FRONT Board 5 (TOP when board raised)

CB1

ex PC COM4 USB to RS485	485A	485A	to SB1/1
ex PC COM4 USB to RS485	485B	485B	to SB1/2

CB3

ex NCE bus	DCC	DCC	to SB7/1
ex NCE bus	DCC	DCC	to SB7/2

BLOCK SENSOR CONTROL UNIT 1

RS485 rail

485A	<connected>	
	485B	<conn>

SB1

485A	ex CB1/1
485B	ex CB1/2

12v rail

SB7

DCC bus in		<connected>
DCC bus in		<connected>

DCC rail

N1 [RS485 BUS interface] **BUS Node1** [CMRI BUS protocol to JMRI]

	ex 12v rail	GND	DI	to A1/1
485A	<connected>	485A	DE	DE & RE joined
485B	<conn>	485B	RE	to A1/5 (D2)
	ex A1/27	VCC	RO	to A1/2

SB8

FY4	to Feeds for B137, B138, B138 & B140
FY3	to Feeds for B134, B135 & B136

BSCU1

GNDs

N1	
BOD13	
BOD12	
BOD11	
BOD10	
BOD09	
BOD08	
BOD07	
A1/29	<connected>
A1/30	<connected>

A1 — **ARDUINO NANO1**

	16	15			
	17	14			BOD13
	18	13			
	19	12	D9	ex BOD13	BOD12
	20	11	D8	ex BOD12	
	21	10	D7	ex BOD11	BOD11
	22	9	D6	ex BOD10	
	23	8	D5	ex BOD9	BOD10
	24	7	D4	ex BOD8	
	25	6	D3	ex BOD7	BOD9
	26	5	D2	ex N1/DE&RE	
to N1/VCC	5v 27	4			BOD8
	28	3			
GND	29	2	RXD	ex N1/RO	BOD7
VIN	30	1	TX1	ex N1/DI	

BOD strip 1

			Screw	
ex 12v rail	GND	BOD13	B140	to track dropper
ex Arduino	A1/13		DCC IN	ex DCC rail
ex 12v rail	GND	BOD12	B139	to track dropper
ex Arduino	A1/12		DCC IN	ex DCC rail
ex 12v rail	GND	BOD11	B138	to track dropper
ex Arduino	A1/11		DCC IN	ex DCC rail
ex 12v rail	GND	BOD10	B137	to rail dropper
ex Arduino	A1/10		DCC IN	ex DCC rail
ex 12v rail	GND	BOD9	B136	to track dropper
ex Arduino	A1/9		DCC IN	ex DCC rail
ex 12v rail	GND	BOD8	B135	to track dropper
ex Arduino	A1/8		DCC IN	ex DCC rail
ex 12v rail	GND	BOD7	B134	to track dropper
ex Arduino	A1/7		DCC IN	ex DCC rail

RS485 rail

485A	<connected>	
	485B	<conn>

SB2

485A	to SB4
485B	to SB4

12v rail

SB3

GND	ex SB5/1
12v	ex SB5/2

SB9

to SB10		<connected>
to SB10		<connected>

BLOCK SENSOR CONTROL UNIT 2

RS485 rail

485A	<connected>	
	485B	<conn>

SB4

485A	ex SB2
485B	ex SB2

12v rail

SB5

GND	to SB3/1
12v	to SB3/2

SB10

ex SB9/1		<connected>
ex SB9/2		<connected>

DCC rail

N2 [RS485 BUS interface] **BUS Node2** [CMRI BUS protocol to JMRI]

	ex 12v rail	GND	DI	to A2/1
485A	<connected>	485A	DE	DE & RE joined
485B	<conn>	485B	RE	to A1/5 (D2)
	ex A2/27	VCC	RO	to A2/2

SB11

FY2	to Feeds for B131, B132 & B133
FY1	to Feeds for B128, B129 & B130

BSCU2

GNDs

N2	
BOD6	
BOD5	
BOD4	
BOD3	
BOD2	
BOD1	
A2/29	<connected>
A2/30	<conn>

A2 — **ARDUINO NANO2**

	16	15			
	17	14			
	18	13			BOD6
	19	12			
	20	11	D8	ex BOD6	BOD5
	21	10	D7	ex BOD5	
	22	9	D6	ex BOD4	BOD4
	23	8	D5	ex BOD3	
	24	7	D4	ex BOD2	BOD3
	25	6	D3	ex BOD1	
	26	5		ex N2/DE&RE	BOD2
to N2/VCC	5v 27	4			
	28	3			BOD1
GND	29	2	RXD	ex N2/RO	
VIN	30	1	TX1	ex N2/DI	

BOD strip 2

			Screw	
ex 12v rail	GND	BOD6	B133	to track dropper
to Arduino	A2/11		DCC IN	ex DCC rail
ex 12v rail	GND	BOD5	B132	to track dropper
to Arduino	A2/10		DCC IN	ex DCC rail
ex 12v rail	GND	BOD4	B131	to track dropper
to Arduino	A2/9		DCC IN	ex DCC rail
ex 12v rail	GND	BOD3	B130	to rail dropper
to Arduino	A2/8		DCC IN	ex DCC rail
ex 12v rail	GND	BOD2	B129	to track dropper
to Arduino	A2/7		DCC IN	ex DCC rail
ex 12v rail	GND	BOD1	B128	to track dropper
to Arduino	A2/6		DCC IN	ex DCC rail

12v rail

SB6

1	GND	ex CB2/1
2	12v	ex CB2/2

DCC rail

CB2

ex 12v supply	GND	GND	to SB6/1
ex 12v supply	12v	12v	to SB6/2

REAR Board 5 (BOTTOM when board raised)