

TB A +5V

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	+5V	J10-57	J1-11	SLIT MASK
	+5V	J10-56	J1-20	SLIT MASK
2	+5V	J10-55	J2-11	FILTER WHEEL
	+5V	J10-54	J2-20	FILTER WHEEL
3	+5V	J10-53	J3-11	APERTURE
	+5V	J10-52	J3-20	APERTURE
4	+5V	J10-51	J4-11	TV FOCUS
	+5V	J10-50	J4-20	TVFOCUS
5	+5V	J20-57	J5-11	COLLIMATOR 1
	+5V	J20-56	J5-20	COLLIMATOR 1
6	+5V	J20-55	J6-11	COLLIMATOR 2
	+5V	J20-54	J6-20	COLLIMATOR 2
7	+5V	J20-53	J7-11	COLLIMATOR 3
	+5V	J20-52	J7-20	COLLIMATOR 3
8	+5V	J20-51	J8-11	TV FILTER
	+5V	J20-50	J8-20	TV FILTER
9	+5V	J10-49	J21-9	ENCODERS
	+5V	J10-48	J22-9	ENCODERS
10	+5V	J10-47	J23-9	ENCODERS
	+5V	J10-46	J24-9	ENCODERS
11	+5V	P1 +5V	-	OPTO-22 PANEL 1
	+5V	P3 +5V	-	OPTO-22 PANEL 2
12	+5V	P2 +5V	-	OPTO-22 PANEL 3
	+5V	-	-	-
13	+5V	J9-14	-	MANUAL PADDLE
	+5V	-	-	-
14	+5V	J20-49	J25-9	ENCODERS
	+5V	J20-48	J26-9	ENCODERS
15	+5V	J20-47	J27-9	ENCODERS
	+5V	J20-46	J28-9	ENCODERS
16	+5V	-	-	-
	+5V	-	-	-
17	+5V	-	-	-
	+5V	-	-	-
18	+5V	-	-	-
	+5V	-	-	-
19	+5V	J7-2	-	ANALOG BD +5
	+5V	-	-	-
20	+5V	-	-	-
	+5V	-	-	-

PINS 1-20 JUMPERED ON TOP

TB B GND

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	GND	J10-22	-	AMP GROUND
	GND	J10-21	-	AMP GROUND
2	GND	J20-22	-	AMP GROUND
	GND	J20-21	-	AMP GROUND
3	GND	J10-1	J1-6	SLIT MASK
	GND	J10-2	J1-12	SLIT MASK
4	GND	J10-3	J1-17	SLIT MASK
	GND	J10-4	J1-18	SLIT MASK
5	GND	J10-5	J2-6	FILTER WHEEL
	GND	J10-6	J2-12	FILTER WHEEL
6	GND	J10-7	J2-17	FILTER WHEEL
	GND	J10-8	J2-18	FILTER WHEEL
7	GND	J10-9	J3-6	APERTURE
	GND	J10-10	J3-12	APERTURE
8	GND	J10-11	J3-17	APERTURE
	GND	J10-12	J3-18	APERTURE
9	GND	J10-13	J4-6	TV FOCUS
	GND	J10-14	J4-12	TV FOCUS
10	GND	J10-15	J4-17	TV FOCUS
	GND	J10-16	J4-18	TV FOCUS
11	GND	J20-1	J5-6	COLLIMATOR 1
	GND	J20-2	J5-12	COLLIMATOR 1
12	GND	J20-3	J5-17	COLLIMATOR 1
	GND	J20-4	J5-18	COLLIMATOR 1
13	GND	J20-5	J6-6	COLLIMATOR 2
	GND	J20-6	J6-12	COLLIMATOR 2
14	GND	J20-7	J6-17	COLLIMATOR 2
	GND	J20-8	J6-18	COLLIMATOR 2
15	GND	J20-9	J7-6	COLLIMATOR 3
	GND	J20-10	J7-12	COLLIMATOR 3
16	GND	J20-11	J7-17	COLLIMATOR 3
	GND	J20-12	J7-18	COLLIMATOR 3
17	GND	J20-13	J8-6	TV FILTER
	GND	J20-14	J8-12	TV FILTER
18	GND	J20-15	J8-17	TV FILTER
	GND	J20-16	J8-18	TV FILTER
19	GND	J7-1	-	ANALOG BD GND
	GND	-	-	-
20	GND	-	-	-
	GND	-	-	-

PINS 1-20 JUMPERED ON TOP

TB E GND

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	GND	PWR SUP	-	-
	GND	P1 GND	-	OPTO-22 PANEL 1
2	GND	P3 GND	-	OPTO-22 PANEL 2
	GND	P2 GND	-	OPTO-22 PANEL 3
3	GND	-	-	-
	GND	-	-	-
4	GND	-	-	-
	GND	-	-	-
5	GND	-	-	-
	GND	-	-	-
6	GND	-	-	-
	GND	-	-	-
7	GND	-	-	-
	GND	-	-	-
8	GND	J9-13	-	MANUAL PADDLE
	GND	-	-	-
9	GND	-	-	-
	GND	J41-5	-	COOLANT
10	GND	J10-17	J21-8	ENCODERS
	GND	J10-18	J22-8	ENCODERS
11	GND	J10-19	J23-8	ENCODERS
	GND	J10-20	J24-8	ENCODERS
12	GND	J20-17	J25-8	ENCODERS
	GND	J20-18	J26-8	ENCODERS
13	GND	J20-19	J27-8	ENCODERS
	GND	J20-20	J28-8	ENCODERS
14	GND	J44-11	-	PUMP OK SIG GND
	GND	-	-	-
15	GND	-	-	-
	GND	-	-	-
16	GND	-	-	-
	GND	-	-	-
17	GND	GROUND	TO ANALOG BD (+28V)	-
	GND	-	-	-
18	GND	GROUND	FROM +12V SUPPLY	-
	GND	GROUND	TO ANALOG BD (+12V)	-
19	GND	GROUND	FROM -12V SUPPLY	-
	GND	GROUND	TO ANALOG BD (-12V)	-
20	GND	GROUND	TO +28V SUPPLY	-
	GND	GROUND	TO CHASSIS TIE POINT	-

PINS 1-20 JUMPERED ON TOP

TB G 120 VAC

PIN	SIGNAL	TO	TO	FUNCTION
1	H	SOURCE	PN1-1	-
	H	-	-	OPTO-22 PANEL 1
2	H	-	-	LOGIC SUPPLY
	H	-	-	MOTOR SUPPLY
3	N	SOURCE	-	TV POWER
	N	-	-	LOGIC SUPPLY
4	N	-	-	MOTOR SUPPLY
	N	-	-	FANS
5	N	-	-	-
	N	-	-	-
6	N	-	-	-
	N	-	-	-
7	N	-	-	-
	N	-	-	-
8	N	-	-	-
	N	-	-	-
9	N	-	-	-
	N	-	-	-
10	N	-	-	-
	N	-	-	-
11	N	-	-	-
	N	-	-	-
12	N	-	-	-
	N	-	-	-

CONTROLLER PLATE #0

REVISION

02/13/97 NEW LAYOUT FOR TERMINAL BLOCKS
 09/12/97 ADDED SECOND SHEET FOR SECOND CONTROLLER
 11/19/97 CORRECTED SOME SIGNAL LABELS
 01/15/98 CHANGED IMAGE AND LOW DISP FLAT STAGES FROM AIR TO SERVO MOTORS
 12/08/98 REMOVED LAMP STAGE REFERENCES (SHEET 2)
 03/17/99 CORRECTED COOLANT SWITCH WIRING
 7-26-99 ADDED ANALOG AND SUPPLY GNDS - JB

**UNIVERSITY OF CALIFORNIA
 LICK OBSERVATORY**

**POWER DISTRIBUTION TERMINAL BOARDS
 INSTRUMENT ENCLOSURE
 ESI SPECTROGRAPH**

DES'N BY: **B. Alcott**

ORIGIN DATE: **2/19/96**

DWG. NO.

NUM. **1** OF **2**

DRAWN BY:

MODIFY DATE: **7-26-99**

PATH: **ESI\TBAG**

REV. **B**

EL-3332-1W

TB C +5V

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	+5V	J10-57	J11-11	PD PRISM
	+5V	J10-56	J11-20	PD PRISM
2	+5V	J10-55	J12-11	SPARE STAGE
	+5V	J10-54	J12-20	SPARE STAGE
3	+5V	J10-53	J13-11	IMAGE FLAT
	+5V	J10-52	J13-20	IMAGE FLAT
4	+5V	J10-51	J14-11	LOW DISP FLAT
	+5V	J10-50	J14-20	LOW DISP FLAT
5	+5V	J20-57	J15-11	-
	+5V	J20-56	J15-20	-
6	+5V	J20-55	J16-11	-
	+5V	J20-54	J16-20	-
7	+5V	J20-53	J17-11	-
	+5V	J20-52	J17-20	-
8	+5V	J20-51	J18-11	-
	+5V	J20-50	J18-20	-
9	+5V	J10-49	J31-9	ENCODERS
	+5V	J10-48	J32-9	ENCODERS
10	+5V	J10-47	J33-9	ENCODERS
	+5V	J10-46	J34-9	ENCODERS
11	+5V	P1 +5V	-	OPTO-22 PANEL 4
	+5V	P3 +5V	-	OPTO-22 PANEL 6
12	+5V	P2 +5V	-	OPTO-22 PANEL 5
	+5V	-	-	-
13	+5V	J19-14	-	MANUAL PADDLE
	+5V	-	-	-
14	+5V	J20-49	J35-9	ENCODERS
	+5V	J20-48	J36-9	ENCODERS
15	+5V	J20-47	J37-9	ENCODERS
	+5V	J20-46	J38-9	ENCODERS
16	+5V	-	-	-
	+5V	-	-	-
17	+5V	-	-	-
	+5V	-	-	-
18	+5V	JHC1-5	-	HOLLOW CAT DRIVE BOARD
	+5V	-	-	-
19	+5V	J7-2	-	ANALOG BD +5
	+5V	-	-	-
20	+5V	-	-	-
	+5V	-	-	-

PINS 1-20 JUMPERED ON TOP

TB D GND

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	GND	J10-22	-	AMP GROUND
	GND	J10-21	-	AMP GROUND
2	GND	J20-22	-	AMP GROUND
	GND	J20-21	-	AMP GROUND
3	GND	J10-1	J11-6	PD PRISM
	GND	J10-2	J11-12	PD PRISM
4	GND	J10-3	J11-17	PD PRISM
	GND	J10-4	J11-18	PD PRISM
5	GND	J10-5	J12-6	SPARE STAGE
	GND	J10-6	J12-12	SPARE STAGE
6	GND	J10-7	J12-17	SPARE STAGE
	GND	J10-8	J12-18	SPARE STAGE
7	GND	J10-9	J13-6	IMAGE FLAT
	GND	J10-10	J13-12	IMAGE FLAT
8	GND	J10-11	J13-17	IMAGE FLAT
	GND	J10-12	J13-18	IMAGE FLAT
9	GND	J10-13	J14-6	LOW DISP FLAT
	GND	J10-14	J14-12	LOW DISP FLAT
10	GND	J10-15	J14-17	LOW DISP FLAT
	GND	J10-16	J14-18	LOW DISP FLAT
11	GND	J20-1	J15-6	-
	GND	J20-2	J15-12	-
12	GND	J20-3	J15-17	-
	GND	J20-4	J15-18	-
13	GND	J20-5	J16-6	-
	GND	J20-6	J16-12	-
14	GND	J20-7	J16-17	-
	GND	J20-8	J16-18	-
15	GND	J20-9	J17-6	-
	GND	J20-10	J17-12	-
16	GND	J20-11	J17-17	-
	GND	J20-12	J17-18	-
17	GND	J20-13	J18-6	-
	GND	J20-14	J18-12	-
18	GND	J20-15	J18-17	-
	GND	J20-16	J18-18	-
19	GND	J7-1	-	ANALOG BD GND
	GND	-	-	-
20	GND	-	-	-
	GND	-	-	-

PINS 1-20 JUMPERED ON TOP

TB F GND

PIN	SIGNAL	TO	THEN TO	FUNCTION
1	GND	-	-	-
	GND	P1 GND	-	OPTO-22 PANEL 4
2	GND	P3 GND	-	OPTO-22 PANEL 6
	GND	P2 GND	-	OPTO-22 PANEL 5
3	GND	J56-7	-	PD PRISM LOCK
	GND	J56-8	-	PD PRISM LOCK
4	GND	J57-10	-	HATCH
	GND	J57-8	-	HATCH
5	GND	J58-7	-	-
	GND	J58-8	-	-
6	GND	J59-7	-	-
	GND	J59-8	-	-
7	GND	-	-	-
	GND	-	-	-
8	GND	J19-13	-	MANUAL PADDLE
	GND	-	-	-
9	GND	-	-	-
	GND	-	-	-
10	GND	J10-17	J31-8	ENCODERS
	GND	J10-18	J32-8	ENCODERS
11	GND	J10-19	J33-8	ENCODERS
	GND	J10-20	J34-8	ENCODERS
12	GND	J20-17	J35-8	ENCODERS
	GND	J20-18	J36-8	ENCODERS
13	GND	J20-19	J37-8	ENCODERS
	GND	J20-20	J38-8	ENCODERS
14	GND	-	-	-
	GND	-	-	-
15	GND	JHC1-6	-	GND FOR HC +5
	GND	-	-	-
16	GND	-	-	GND FOR HC +12
	GND	-	-	-
17	GND	-	-	GND FOR HC -12
	GND	-	-	SERVO TO ANALOG
18	GND	-	-	GND FOR +12
	GND	-	-	-
19	GND	-	-	GND FOR -12
	GND	-	-	GND TO CHASSIS
20	GND	J56-2	-	AIR PRESS. SW
	GND	-	-	GND FOR +28V

PINS 1-20 JUMPERED ON TOP

TB H 120 VAC

PIN	SIGNAL	TO	TO	FUNCTION
1	H	SOURCE	PN1-1	-
	H	-	-	OPTO-22 PANEL 4
2	H	-	-	LOGIC SUPPLY
	H	-	-	MOTOR SUPPLY
3	N	SOURCE	-	-
	N	-	-	LOGIC SUPPLY
4	N	-	-	MOTOR SUPPLY
	N	-	-	FANS
5	N	J42-2	J42-5	LAMPS
	N	J42-8	J42-11,14	LAMPS
6	N	PJ20-11	-	HATCH
	N	-	-	-
7	N	-	-	-
	N	-	-	-
8	N	-	-	-
	N	-	-	-
9	N	-	-	-
	N	-	-	-
10	N	-	-	-
	N	-	-	-
11	N	-	-	-
	N	-	-	-
12	N	-	-	-
	N	-	-	-

STAGE BRAKES

1	+28V	PNL4-31	-	BRAKE POWER
	-	-	-	-
2	Gnd	J51-2	-	PD PRISM
	-	J53-2	-	IMAGE FLAT
	-	J54-2	-	LD FLAT

POWER FOR THESE STAGES COMES FROM THE SMALL TERMINALS ON THE MOTOR POWER SUPPLY

CONTROLLER PLATE #1

REVISION

02/13/97 NEW LAYOUT FOR TERMINAL BLOCKS
 09/12/97 ADDED SECOND SHEET FOR SECOND CONTROLLER
 11/19/97 CORRECTED SOME SIGNAL LABELS
 01/15/98 CHANGED IMAGE AND LOW DISP FLAT STAGES FROM AIR TO SERVO MOTORS
 09/01/98 ADDED TB F-20
 10-21-98 ADDED +28V BRAKE WIRING
 12-8-98 REMOVED LAMP STAGE REFERENCES
 7-26-99 ADDED HC AND GND LABELS - JB

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POWER DISTRIBUTION TERMINAL BOARDS
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DES'N BY: B. Alcott

ORIGIN DATE: 2/19/96

DWG. NO.

NUM. 2 OF 2

DRAWN BY:

MODIFY DATE: 7-26-99

PATH: ESI\TBAG

REV. B

EL-3332-1W