Remote Motion Controller and Jog Shuttle

Manual Supplement No. MS 93-007

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MODEL: Remote Motion Controller and Jog Shuttle Wheel

REVISION: All

SERIAL NO: All

SOFTWARE: All

MANUAL: 73A006 or 73A015

DESCRIPTION:

This Manual Supplement contains installation, setup, and operating information for the Remote Motion Controller and Jog Shuttle Wheel.

Remote Motion Controller and Jog Shuttle Wheel

Introduction

The Remote Motion Controller and the Jog Shuttle unit are panel mounted accessories for the TimeLine Console Control and System Supervisor Units. They have been designed for quick and simple implementation of transport control and editing functions when these are not provided by the console manufacturer.

Remote Motion Controller

Figure 1. Remote Motion Controller

The Remote Motion Controller (RMC) is a compact panel that fits in a standard four fader width console bay. The RMC has twelve motion control switches, a lock status indicator, four countdown LEDs and an edit loop switch. The RMC is suitable for use as a parallel remote control. Connectors are provided for direct connection to the SSU and CCU using pin-for-pin compatible cables.

Jog/Shuttle Wheel

Figure 2. Jog/Shuttle Wheel

The Jog/Shuttle unit is a compact panel for console mounting. The unit has a high quality optical encoder and Jog, Shuttle and Loop switches. The Jog/Shuttle unit is designed to connect directly to the Console Control Unit, or when used in an SSL console, the SSU SSL data interface option card.

Installation

Cutout and mounting details for both top and rear panel mounting of the RMC, CCU and Jog/Shuttle units are included in the template drawings at the back of this manual supplement.

Cabling Information

All interconnections have been designed to be pin-for-pin compatible. The transport control switches and jog shuttle cables can be fabricated with IDC connectors and ribbon cable. The parallel 50-pin remote connection to the SSU should be fabricated with round multiconductor cable.

Connector Pin-outs

Remote Motion Controller

Use connector J6 on the CCU Processor Board and J103 on the RMC to provide transport controls for the CCU.

Table 1. Motion Control Interface 40-pin IDC Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Rewind Switch	2	Rewind Return Switch
3	NC	4	NC
5	Fast Forward Switch	6	Fast Forward Return Switch
7	NC	8	NC
9	NC	10	NC
11	Play Switch	12	Play Return Switch
13	NC	14	NC
15	Stop Switch	16	Stop Return Switch
17	NC	18	NC
19	Record Switch	20	Record Return Switch
21	NC	22	NC
23	Rewind Lamp	24	Rewind Return Lamp
25	Fast Forward Lamp	26	Fast Forward Return Lamp
27	Stop Lamp	28	Stop Return Lamp
29	Play Lamp	30	Play Return Lamp
31	Record Lamp	32	Record Return Lamp
33	Reset	34	Spare
35	Serial Clock	36	Spare
37	Serial Out Data	38	Spare
39	Serial strobe	40	+5V

Jog/Shuttle Wheel

Use connector J2 on the CCU processor board and J302 on the Jog Shuttle Unit to provide jog/shuttle controls for the CCU. Use two 16-pin cables and RMC connectors J101 and J102, when using the Jog/Shuttle Unit with the CCU and RMC.

Table 2. Jog/Shuttle 16-pin IDC Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Encoder A (signal input)	2	Encoder B (signal input)
3	Encoder Common (ground)	4	Jog Switch
5	Shuttle Switch	6	Loop Switch
7	Jog Tally	8	Shuttle Tally
9	Loop Tally	10	+12V
11	Ground	12	Ground
13	Ground	14	+5V
15	+5V	16	NC

Use the SSU SSL Data Interface Jog/Shuttle connector and J301 on the Jog/Shuttle Unit to provide jog/shuttle controls for the SSL Console.

Table 3. Jog/Shuttle 15-pin D Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Encoder A (signal input)	9	Encoder B (signal input)
2	Encoder Common (ground)	10	Jog Switch
3	Shuttle Switch	11	Loop Switch
4	Jog Tally	12	Shuttle Tally
5	Loop Tally	13	NC
6	Ground	14	Ground
7	Ground	15	+5V
8	+5V		

System Supervisor Unit

Use the Logic I/O connector on the SSU and 50-pin connector P101 on the RMC to use the RMC as a parallel remote control for the SSU.

Table 4. Logic I/O 50-pin D Cable Pinout

Pin	Signal Description	Pin	Signal Description
1	GPI 1 Out, Common	26	ADR Beep Out, +
2	GPI 1 Out, N.O.	27	ADR Beep Out, -
3	GPI 4 Out, Common	28	Ground
4	GPI 4 Out, N.O.	29	Control Wheel Clock Out
5	GPI 7 Out, Common	30	Control Wheel Direction Out
6	GPI 7 Out, N.O.	31	Annunciator Diode
7	RWD SW	32	Ground
8	FFD SW	33	+5 Volts
9	PLAY SW	34	GPI 3 Out, Common
10	STOP SW	35	GPI 3 Out, N.O.
11	REC SW	36	GPI 6 Out, Common
12	LOOP/Shift SW	37	GPI 6 Out, N.O.
13	SHTL/REH SW	38	Rehearse Command Out, +
14	JOG/REP SW	39	Rehearse Command Out, -
15	Frame Clock Out (Resynthesized)	40	Record Command Out, +
16	Ground	41	Record Command Out, -
17	+5 Volts	42	Annunciator 2 Out (Countdown "2")
18	GPI 2 Out, Common	43	Annunciator 3 Out (Countdown "3")
19	GPI 2 Out, N.O.	44	Annunciator 4 Out (Countdown "4")
20	GPI 5 Out, Common	45	Annunciator 5 Out Lock Tally
21	GPI 5 Out, N.O.	46	Data (Tally Output)
22	GPI 8 Out, Common	47	CLK (Tally Output)
23	GPI 8 Out, N.O.	48	Strobe (Tally Output)
24	Annunciator 1 Out (Countdown "1")	49	Ground
25	Spare	50	+5 Volts

- All GPI Outputs are normally open, single-pole relay closures rated at 600 mA, at 110 volts (AC or DC) or up to 2 Amps at 30 volts DC.
- The five Annunciator outputs are open-collector Darlington transistor outputs. Each is rated for up to 150 mA of collector current at a maximum of 50 volts. The "Annunciator Diode" terminal is connected to the cathodes of diodes connected to each output in the array; this diode may be used for integral suppression of inductive load transients when driving relays.
- Annunciator outputs '1' through '4' are used for the GPI Countdown sequence. Annunciator '5' is used as a system lock tally. Data, CLK and Strobe are used to provide external transport motion tallies on the TimeLine Remote Motion Control panel.

Typical Configurations

CCU with RMC

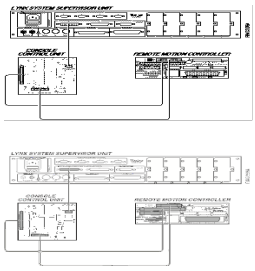


Figure 3. Console Control Unit with Remote Motion Controller

- Works with most software (CCU 230 or later recommended)
- Remove IC U102 on RMC Logic Assembly PCB (Figure 4)
- Does not support Lock and countdown LEDs.

> Note:
>
> When using the RMC with the CCU, both 40-pin and 16-pin cables are required for all RMC switches to operate.

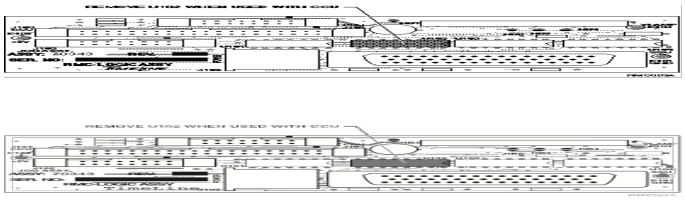
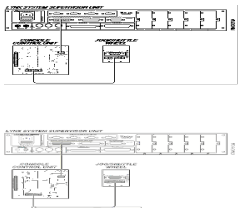


Figure 4. IC Location

Warning

Us an IC insertor to remove the IC at U102. If one is not available, use a small flat blade screwdriver. Insert the screwdriver under the IC, twist slightly and gently lift up. Inserting the screwdriver incorrectly could damage surrounding components.

CCU with Jog/Shuttle Wheel



RMC010

Figure 5. Console Control Unit with Jog/Shuttle Wheel

- With software prior to CCU 230, existing users must flip pins A/B on encoder cable (See Figure 8.)
- With software CCU 230 or later, install CCU jumper J5 position 2 (Figure 6).

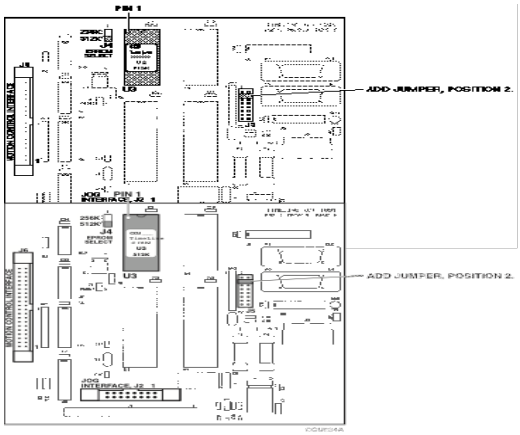


Figure 6. Jumper Location

CCU with RMC and Jog/Shuttle Wheel

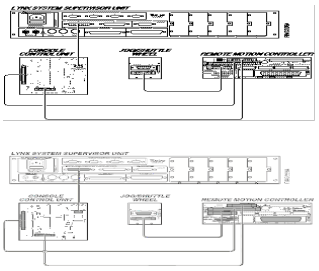


Figure 7. Console Control Unit with Remote Motion Controller and Jog/Shuttle Wheel

- Works with most CCU software (CCU 230 or later recommended).
- Remove IC U102 on RMC Logic Assembly PCB (Figure 4).
- Does not support Lock and countdown LEDs.
- With software CCU 230 or later, install CCU jumper J5 position 2 (Figure 6).
- With software prior to CCU 230, existing users must flip pins 1 and 4 (orange and yellow) on encoder cable (See Figure 8).

Figure 8. Encoder Cable

SSU with RMC

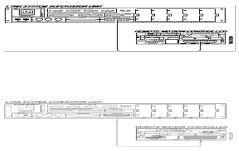


Figure 9. System Supervisor Unit with Remote Motion Controller

- SSU 1.41 (or later) software required
- On RMC, Switch Assembly HB1 changes the function of the ROLLBACK key to be Reverse Play (SSU Only). (See Figure 10.)

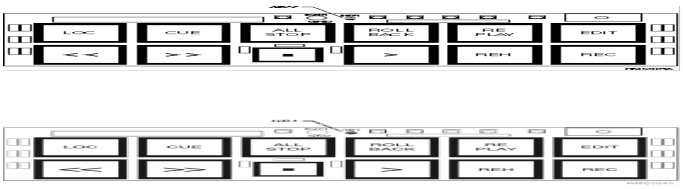


Figure 10. RMC Switch Board Assembly

SSU and SSL Data Interface with Jog/Shuttle Wheel

Figure 11. System Supervisor Unit Fitted with SSL Option Card with a Jog/Shuttle Wheel

- With software prior to SSU 1.42, existing users must flip pins 1 and 4 (orange and yellow) on encoder cable. (See Figure 12.)

Figure 12. Encoder Cable

SSU/SSL with RMC and Jog/Shuttle Wheel

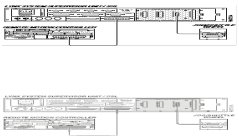
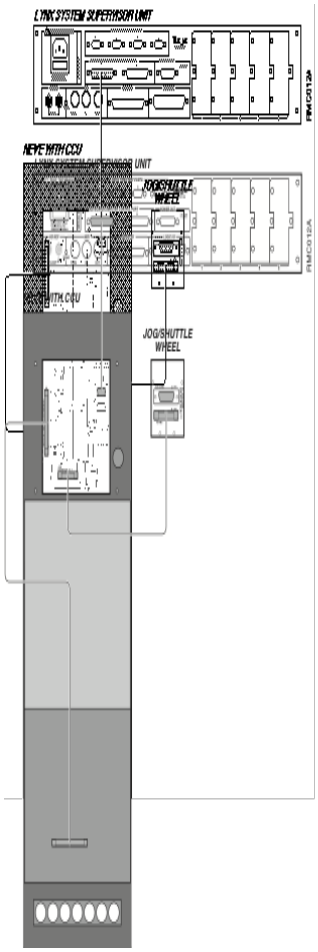


Figure 13. System Supervisor Unit Fitted with SSL Option Card with a Remote Motion Controller and Jog/Shuttle Wheel

- SSU 1.41 (or later) software required
- On RMC, Switch Assembly HB1 changes the function of the ROLLBACK key to be Reverse Play (SSU Only) (See Figure 10.)
- With software prior to 1.42, existing users must flip pins 1 and 4 (orange and yellow) on encoder cable (See Figure 12).

Jog/Shuttle Wheel with Neve



RMC012

Figure 14. Jog/Shuttle Wheel with Neve

- With software prior to 230, existing users must flip pins 1 and 4 (orange and yellow) on encoder cable (Figure 12)
- With software 230 or later, install jumper in CCU (Figure 6.)

Warning
NEVE Installation Only!

The lamps in the Neve Motion Control keys must be replaced for the CCU to control them. Replacement lamps must be 12V, max 40 mA.

RMC Jumper Pad Information

	RMC Logic Assembly						
Configuration	**HB1**	**HB2**	**HB3**	**HB4**	**HB5**	**HB6**	
Factory Default +5 Volt Internal			X			X	
+5V External Lamp Supply		X			X		
+12V External Lamp Supply*		X		X			

NOTE: * A +12V external configuration requires both +5V and +12V on power input.

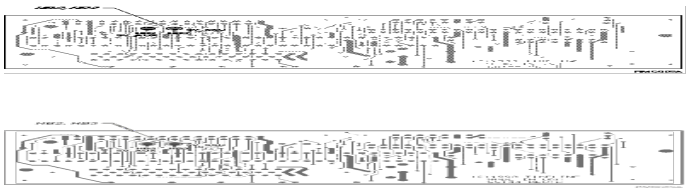


Figure 15. Jumper Locations Logic Assembly, Solder Side

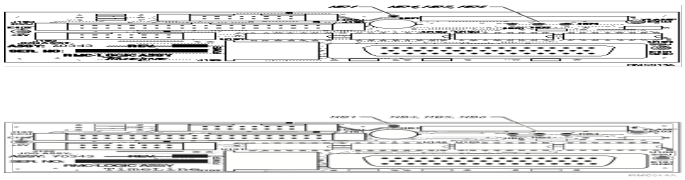


Figure 16. Jumper Locations Logic Assembly, Component Side

Jog/Shuttle Jumper Pad Information

	Jog/Shuttle	
Configuration	**CB1**	**HB1**
Factory Default +5 Volt Internal	X	
+5V External Lamp Supply	X	
+12V External Lamp Supply*	Cut	X

NOTE: * CB1 must be cut in this configuration.

Figure 17. Jumper Locations

Miscellaneous

External Power Supply

TimeLine Part Number 70A042 is recommended.