



26-Aug. -66

Experiment Electrical  
Interface Definitions

This ATM defines the electrical interfaces, both internal and external, for each experiment. The Integration and Control Section of the Experiments Group will update the ATM by using amendments on a weekly basis, thereby confirming any hand carried information given by the Group. Experiment data used by other groups for design purposes should be verified by Integration and Control Section, who will ensure that the P. E. concerned is aware, and approves of the issues involved.

Prepared by: *D Perkins*

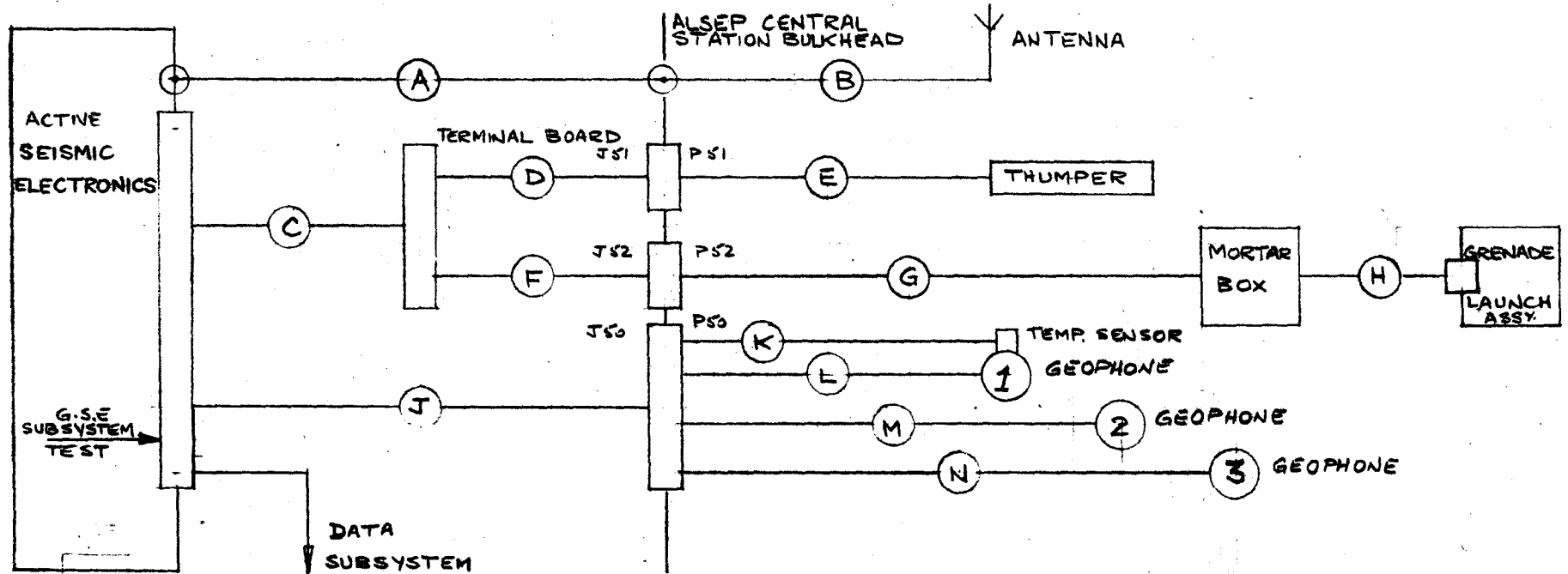
D. Perkins

Approved by: *A B Collins*

A. B. Collins

# ACTIVE SEISMIC EXPERIMENT LINE DIAGRAM

ATM-483 Page 2 of 33



ISSUE NUMBER									
DATE	9/2/66								
APPROVED	<i>[Signature]</i>								

# ACTIVE SEISMIC EXPERIMENT CABLES

ATM-483 Page 3 of 33

CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	ACTIVE SEISMIC ELECTRONICS CONNECTOR	OSM 531/3 RIGHT ANGLE	COAXIAL RG188 A/U	1	3 FEET	OSM 636-3 FLANGE MOUNTING	ANTENNA CABLE CONNECTOR
B	CONNECTOR ON CENTRAL STATION	OSM 531/3	COAXIAL RG188 A/U	1	10 FEET		ANTENNA
C	ACTIVE SEISMIC ELECTRONICS CONNECTOR		24 ANG TEFLON COATED STRANDED WIRE MS18032-2409	22		HARDWIRE	TERMINAL BOARD
D	TERMINAL BOARD	HARDWIRE	CONSTANTAN AWG	4	4 INCHES	(J51)	CONNECTOR ON CABLE 'E' (P51)
E	CONNECTOR ON CENTRAL STATION (J51)	(P51)	METHODE H FILM FLAT CONDUCTOR CABLE PD3004H	4	310 FEET	HARDWIRE	THUMPER
F	TERMINAL BOARD	HARDWIRE	CONSTANTAN A.W.G	18	4 INCHES	J(52)	CONNECTOR ON CABLE 'G' (P52)
G	CONNECTOR ON CENTRAL STATION (J52)	(P52)	METHODE H FILM FLAT CONDUCTOR CABLE PD3020H	20	10 FEET	HARDWIRE	MORTAR BOX
H	MORTAR BOX	HARDWIRE		30			GRENADE LAUNCHER ASSEMBLY
J	ACTIVE SEISMIC ELECTRONICS CONNECTOR		TWISTED PAIR ROUND WIRES, SHIELDED	11 & 4 SHIELDS		(J50)	CONNECTOR ON CABLES K, L, M, N. (P50)
K, L, M, N	CONNECTOR ON CENTRAL STATION (J50)	(P50)	TWISTED PAIR ROUND WIRE SHIELDED, RIBBON CABLE	2 PER CABLE & SHIELDS	K 10 FEET L 10 FEET M 160 FEET N 310 FEET	HARDWIRE	'K' TEMP SENSOR 'L' 'M' 'N' GEOPHONES



8/26/66

**BENDIX SYSTEMS DIVISION ANN ARBOR, MICH.**

Experiment Electrical Interface  
Definitions

NO. ATM-483

REV. NO.

PAGE 4 OF 33 PAGES

Active Seismic Experiment

Cable C details and pin functions for signals to data subsystem are to be determined.



8/26/66

Active Seismic Experiment

Cable D Details

Connector Pins (J51)	Function	Terminal Board Pin
1	Thumper real time event	51-01
2	Electrical Common	51-02
3	+29 volts Supply	51-03
4	Thumper Arm	51-04

Cable E Details

Connector Pins (P51)	Function
1	Thumper Real Time Event
2	Electrical Common
3	+29 Volts Supply
4	Thumper Arm



8/26/66

Experiment Electrical Interface  
Definitions

Active Seismic Experiment

Cable F

Connector J52	Terminal Board Pins	Functions
1	52-01	+ 5v Telemetry
2	52-02	+ 24v Arming
3	52-03	E-W Angle
4	52-04	+24v Sequential Arming
5	52-05	N-S Angle
6	52-06	Temperature Sensor Power
7	52-07	G. L. A. Temperature Sensor
8	52-08	Electrical Common
9	52-09	Range Start/Stop
10	52-10	+ 29v Heater Power
11	52-11	Fire Grenade #3
12		Connected to pin 8 (J52)
13	52-12	Fire Grenade #1
14	52-13	+ 5 volts
15	52-14	Fire Grenade #2
16	52-15	Chassis Return
17	52-16	Fire Grenade #4
18	52-17	Mortar Box Temperature Sensor
19		Connected to pin 10 (J52)
20	52-18	Sequential Fire



8/26/66

Active Seismic Experiment

Cable G Details

Connector Pin (P52)	Function
1	+5v Telemetry
2	+24v Arming STD
3	E-W Angle
4	24v Arming (SEQ)
5	N-S Angle
6	Temperature Sensor Power
7	Grenade Launcher Assembly Temperature Sensor
8	Electrical Common
9	Range Start Stop
10	29v Survival Power
11	Fire Grenade #3
12	Electrical Common
13	Fire Grenade #1
14	Range Line Power +5v
15	Fire Grenade #2
16	Chassis Common
17	Fire Grenade #4
18	Mortar Box Temperature Sensor
19	29v Survival Power
20	Sequential Fire



26-Aug. -66

Active Seismic Experiment

Cable H Details

G. L. A. Connector Pin

Functions

1	Fire Grenade #1
2	Range Start #1
3	Arm #1, 2, 3, 4
4	Range Stop #1
5	Range Stop #2
6	Spare
7	Range Stop #2
8	Fire Grenade #2
9	Chassis Common
10	+ 5v Telemetry
11	+ 5v Transducer Power
12	Heater Control Temperature Sensor
13	+29 v Heater Power
14	N-S Angle
15	+ 29 v Sensor Power
16	E-W Angle
17	+ 5v Range Line Power
18	Heater Control Temperature Sensor
19	Grenade Launcher Temperature
20	Heater Status G. S. E.
21	Range Stop #3
22	Electrical Common
23	Fire #3
24	Range Start #3
25	Spare
26	Spare
27	Range Stop #4
28	Spare
29	Range Start #4
30	Fire Grenade #4





8/26/66

Active Seismic Experiment

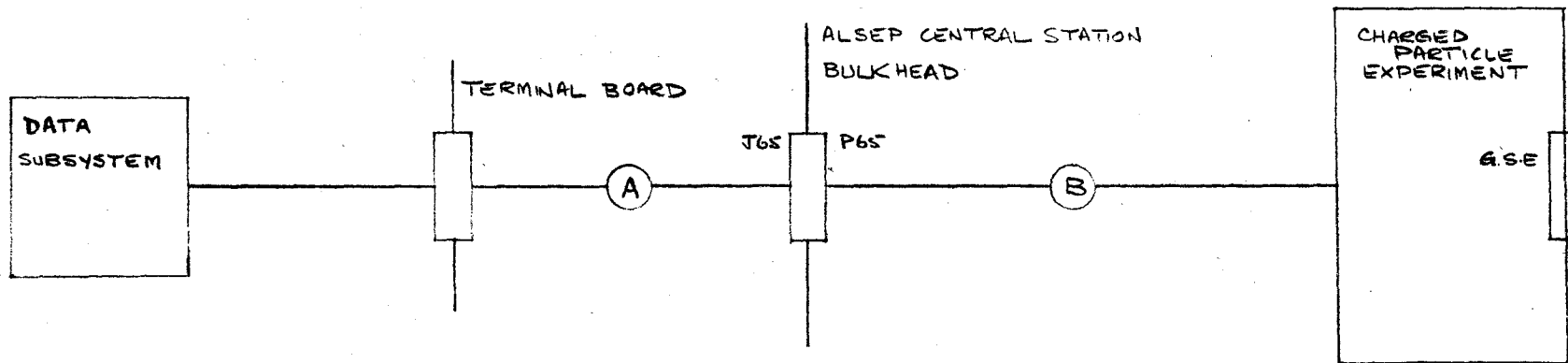
Cable J Details

<u>Central Station Connector Pin</u>	<u>Seismic Electronic Connector Pin</u>	<u>Function</u>
1		Geophone 3 Signal "A"
2		Geophone 3 Signal "B"
3	To be determined	Shield
4		Geophone 2 Signal "A"
5		Geophone 2 Signal "B"
6		Shield
7		Geophone 1 Signal "A"
8		Geophone 1 Signal "B"
9		Shield
10		Geophone Temperature
11		Geophone Temp. Sensor Return
12		Shield
13		Output Number 1 G.S.E.
14		Output Number 2 only
15		Output Number 3

Cable K, L, M, N Details

<u>Central Station Connector Pin</u>	<u>Function</u>	<u>Cable</u>
1	Geophone 3 Signal "A"	K
2	Geophone 3 Signal "B"	K
3	Shield	K
4	Geophone 2 Signal "A"	L
5	Geophone 2 Signal "B"	L
6	Shield	L
7	Geophone 1 Signal "A"	M
8	Geophone 1 Signal "B"	M
9	Shield	M
10	Geophone Temperature Sensor	F
11	Temperature Sensor Ground	F
12	Shield	F
13		
14		
15		

CHARGED PARTICLE EXPERIMENT LINE DIAGRAM



CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	TERMINAL BOARD	HARDWIRE	CONSTANTAN 28 AWG UNLESS SHOWN OTHERWISE COPPER WIRES	24		J65	CONNECTOR ON CABLE 'B' (P65)
B (W65)	CONNECTOR ON CENTRAL STATION J65	(P65)	METHODE H FILM FLAT CONDUCTOR CABLE PD3038H	37	10 FEET	HARDWIRE	EXPERIMENT

G.S.E. CONNECTOR:

ISSUE NUMBER	1								
DATE									
APPROVED	J.S.								



8/26/66

Charged Particle Experiment

Cable A Details

<u>Connector Pin (J65)</u>	<u>Wire and Gauge</u>	<u>Terminal Board Pin</u>	<u>Function (J65)</u>
1	Constantan 28	TB65-01	Shield
2	Constantan 28	TB65-02	Data Line
3			Connected to Pin 1
4	Constantan 28	TB65-03	Shift Pulse
5			Connected to Pin 1
6	Constantan 28	TB65-04	Even Frame Mark
7			Connected to Pin 1
8	Constantan 28	TB65-05	Case Return
9	Constantan 28	TB65-06	Demand Line
10	Copper	TB65-07	Signal Return
11	Constantan 28	TB65-08	Command #1
12	Constantan 28	TB65-09	Command #2
13	Constantan 28	TB65-10	Command #3
14	Constantan 28	TB65-11	Command #4
15	Constantan 28	TB65-12	Command #5
16	Constantan 28	TB65-13	Command #6
17	Constantan 28	TB65-14	Command #7
18	Constantan 28	TB65-15	Command #8
19	Copper	TB65-16	Analog #1
20	Copper	TB65-17	Analog #2
21	Copper	TB65-18	Analog #3
22	Copper	TB65-19	Analog #4
23	Copper	TB65-20	Analog #5
24	Copper	TB65-21	Analog #6
25			Connected to Pin 1
26	Constantan 26	TB65-22	Operating & Heater Power
27			Connected to 26
28			Connected to 26
29			Connected to 26
30	Constantan 26	TB65-23	Power Return
31			Connected to Pin 30
32			Connected to Pin 30
33			Connected to Pin 30
34	Constantan 26	TB65-24	Survival Heater
35			Connected to 34
36			Connected to 34
37			Connected to 34



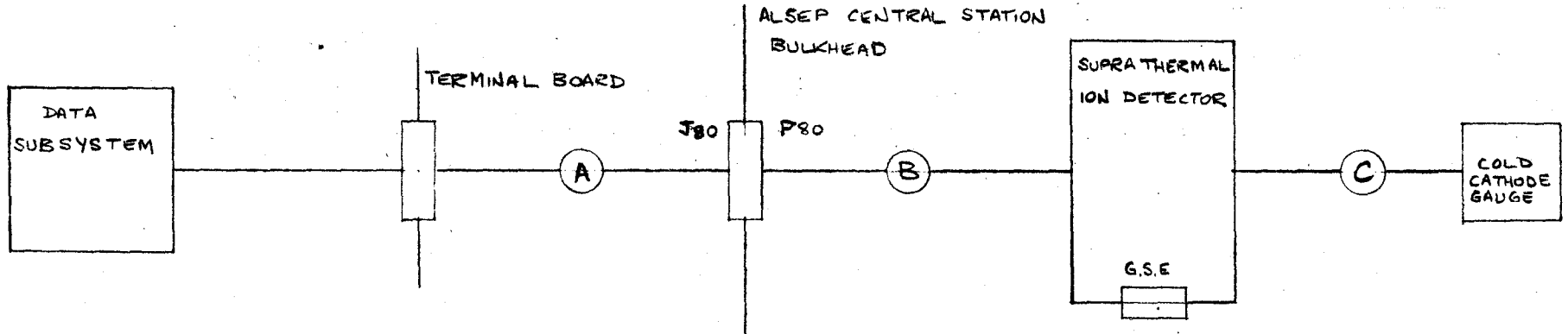
26-Aug. -66

Charged Particle Experiment

Cable B Details

Connector pin (P65)	Function
1	Shield
2	Data Line
3	Shield
4	Shift Pulse
5	Shield
6	Even Frame Mark
7	Shield
8	Case Return
9	Demand Line
10	Signal Return
11	Command #1 Thermal control bypass ON
12	Command #2 Thermal control bypass OFF
13	Command #3 Dust cover removal
14	Command #4 Automatic voltage level sequencer ON
15	Command #5 Step voltage level
16	Command #6 Automatic voltage sequencer OFF
17	Command #7 Channeltron P.S. voltage increase ON
18	Command #8 Channeltron P.S. voltage increase OFF
19	Housekeeping #1 Switchable power supply voltage
20	Housekeeping #2 Channeltron P.S. #1 voltage
21	Housekeeping #3 Channeltron P.S. #2 voltage
22	Housekeeping #4 DC-DC converter voltage
23	Housekeeping #5 Temperature #1
24	Housekeeping #6 Temperature #2
25	Spare
26	Operating and Heater Power
27	Operating and Heater Power
28	Operating and Heater Power
29	Operating and Heater Power
30	Power Return
31	Power Return
32	Power Return
33	Power Return
34	Survival Heater Power
35	Survival Heater Power
36	Survival Heater Power
37	Survival Heater Power

## SUPRATHERMAL ION DETECTOR EXPERIMENT LINE DIAGRAM



CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	TERMINAL BOARD	HARDWIRE	CONSTANTAN WIRES 28 AWG UNLESS OTHERWISE STATED	16		J 80	CONNECTOR ON CABLE 'B' P80
B (W80)	CONNECTOR ON CENTRAL STATION	P80	METHODE H FILM FLAT CONDUCTOR CABLE PD 3038 H	38	60 FEET	HARDWIRE	EXPERIMENT
C	S.I.D.E	HARDWIRE		7	4 FEET	HARDWIRE	COLD CATHODE GAUGE

G.S.E CONNECTOR

ISSUE NUMBER									
DATE									
APPROVED	<i>R. M. Hager</i> 7/2/66								



8-26-66

Suprathermal Ion Detector

Cable A Details

Terminal Board Pin	Constantan A. W. G.	Connector Pin (J80)	Pin Function
TB80-01		1	Shield
TB80-02		2	Digital data
		3	Connected to pin 1
TB80-03		4	Shift Pulse
		5	Connected to pin 1
TB80-04		6	Frame Mark
		7	Connected to pin 1
TB80-05		8	Even Frame Mark
		9	Connected to pin 1
TB80-06		10	Data Demand
TB80-07		11	Signal Return
TB80-08		12	Command
TB80-09		13	Command
TB80-10		14	Command
TB80-11		15	Command
TB80-12		16	Command
		17	Connected to pin 1
TB80-13		18	Low energy detector count rate
		19	High Energy detector count rate
TB80-14			
TB80-15		20	Operating Power
TB80-16		21	Power Return
		22	Connected to pin 20
		23	Connected to pin 21
		24	Connected to pin 20
		25	Connected to pin 21
		26	Connected to pin 20
		27	Connected to pin 21
		28	Connected to pin 20
		29	Connected to pin 21
		30	Connected to pin 20
		31	Connected to pin 21
TB80-17		32	Survival Heater Power
TB80-18		33	Survival Heater Power Return
		34	Connected to pin 32
		35	Connected to pin 33
		36	Connected to pin 32
		37	Connected to pin 33



8-26-66

### Suprathermal Ion Detector Experiment

#### Cable B Details (W 80)

##### Connector Pin (P80)

##### Function

1	Shield
2	Digital Data
3	Shield
4	Shift Pulse
5	Shield
6	Frame Mark
7	Shield
8	Even Frame Mark
9	Shield
10	Data Demand
11	Signal Return
12	Command
13	Command
14	Command
15	Command
16	Command
17	Spare
18	Low Energy Detector Count Rate
19	High Energy Detector Count Rate
20	Operating Power
21	Power Return
22	Operating Power
23	Power Return
24	Operating Power
25	Power Return
26	Operating Power
27	Power Return
28	Operating Power
29	Power Return
30	Operating Power
31	Power Return
32	Survival Power
33	Survival Power Return
34	Survival Power
35	Survival Power Return
36	Survival Power
37	Survival Power Return



8/26/66

BENDIX SYSTEMS DIVISION ANN ARBOR, MICH. NO.

ATM-483

REV. NO.

Experiment Electrical Interface  
Definitions

PAGE 16 OF 33 PAGES

Suprathermal Ion Detector Experiment

Cable C Details

Wire No.

- |   |                         |
|---|-------------------------|
| 1 | Anode Volts             |
| 2 | Signal                  |
| 3 | Shield and Power Return |
| 4 | Fuze Supply Positive    |
| 5 | Fuze Supply Negative    |
| 6 | Temperature Sensor 1    |
| 7 | Temperature Sensor 2    |



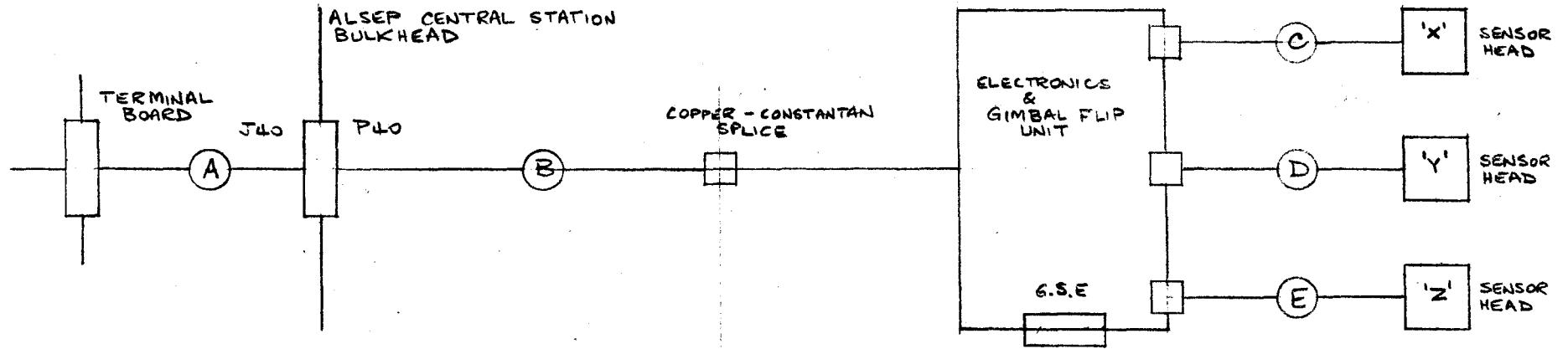


8/26/66

Suprathermal Ion Experiment Jumper Cables

Connector (J80A, P80A)	Connector (P80B, J80B)	Function
1	W	Shield Wire 2
2	V	Digital Data
3	j	Shield Wire 4
4	U	Shift Pulse
5	i	Shield Wire 6
6	T	Frame Mark
7	s	Shield Wire 8
8	h	Even Frame Mark
9	R	Shield Wire 10
10	S	Data Demand
11	r	Signal Return
12	g	Command
13	q	Command
14	P	Command
15	f	Command
16	e	Command
17	N	Shields on Wires 12-16
18	M	Low Energy Detector Count Rate
19	L	High Energy Detector Count Rate
20	K	Operating Power
21	J	Power Return
22	d	Operating Power
23	c	Power Return
24	H	Operating Power
25	p	Power Return
26	b	Operating Power
27	G	Power Return
28	t	Operating Power
29	n	Power Return
30	a	Operating Power
31	F	Power Return
32	m	Survival Power
33	Z	Survival Return
34	E	Survival Power
35	Y	Survival Return
36	X	Survival Power
37	D	Survival Return

# LUNAR SURFACE MAGNETOMETER LINE DIAGRAM



CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	TERMINAL BOARD	HARDWIRE	CONSTANTAN WIRES 28 AWG UNLESS OTHERWISE STATED	17		J40	CONNECTOR ON CABLE 'B' P40
B (W40)	CONNECTOR ON CENTRAL STATION J40	P.40	METHODE H FILM FLAT CONDUCTOR CABLE PD3030H SPLICED TO FIVE INCHES OF 32 AWG CONSTANTAN RIBBON CABLE AT E.G.F.U END	27	50 FEET	HARDWIRE	ELECTRONIC GIMBAL FLIP UNIT
C, D, E	E. G. F. U	CABLE 'C' CABLE 'D' CABLE 'E'	TWISTED SHIELDED PAIRS COAX	21 PER SENSOR	3 FEET	HARDWIRE	SENSOR HEAD

G.S.E CONNECTOR

ISSUE NUMBER									
DATE									
APPROVED	<i>E. J. Parker</i>								
	9/2/66								



8/26/66

Lunar Surface Magnetometer Experiment

Cable A Details Terminal Board Pin	Constantan A. W. G.	Connector Pin (J40)	Pin Function
TB40-01		1	Shield
TB40-02		2	Data
		3	Connected to pin 1
TB40-03		4	Frame Mark
		5	Connected to pin 1
TB40-04		6	Shift Pulse
		7	Connected to pin 1
TB40-05		8	Demand Pulse
		9	Connected to pin 1
TB40-06		10	Command 1
TB40-07		11	Command 2
TB40-08		12	Command 3
TB40-09		13	Command 4
TB40-10		14	Command 5
TB40-11		15	Command 6
TB40-12		16	Command 7
TB40-13		17	Command 8
TB40-14		18	Data Return
TB40-15		19	Chassis Return
TB40-16	24	20	Power Return
TB40-17	24	21	Operating Power
		22	Connected to pin 20
		23	Connected to pin 21
		24	Connected to pin 20
		25	Connected to pin 21
		26	Connected to pin 20
		27	Connected to pin 21



8/26/66

Lunar Surface Magnetometer Experiment

Cable B Details

Connector Pin P40

Function

1	Shield
2	Data
3	Shield
4	Frame Mark
5	Shield
6	Shift Pulse
7	Shield
8	Demand Pulse
9	Shield
10	Command 1 Range Select
11	Command 2 Steady Field Offset
12	Command 3 Steady Field Hold
13	Command 4 Flip Calibrate Inhibit
14	Command 5 Flip Calibrate Initiate
15	Command 6 Filter Failure Bypass
16	Command 7 Site Survey
17	Command 8 Thermal Control Select
18	Data Return
19	Chassis Return
20	Power Return
21	Operating Power
22	Power Return
23	Operating Power
24	Power Return
25	Operating Power
26	Power Return
27	Operating Power



8/26/66

Lunar Surface Magnetometer

Cable C, D, E Details

<u>Connector Pin</u>	<u>Wire Type &amp; Gauge</u>	<u>Function</u>
1	Twisted shielded pair, 32	Sensor Excitation High
2		Sensor Excitation Return
3		Sensor Excitation Shield
4	Coax, 32	Sensor Output High
5		Sensor Output Return
6	Coax, 32	Sensor Feedback, High
7		Sensor Feedback, Return
8	Twisted shielded pair, 30	Temperature Detector, High
9		Temperature Detector Return
10		Temperature Detector Shield
11	Coax, 30	X <sub>1</sub> Position Detector Capacitor, High
12		X <sub>1</sub> position Detector Capacitor, Return
13	Coax, 30	X <sub>2</sub> Position Detector Capacitor High
14		X <sub>2</sub> Position Detector Capacitor Return
15	Coax, 30	X <sub>3</sub> Position Detector Capacitor High
16		X <sub>3</sub> Position Detector Capacitor Return
17	Coax, 30	Sensor Capacitor High
18		Sensor Capacitor Return
19	Twisted Pair, 30	Heater Connection, High
20		Heater Connection, Return
21	Single Conductor, 30	Case Ground

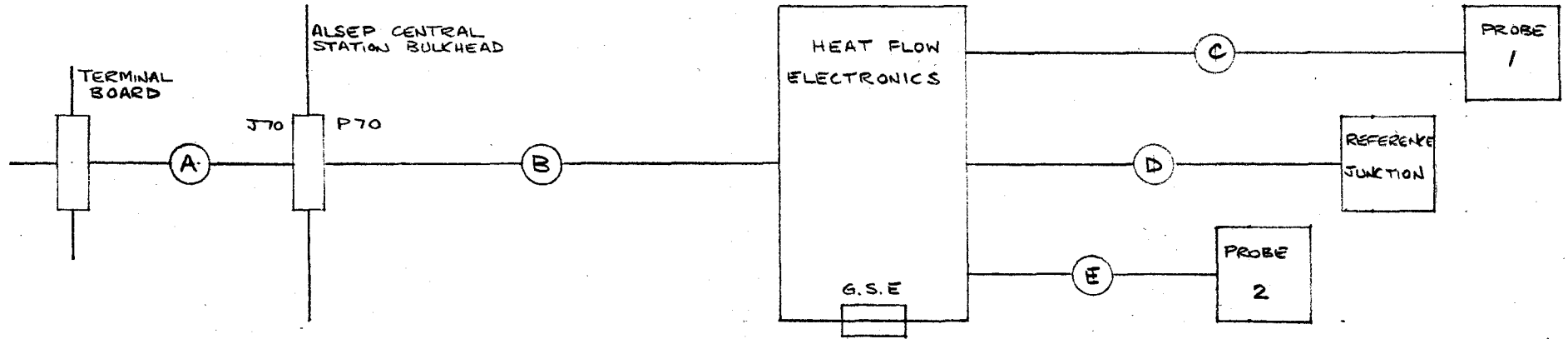


8/26/66

Magnetometer Experiment Jumper Cables

Connectors (J40A, P40A)	Connector (P40B, J40B)	Function
1	e	Shield Wire 2
2	S	Digital Data
3	d	Shield Wire 4
4	R	Frame Mark
5	j	Shield Wire 6
6	P	Shift Pulse
7	c	Shield Wire 8
8	N	Demand
9	h	Shield Wire 10-17
10	M	Command
11	L	Command
12	b	Command
13	K	Command
14	a	Command
15	J	Command
16	Z	Command
17	H	Command
18	Y	Signal Return
19	G	Chassis Return
20	F	Power Return
21	X	Operating Power
22	E	Power Return
23	g	Operating Power
24	f	Power Return
25	W	Operating Power
26	D	Power Return
27	V	Operating Power

## HEAT FLOW EXPERIMENT LINE DIAGRAM



CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	TERMINAL BOARD	HARDWIRE	COPPER AND CONSTANTAN WIRES	36		(J70)	CONNECTOR ON CABLE 'B'
B (W70)	CONNECTOR ON CENTRAL STATION (J70)	(P70)	METHODE H FILM FLAT CONDUCTOR CABLE	47	30 FEET	HARDWIRE	HEAT FLOW ELECTRONICS
C, E	HEAT FLOW ELECTRONICS	HARDWIRE	SHIELDED	34 EACH CABLE	30 FEET	HARDWIRE	'C' PROBE 1 'E' PROBE 2
D	HEAT FLOW ELECTRONICS	HARDWIRE				HARDWIRE	REFERENCE JUNCTION

G.S.E. CONNECTOR 4 WAY.

ISSUE NUMBER	1								
DATE	25 May 66								
APPROVED	<i>MFK</i> H.F.								



26-Aug -66

Heat Flow Experiment

Cable A Details

Connector Pin (J70)	Function	Wire type and A. W. G.	Terminal Board Pin
1	Analog	Copper	70-01
2	Analog	Copper	70-02
3	Analog	Copper	70-03
4	Analog	Copper	70-04
5	Analog	Copper	70-05
6	Analog	Copper	70-06
7	Analog	Copper	70-07
8	Shield	Constantan 28	70-08
9	Data	Constantan 28	70-09
10	Connected to pin 8		
11	Shift Pulse	Constantan 28	70-10
12	Connected to pin 8		
13	Demand	Constantan 28	70-11
14	Connected to pin 8		
15	Frame Mark	Constantan 28	70-12
16	90 Frame Mark	Constantan 28	70-13
17	Signal Return	Copper	70-14
18	Chassis Return	Copper	70-15
19	Command 1	Constantan 28	70-16
20	Command 2	Constantan 28	70-17
21	Command 3	Constantan 28	70-18
22	Command 4	Constantan 28	70-19
23	Command 5	Constantan 28	70-20
24	Command 6	Constantan 28	70-21
25	Command 7	Constantan 28	70-22
26	Command 8	Constantan 28	70-23
27	Command 9	Constantan 28	70-24
28	Command 10	Constantan 28	70-25
29	Command 11	Constantan 28	70-26
30	Command 12	Constantan 28	70-27
31	Command 13	Constantan 28	70-28
32	Command 14	Constantan 28	70-29
33	Command 15	Constantan 28	70-30
34	Command 16	Constantan 28	70-31
35	Command 17	Constantan 28	70-32
36	Command 18	Constantan 28	70-33
37	Experiment Power Return	Constantan 24	70-34





26-Aug. -66

Heat Flow Experiment

Cable A Details (Continued)

Connector Pin (J70)	Function	Wire type and A. W. G.	Terminal Board Pin
38	Experiment Power	Constantan 24	70-35
39	Connected to pin 37		
40	Connected to pin 38		
41	Connected to pin 37		
42	Connected to pin 38		
43	Connected to pin 37		
44	Connected to pin 38		
45	Connected to pin 37		
46	Connected to pin 38		
47	Heater Power	Constantan 28	70-36

Cable D Details

Wire	Function
1	Ref. Bridge Arm No. 1
2	Return
3	Ref. Bridge Arm No. 2
4	Return



26-Aug.-66

Heat Flow Experiment

Cable C and E Details

Wire	Function
1	Ref. Junction
2	Thermocouple No. 1
3	Thermocouple No. 2
4	Thermocouple No. 3
5	Thermocouple No. 4
6	Heater Common
7	Heater No. 1 Return
8	Heater No. 2 Return
9	Heater No. 3 Return
10	Heater No. 4 Return
11	K Sensor Excitation No. 1
12	K Sensor Excitation No. 1 Return
13	K Sensor Excitation No. 1 Remote Lead
14	K Sensor Excitation No. 1 Remote Lead
15	K Sensor Excitation No. 2
16	K Sensor Excitation No. 2 Return
17	K Sensor Excitation No. 2 Remote Lead
18	K Sensor Excitation No. 2 Remote Lead
19	K Sensor No. 1 Offset Signal
20	K Sensor No. 1 Return
21	K Sensor No. 2 Offset Signal
22	K Sensor No. 2 Return
23	PT Bridge No. 1 Excitation
24	PT Bridge No. 1 Excitation Return
25	PT Bridge No. 1 Excitation Remote Lead
26	PT Bridge No. 1 Excitation Remote Lead
27	PT Bridge No. 1 Offset Signal
28	PT Bridge No. 1 Offset Signal Return
29	PT Bridge No. 2 Excitation
30	PT Bridge No. 2 Excitation Return
31	PT Bridge No. 2 Excitation Remote Lead
32	PT Bridge No. 2 Excitation Remote Lead
33	PT Bridge No. 2 Offset Signal
34	PT Bridge No. 2 Offset Signal Return



26-Aug. -66

Experiment Electrical  
Interface Definitions

Heat Flow Experiment

Cable B Details

Connector (P70) pin	Function
1	Analog
2	Analog
3	Analog
4	Analog
5	Analog
6	Analog
7	Analog
8	Shield
9	Data
10	Shield
11	Shift Pulse
12	Shield
13	Demand Line
14	Shield
15	Frame Mark
16	90th Frame Mark
17	Signal Return
18	Chassis Return
19	Command 1
20	Command 2
21	Command 3
22	Command 4
23	Command 5
24	Command 6
25	Command 7
26	Command 8
27	Command 9
28	Command 10
29	Command 11
30	Command 12
31	Command 13
32	Command 14
33	Command 15
34	Command 16
35	Command 17
36	Command 18
37	Power Return
38	Experiment Power
39	Power Return
40	Experiment Power
41	Power Return
42	Experiment Power



26-Aug. -66

Experiment Electrical  
Interface Definitions

Heat Flow Experiment

Cable B (Continued)

Connector (P70) pin	Function
43	Power Return
44	Experiment Power
45	Power Return
46	Experiment Power
47	Heater Power

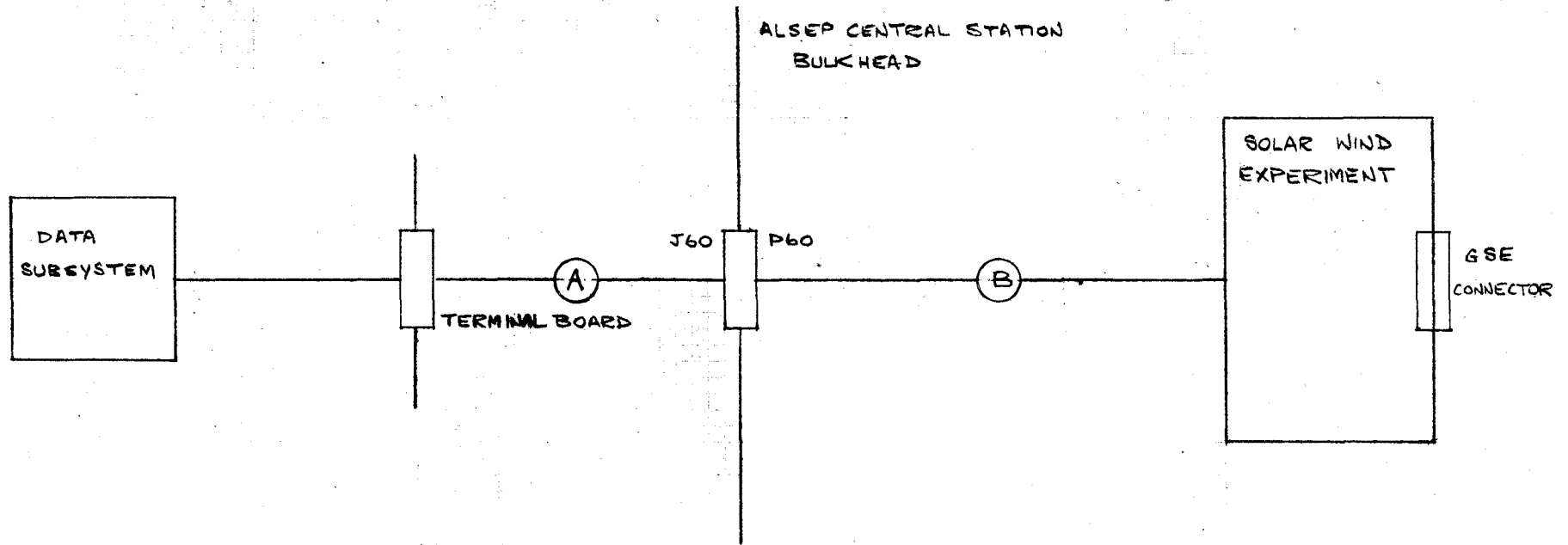


8/26/66

Passive Seismic Experiment Jumper Cables

Connector (J30A, P30A) (J35A, P35A)	Connector (P30B, J30B) (P35B, J35B)	Function (W30A, W30B)	Function (W35A, W35B)
1	S		X L.P. Level +
2	e	X L.P. Seismic	X L.P. Level -
3	R	X Coarse Level +	Y L.P. Level +
4	d	X Tidal	Y L. P. Level -
5	P	X Coarse Level -	Z L.P. Level +
6	j	Y L.P. Seismic	Z L. P. Level -
7	c	Y Coarse Level +	Cage
8	N	Y Tidal	Cage
9	h	Y Coarse Level -	Cage Power
10	M	Z L.P. Seismic	Cage Power
11	L	Coarse Level Power X & Y	Heater Power
12	b	Z Tidal	Heater Power
13	K	Filter In	X 29v Motor Power
14	a	Temp. Data	X 29v Motor Power
15	J	+ 12v Common	X 29v Motor Power
16	Z	S.P. Calibrate	Y 29v Motor Power
17	H	S.P. V Seismic 1	Y 29v Motor Power
18	Y	S.P. V Seismic 2	Y 29v Motor Power
19	G	Chassis Return	Z 29v Motor Power
20	F	X & Y Calibrate	Z
21	X	Z Calibrate	Z
22	E	Signal Return	Heater & Motor Power Return
23	g	Signal Return	Heater & Motor Power Return
24	f	Signal Return	Heater & Motor Power Return
25	W	Thermal Bypass	+12v Supply
26	D	Shield Return	+12v Supply
27	V		-12v Supply
28	C		-12v Supply
29	U		
30	B		

# SOLAR WIND EXPERIMENT LINE DIAGRAM



CABLE	MATING UNIT	CONNECTOR	CABLE TYPE	NUMBER OF WIRES	LENGTH	CONNECTOR	MATING UNIT
A	TERMINAL BOARD	HARDWIRE	CONSTANTAN 28 A.W.G. UNLESS OTHERWISE STATED	9		(J60)	CONNECTOR ON CABLE (P60)
B (W60)	CONNECTOR ON-CENTRAL STATION (J60)	(P60)	METHOD H FILM FLAT CONDUCTOR CABLE PD 3020H	20	15 FEET	HARDWIRE	SOLAR WIND EXPERIMENT

G.S.E CONNECTOR

ISSUE NUMBER									
DATE									
APPROVED	<i>N.L. Miller</i>								



8/26/66

Solar Wind Experiment

Cable A detailed

Terminal Board Pin	Constantan A. W. G.	Connector Pin (J60)	Pin Function
TB60-01		1	Shield
TB60-02		2	Digital Data
		3	Connected to pin 1 (Shield)
TB60-03		4	Shift Pulse
		5	Connected to pin 1 (Shield)
T <sup>B</sup> 60-04		6	Demand Line
		7	Connected to pin 1 (Shield)
TB60-05		8	Command Spare
		9	Connected to pin 1 (Shield Spare)
TB60-06		10	Command (Dust Cover Removal)
TB60-07		11	Signal Return
TB60-08		12	Survival Return
TB60-09	26	13	Power Return
TB60-10	26	14	29 volt Experiment Power
		15	Connected to pin 13 (power return)
		16	Connected to pin 14 (29 volts)
		17	Connected to pin 13 (power return)
		18	Connected to pin 14 (29 volts)
		19	Connected to pin 13 (power return)
		20	Connected to pin 14 (29 volts)



8/26/66

Solar Wind Experiment

Cable B Details (W60)

Connector Pin (P60)

Function

1	Shield
2	Digital Data
3	Shield
4	Shift Pulse
5	Shield
6	Demand Line
7	Shield
8	Spare Command Line
9	Spare Shield
10	Command Line (Dust Cover REmoval)
11	Signal Return
12	Survival Power
13	Power Return
14	29 volts Experiment Power
15	Power Return
16	29 volts Experiment Power
17	Power Return
18	29 volts Experiment Power
19	Power Return
20	29 volts Experiment Power





8/26/66

BENDIX SYSTEMS DIVISION ANN ARBOR, MICH.

Experiment Electrical Interface  
Definitions

NO.

ATM-483

REV. NO.

PAGE 33 OF 33 PAGES

### Solar Wind Experiment Jumper Cables

Connectors (J60A, P60A)	Connectors (P60B, J60B)	Function
1	N	Shield Wire 2
2	M	Data
3	a	Shield Wire 4
4	L	Shift Pulse
5	Z	Shield Wire 6
6	K	Demand Line
7	J	Shield Wire 8
8	Y	Command Spare
9	c	Shield Wire 10
10	X	Command (Dust Cover Remove)
11	H	Signal Ground
12	W	Survival Power
13	G	Power Return
14	V	Operating Power
15	F	Power Return
16	E	Operating Power
17	U	Power Return
18	D	Operating Power
19	T	Power Return
20	C	Operating Power