

WIRE RUN LIST

INDEX

PAGE	CODE	DESCRIPTION
1	INDEX	INDEX
2 - 5	J0	MAIN CONNECTOR
6	J1	#1 MOTOR & ENCODER
6 - 7	J2	#2 MOTOR & ENCODER
7	J3	#3 MOTOR & ENCODER
8	J4	#4 MOTOR & ENCODER
8 - 9	J5	#5 MOTOR & ENCODER
9	J8	• POWER AND HAND
9	GND	GND TERMINALS
10	J6	#6 MOTOR & ENCODER

NOTES:

- NOTE 1 (*) 4 conductor shield and 2 conductor shield are connected together with #24 black wire and then connected to an appropriate pin in J0 connector.
- NOTE 2 Pin 78 in connector J0 is connected to J1-8, J2-8, J3-8, J4-8, J5-8, J8-11 using #24 red wire of twisted pair (red and black) and splices per 500 - 1500.
- NOTE 3 Pin 79 in connector J0 is connected to J1-11, J2-11, J3-11, J4-11, J5-11, J8-12 using #24 black wire of twisted pair (red and black) and splices per 500 - 1500.
- NOTE 4 Pin 80 in connector J0 is connected to J1-9, J2-9, J3-9 using #24 blue wire of twisted pair (blue and brown) and splices per 500 - 1500.
- NOTE 5 Pin 82 in connector J0 is connected to J1-10, J2-10, J3-10 using brown wire of twisted pair (blue and brown) and splices per 500 - 1500.
- NOTE 6 4 conductor shield and 2 conductor shield are connected together with #24 black wire and then connected to Pin 9 in connector.
- NOTE 7 If one wire of a twisted pair is not connected to the next pin on the wire run list its termination is referenced in parenthesis.

(A)

BRUNING 40-21 28437-6

DR. <u>4 6-25-79</u>	REV.	-	A	500-0501
CHK.	C/N	U8711	B0308	
REL. <u>EM 7-9-79</u>	DATE	7-9-79	PPR 7/28/80	USED ON

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SHEET 1 OF 10

REV.

J0

PIN	CODE	DESTINATION	SIZE	COLOR	
1	#1 MOTOR +	J1-1	TP { 20	VIO	
2	#1 MOTOR -	J1-2		20	WHT
3	#2 MOTOR +	J2-1	TP { 20	VIO	
4	#2 MOTOR -	J2-2		.20	WHT
5	#3 MOTOR +	J3-1	TP { 20	VIO	
7	#3 MOTOR -	J3-2		20	WHT
8	#4 MOTOR +	J4-1	TP { 24	VIO	
10	#4 MOTOR -	J4-2		24	WHT
11	#5 MOTOR +	J5-1	TP { 24	VIO	
12	#5 MOTOR -	J5-2		24	WHT
13	#6 MOTOR +	J6-1	TP { 24	VIO	
14	#6 MOTOR -	J6-2		24	WHT
15	#7 MOTOR +				
16	#7 MOTOR -				
17	-12 VDC	J8-1	24	BLU	
18	+12 VDC	J8-2	24	RED	
20	GND	GND #1	24	BLK	
21	#1 ENC A +	J1-3	4 COND SHLD { 24	BLK	
22	#1 ENC A -	J1-4		24	WHT
23	#1 ENC B +	J1-5		24	RED
24	#1 ENC B -	J1-6		24	GRN

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BRUNING 40-21 28437-6

FORM 0038

J0

PIN	CODE	DESTINATION	SIZE	COLOR	
25	#1 ENC I	J1-7	2 COND SHLD	24	BLK
26	#1 POT	J1-12		24	WHT
27	#1 SHIELD	NOTE 1		24	BLK
28	#2 ENC A +	J2-3	4 COND SHLD	24	BLK
29	#2 ENC A -	J2-4		24	WHT
30	#2 ENC B +	J2-5		24	RED
31	#2 ENC B -	J2-6		24	GRN
32	#2 ENC I	J2-7	2 COND SHLD	24	BLK
33	#2 POT	J2-12		24	WHT
34	#2 SHIELD	NOTE 1		24	BLK
35	#3 ENC A +	J3-3	4 COND SHLD	24	BLK
36	#3 ENC A -	J3-4		24	WHT
37	#3 ENC B +	J3-5		24	RED
38	#3 ENC B -	J3-6		24	GRN
39	#3 ENC I	J3-7	2 COND SHLD	24	BLK
40	#3 POT	J3-12		24	WHT
41	#3 SHIELD			24	BLK
42	#4 ENC A +	J4-3	4 COND SHLD	24	BLK
43	#4 ENC A -	J4-4		24	WHT
44	#4 ENC B +	J4-5		24	RED
45	#4 ENC B -	J4-6		24	GRN
46	#4 ENC I	J4-7	2 COND SHLD	24	BLK
47	#4 POT	J4-12		24	WHT

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REV.

J0

PIN	CODE	DESTINATION	SIZE	COLOR
48	#4 SHIELD	NOTE 1	24	BLK
49	#5 ENC A +	J5-3	4 COND SHLD	BLK
50	#5 ENC A -	J5-4		WHT
51	#5 ENC B +	J5-5		RED
52	#5 ENC B -	J5-6		GRN
53	#5 ENC I	J5-7	2 COND SHLD	BLK
54	#5 POT	J5-12		WHT
55	#5 SHIELD	NOTE 1	24	BLK
56	#6 ENC A +	J6-3	4 COND SHLD	BLK
57	#6 ENC A -	J6-4		WHT
58	#6 ENC B +	J6-5		RED
59	#6 ENC B -	J6-6		ORN
60	#6 ENC I	J6-7	2 COND SHLD	BLK
62	#6 POT	J6-12		WHT
63	#6 SHIELD	NOTE 1	24	
64	#7 TACH +			
65	#7 TACH			
66	#7 POT			
67	#7 SHIELD			
70	SPARE 1	J8-3	24	BLK
71	SPARE 2	J8-4	24	BRN

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BRUNING 40-21 28437-6

FORM 0038

J0

PIN	CODE	DESTINATION	SIZE	COLOR
72	SPARE 3	J8-5	24	RED
73	SPARE 4	J8-6	24	ORG
74	SPARE 5	J8-7	24	YEL
75	HAND POWER	J8-8	24	RED
76	HAND OPEN	J8-9	24	BLU
77	HAND CLOSE	J8-10	24	VIO
78	ENC. POWER	NOTE 2	24	RED
79	ENC. GND	NOTE 3	24	BLK
80	BRAKE POWER	NOTE 4	24	BLU
82	BRAKE RETURN	NOTE 5	24	BRN

TP



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SHEET 5 OF

REV.

J1

PIN	CODE	DESTINATION	SIZE	COLOR	
1	#1 MOTOR +	J0-1	TP { 20	VIO	
2	#1 MOTOR -	J0-2		20	WHT
3	#1 ENC A +	J0-21	4 COND SHLD { 24	BLK	
4	#1 ENC A -	J0-22		24	WHT
5	#1 ENC B +	J0-23		24	RED
6	#1 ENC B -	J0-24		24	GRN
7	#1 ENC I	J0-25	(12) 2 COND SHLD	24	BLK
8	ENC. POWER	NOTE 2	(11) TP	24	RED
9	BRAKE POWER	NOTE 4	TP { 24	BLU	
10	BRAKE RETURN	NOTE 5		24	BRN
11	ENC. GND	NOTE 3	(8) TP	24	BLK
12	#1 POT	J0-26	(7) 2 COND SHLD	24	WHT

J2

PIN	CODE	DESTINATION	SIZE	COLOR	
1	#2 MOTOR +	J0-3	TP { 20	VIO	
2	#2 MOTOR -	J0-4		20	WHT
3	#2 ENC A +	J0-28	4 COND SHLD { 24	BLK	
4	#2 ENC A -	J0-29		24	WHT
5	#2 ENC B +	J0-30		24	RED
6	#2 ENC B -	J0-31		24	GRN
7	#2 ENC I	J0-32	(12) 2 COND SHLD	24	BLK
8	ENC. POWER	NOTE 2	(11) TP	24	RED
9	BRAKE POWER	NOTE 4	TP { 24	BLU	
10	BRAKE RETURN	NOTE 5		24	BRN

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J2 CONT.

PIN	CODE	DESTINATION	SIZE	COLOR
11	ENC. GND	NOTE 3 (8) TP	24	BLK
12	#1 POT	J0-33 (7) 2 COND SHLD	24	WHT

J3

PIN	CODE	DESTINATION	SIZE	COLOR
1	#3 MOTOR +	J0-5 TP	20	VIO
2	#3 MOTOR -	J0-6	20	WHT
3	#3 ENC A +	J0-35	24	BLK
4	#3 ENC A -	J0-36	24	WHT
5	#3 ENC B +	J0-37 4 COND SHLD	24	RED
6	#3 ENC B -	J0-38	24	GRN
7	#3 ENC I	J0-39 (12) 2 COND SHLD	24	BLK
8	ENC POWER	NOTE 2 (11) TP	24	RED
9	BRAKE POWER	NOTE 4 TP	24	BLU
10	BRAKE RETURN	NOTE 5	24	BRN
11	ENC. RETURN	NOTE 3 (8) TP	24	BLK
12	#3 POT	J0-40 (7) 2 COND SHLD	24	WHT

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SHEET 7 OF

REV.

J4

PIN	CODE	DESTINATION	SIZE	COLOR	
1	#4 MOTOR +	J0-8	TP { 24	VIO	
2	#4 MOTOR -	J0-10		24	WHT
3	#4 ENC A +	J0-42	4 COND SHLD { 24	BLK	
4	#4 ENC A -	J0-43		24	WHT
5	#4 ENC B +	J0-44		24	RED
6	#4 ENC B -	J0-45		24	GRN
7	#4 ENC I	J0-46	(12) 2 COND SHLD	24	BLK
8	ENC. POWER	NOTE 2	(11) TP	24	RED
9	#4 SHIELD	NOTE 6		24	BLK
10					
11	ENC. GND	NOTE 3	(8) TP	24	BLK
12	#4 POT	J0-47	(7) 2 COND SHLD	24	WHT

J5

PIN	CODE	DESTINATION	SIZE	COLOR	
1	#5 MOTOR +	J0-11	TP { 24	VIO	
2	#5 MOTOR -	J0-12		24	WHT
3	#5 ENC A +	J0-49	4 COND SHLD { 24	BLK	
4	#5 ENC A -	J0-50		24	WHT
5	#5 ENC B +	J0-51		24	RED
6	#5 ENC B -	J0-52		24	GRN
7	#5 ENC I	J0-53	(12) 2 COND SHLD	24	BLK
8	ENC POWER	NOTE 2	(11) 2 COND SHLD	24	RED

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A

SHEET 8 OF

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J5				
PIN	CODE	DESTINATION	SIZE	COLOR
9	#5 SHIELD	NOTE 6	24	BLK
10				
11	ENC GND	NOTE 3 (8) TP	24	BLK
12	#5 POT	J0-54 (7) TP	24	WHT

J8				
PIN	CODE	DESTINATION	SIZE	COLOR
1	-12 VDC	J0-17	24	BLU
2	+12 VDC	J0-18	24	RED
3	SPARE 1	J0-70	24	BLK
4	SPARE 2	J0-71	24	BRN
5	SPARE 3	J0-72	24	RED
6	SPARE 4	J0-73	24	ORG
7	SPARE 5	J0-74	24	YEL
8	HAND POWER	J0-75	24	RED
9	HAND OPEN	J0-76	24	RED
10	HAND CLOSE	J0-77	24	VIO
11	ENC POWER	NOTE 2 TP {	24	RED
12	ENC GND	NOTE 3	24	BLK

GND TERMINALS				
PIN	CODE	DESTINATION	SIZE	COLOR
1	GND	J0-20 GND #2	24	BLK
2	GND	GND #1 GND #3	24	BLK
3	GND	GND 32	24	BLK

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J6

PIN	CODE	DESTINATION		SIZE	COLOR
1	#6 MOTOR+	J0-13	TP	24	VIO
2	#6 MOTOR-	J0-14			24
3	#6 ENC A+	J0-56	4 COND. SHLD.	24	BLK
4	#6 ENC A-	J0-57			WHT
5	#6 ENC B+	J0-58			RED
6	#6 ENC B-	J0-59			GRN
7	#6 ENC I	J0-60		24	BLK
8	ENC PWR	NOTE 2		24	RED
9	#6 SHIELD	NOTE 6		24	BLK
10					
11	ENC GND	<u>NOTE</u> 3		24	BLK
12	#6 POT	J0-62		24	WHT

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REL.	DATE		

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A

SHEET 10 OF 10

REV.

WIRE RUN LIST

INDEX

PAGE	CODE	DESCRIPTION
1	INDEX	INDEX
2	P1	SERVO ASSY JT 1, 500-1601
2 - 3	P2	SERVO ASSY JT 2, 500-1602
3	P3	SERVO ASSY JT 3, 500-1603
4	P4	SERVO ASSY WRIST, 500-3400
4 - 5	P5	SERVO ASSY WRIST, 500-3400
5	P8	VALVE ASSY, 500-3250
6	P6	SERVO ASSY WRIST, 500-3400

NOTES:

NOTE 1 Red wire from encoder is connected together with red wire from Pot. to Pin 8.

NOTE 2 Black wire from encoder is connected together with black wire from Pot to Pin 11.

DR. 4 6-25-79	REV. -	A	500-0501
CHK.	C/N D8711	B0308	
REL. 7-9-79	DATE 7-9-79	PKR 7/28/80	USED ON
Unimation Inc. Danbury, Connecticut			500-1540 A
			SHEET 1 OF 6 REV.

BRUNING 40-21 28437-6

P1 SERVO ASS'Y J1, 500-1601

PIN	CODE	DESTINATION	SIZE	COLOR
1	#1 MOTOR+	J1-1	20	VIO
2	#1 MOTOR-	J1-2	20	WHT
3	#1 ENC A+	J1-3	24	ORN
4	#1 ENC A-	J1-4	24	GRN
5	#1 ENC B+	J1-5	24	YEL
6	#1 ENC B-	J1-6	24	BLU
7	#1 ENC I	J1-7	24	GRY
8	ENC. POWER	J1-8 NOTE 1	24	RED
9	BRAKE POWER	J1-9	24	BLU
10	BRAKE RETURN	J1-10	24	GRY
11	ENC. GND	J1-11 NOTE 2	24	BLK
12	#1 POT	J1-12	24	BRN

P2 SERVO ASS'Y J2, 500-1602

PIN	CODE	DESTINATION	SIZE	COLOR
1	#2 MOTOR+	J2-1	20	VIO
2	#2 MOTOR	J2-2	20	WHT
3	#2 ENC A+	J2-3	24	ORN
4	#2 ENC A-	J2-4	24	GRN
5	#2 ENC B+	J2-5	24	YEL
6	#2 ENC B-	J2-6	24	BLU
7	#2 ENC I	J2-7	24	GRY
8	ENC. POWER	J2-8 NOTE 1	24	RED
9	BRAKE POWER	J2-9	24	BLU
10	BRAKE RETURN	J2-10	24	GRY

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A

SHEET 2 OF

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BRUNING 40-21 28437-6

J2 CONT.

PIN	CODE	DESTINATION	SIZE	COLOR
11	ENC. GND	NOTE 2, J2-11	24	BLK
12	#1 POT	J2-12	24	BRN

SERVO ASSY J3, 500-1603
P3

PIN	CODE	DESTINATION	SIZE	COLOR
1	#3 MOTOR+	J3-1	20	VIO
2	#3 MOTOR-	J3-2	20	WHT
3	#3 ENC A+	J3-3	24	ORN
4	#3 ENC A-	J3-4	24	GRN
5	#3 ENC B+	J3-5	24	YEL
6	#3 ENC B-	J3-6	24	BLU
7	#3 ENC I	J3-7	24	GRY
8	ENC POWER	NOTE 1 J3-8	24	RED
9	BRAKE POWER	J3-9	24	BLU
10	BRAKE RETURN	J3-10	24	GRY
11	ENC. RETURN	NOTE 2, J3-11	24	BLK
12	#3 POT	J3-12	24	BRN

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A

SHEET 3 OF

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BRUNING 40-21 28437-6

FORM 0038

P4
SERVO ASS'Y, 500-3400

PIN	CODE	DESTINATION	SIZE	COLOR
1	#4 MOTOR+	J4-1	24	VIO
2	#4 MOTOR-	J4-2	24	WHT
3	#4 ENC A+	J4-3	24	ORN
4	#4 ENC A-	J4-4	24	GRN
5	#4 ENC B+	J4-5	24	YEL
6	#4 ENC B-	J4-6	24	BLU
7	#4 ENC I	J4-7	24	GRY
8	ENC. POWER	NOTE 1 J4-8	24	RED
9	#4 SHIELD	J4-9	24	BLK
10				
11	ENC. GND	NOTE 2 J4-11	24	BLK
12	#4 POT	J4-12	24	BRN

P5 SERVO ASS'Y, 500-3400

PIN	CODE	DESTINATION	SIZE	COLOR
1	#5 MOTOR+	J5-1	24	VIO
2	#5 MOTOR-	J5-2	24	WHT
3	#5 ENC A+	J5-3	24	ORN
4	#5 ENC A-	J5-4	24	GRN
5	#5 ENC B+	J5-6	24	YEL
6	#5 ENC B-	J5-7	24	BLU
7	#5 ENC I	J5-8	24	GRY
8	ENC POWER	NOTE 1 J5-9	24	RED

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A

SHEET 4 OF

REV.

BRUNING 40-21 28437-6

P5 CONT.

PIN	CODE	DESTINATION	SIZE	COLOR
9	#5 SHIELD	J5-9	24	BLK
10				
11	ENC GND	NOTE 2 J5-11	24	BLK
12	#5 POT	J5-12	24	BRN

VALVE ASS'Y, 500-3250
P8

PIN	CODE	DESTINATION	SIZE	COLOR
1				
2				
3				
4				
5				
6				
7				
8	HAND POWER	J8-8	18	BLK
9	HAND OPEN	J8-9	18	BLK
10				
11				
12				

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500-1540	A
SHEET 5 OF	REV.

(A)

SERVO ASS'Y, 500-3400

P6

PIN	CODE	DESTINATION	SIZE	COLOR
1	#6 MOTOR+	J6-1	24	VIO
2	#6 MOTOR-	J6-2	24	WHT
3	#6 ENC A+	J6-3	24	ORN
4	#6 ENC A-	J6-4	24	GRN
5	#6 ENC B+	J6-5	24	YEL
6	#6 ENC B-	J6-6	24	BLU
7	#6 ENC I	J6-7	24	GRY
8	ENC PWR	J6-8	24	RED
9	#6 SHIELD	J6-9	24	BLK
10				
11	ENC GND	J6-11	24	BLK
12	#6 POT	J6-12	24	BRN

NOTE 1

NOTE 2

BRUNING 40-21 28437-6

DR.	REV.		
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A

SHEET 6 OF 6

REV.