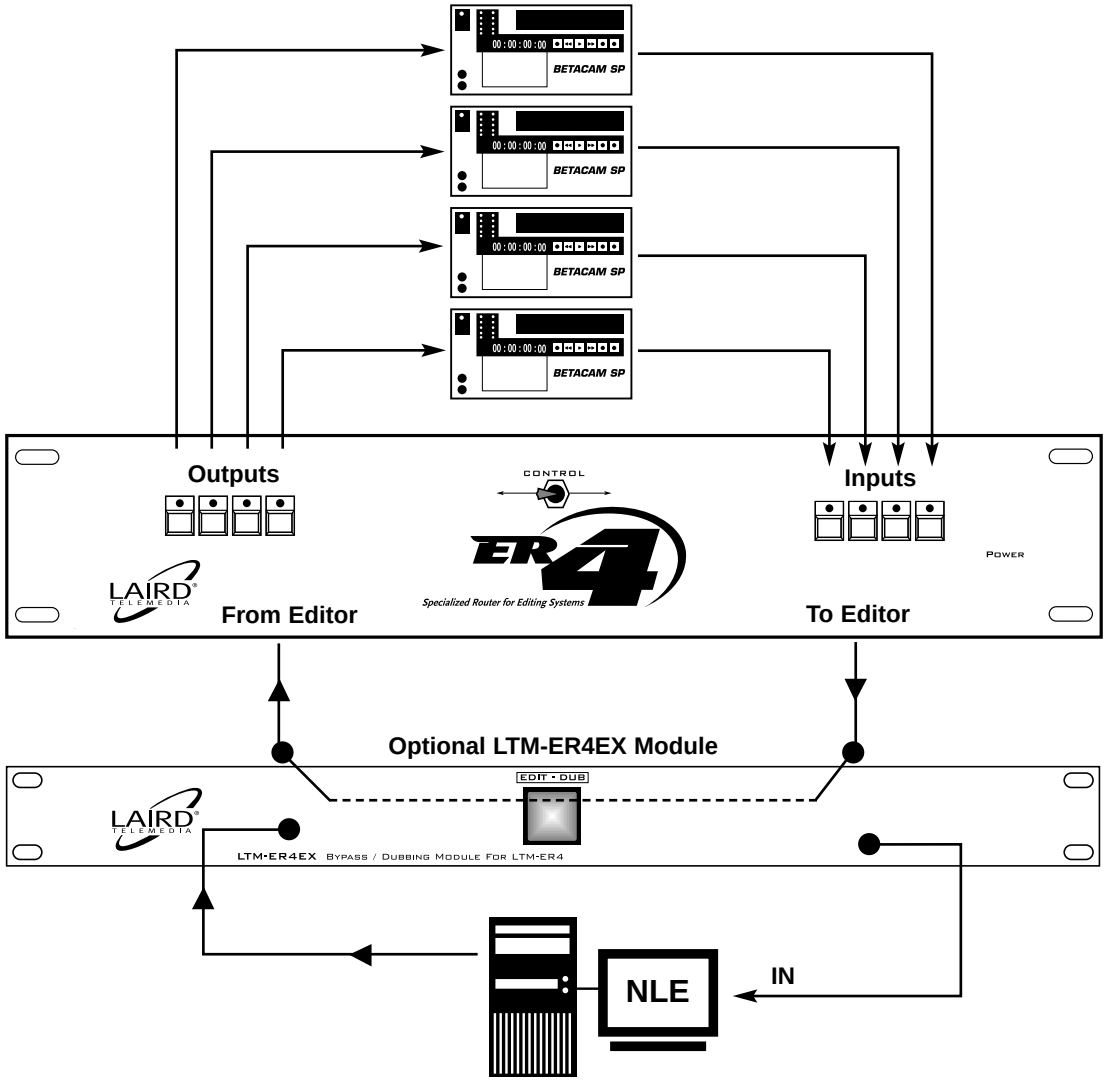
DUBBING WITH THE LTM-ER4

The **LTM-ER4** is designed as a 4x1 selector and 1x4 assignment selector for NLE systems. However, today's multi-tasking production facility sometimes requires additional operations, such as DUBBING. The **Laird LTM-ER4EX Dubbing-Bypass Module** is the answer. The **LTM-ER4EX** is designed to be connected to the **LTM-ER4** providing an editor bypass function. Each VTR source signal is routed around the NLE to feed the assignment side of the **LTM-ER4** directly. In this fashion, any source VTR can be routed to any other VTR for audio/video machine to machine dubbing. Simply push one button on the **LTM-ER4EX** and you are ready to dub without patching any cables. Push the button again and the system puts the NLE back in line for editing as before. The diagram below shows this feature.



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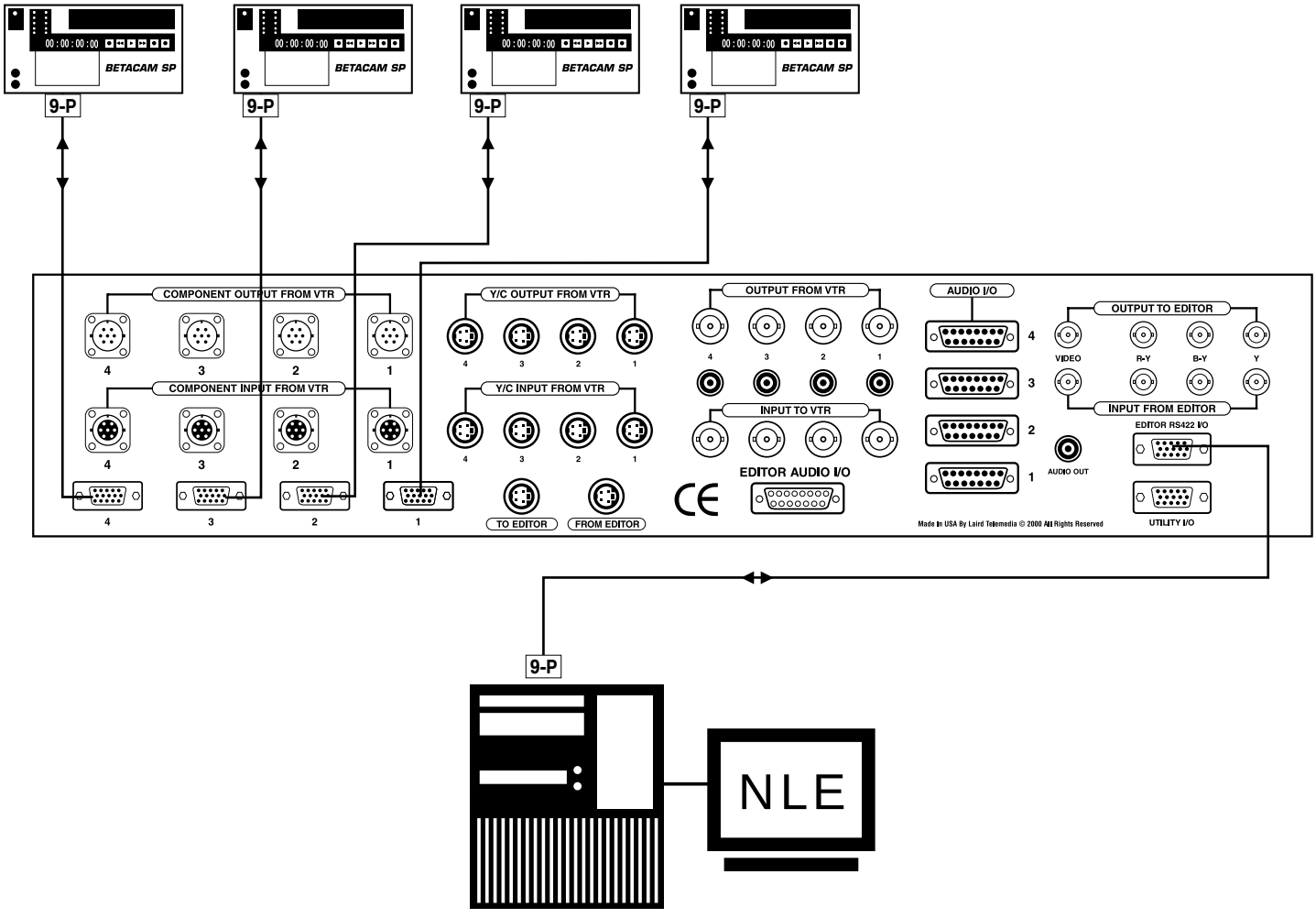
RS422 SERIAL MACHINE CONTROL SECTION

The **LTM-ER4** RS422 Serial Control features a 4x1 Router, which is controlled by the front panel **TOGGLE SWITCH**. The **LTM-ER4** has full duplex RS422 control via standard 9pin D-Sub connectors. The front panel toggle switch allows the "follow" of RS422 serial control to either the select buttons or output buttons. When the toggle switch is aimed at the left switches, the RS422 will switch when the input select switches are pressed. When the toggle switch is aimed to the right, the output select switches now control the RS422.



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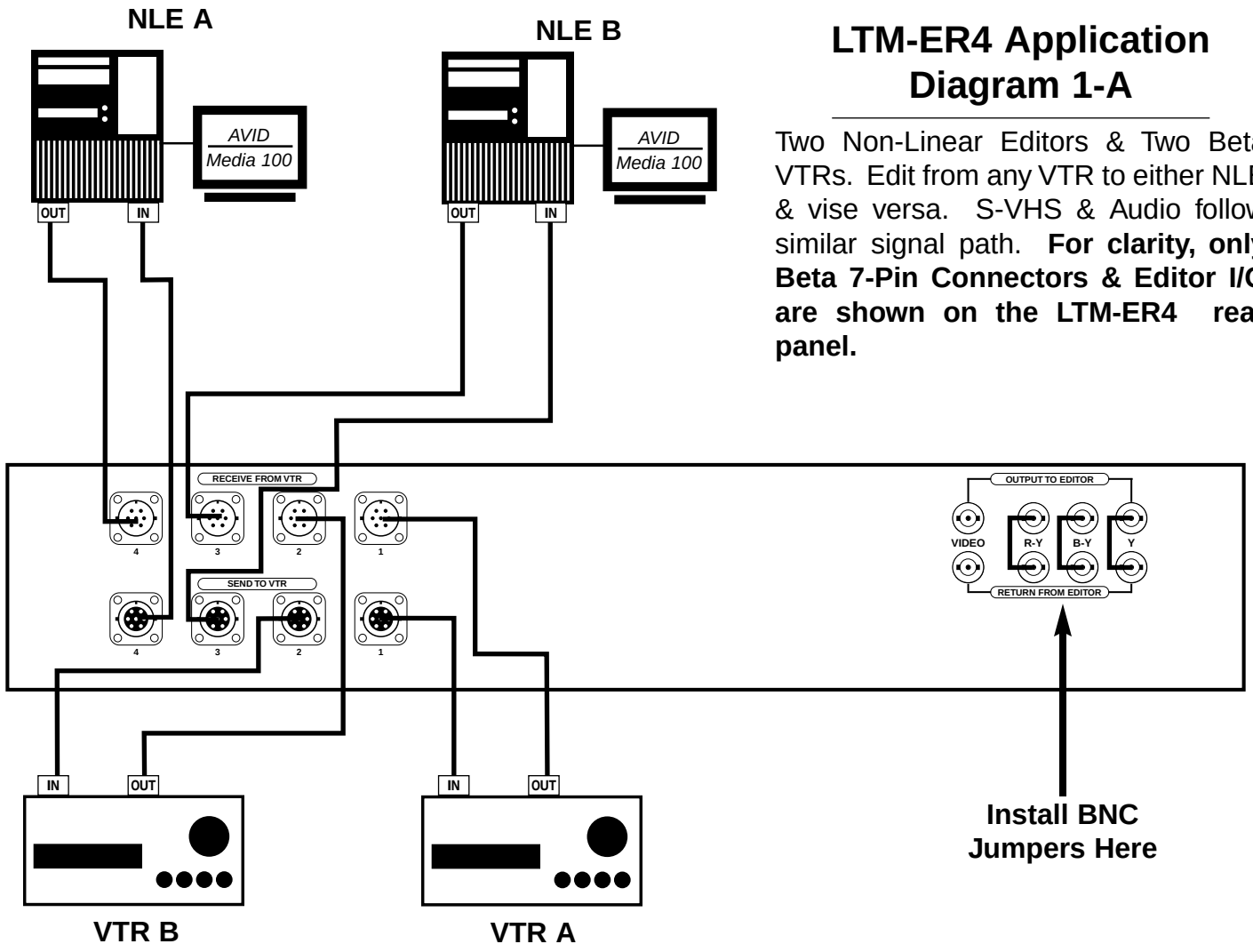

LTM-ER4 Application Diagram 1-A

Two Non-Linear Editors & Two Beta VTRs. Edit from any VTR to either NLE & vise versa. S-VHS & Audio follow similar signal path. **For clarity, only Beta 7-Pin Connectors & Editor I/O are shown on the LTM-ER4 rear panel.**

■ Select Any VTR to Any Editor ■ Select Any Editor to Any VTR ■ Perform Dubbing Between NLEs ■ Perform Dubbing Between VTRs

This manual is provides a basic system configuration diagram representing a simple application. It would be improbable to cover every possible configuration. Should there be any questions regarding configurations and setups call 845-339-9555, Monday - Friday: 9AM-5PM EST for Tech Support.

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