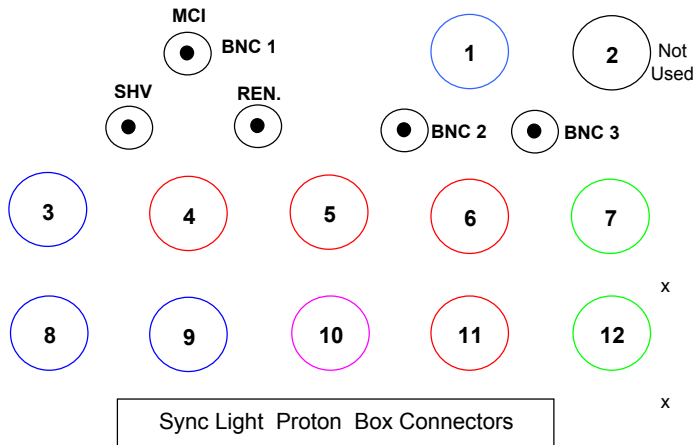


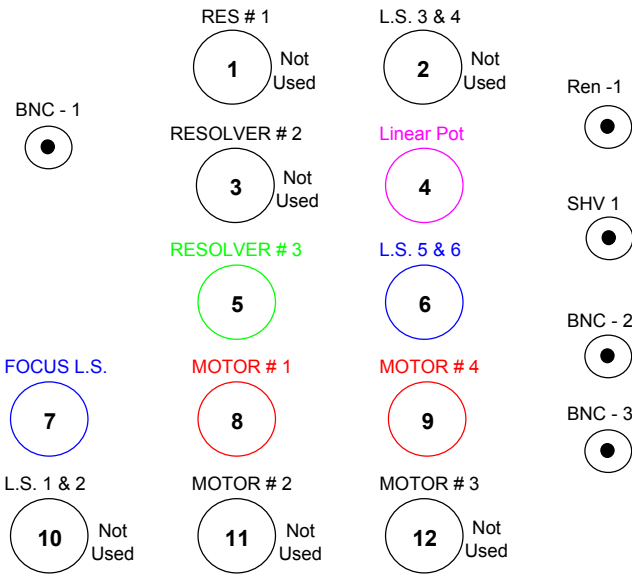
Note: This Sheet information
 At A12 to M12 is the Proton box connector drawing and identification.
 At A36 to L36 is the P-Bar box connector drawing and identification.
 At A68 to K68 is information about the Pick-Off Motor.
 At P24 is the color code for the Motor cables.
 At M1 to AD1 is information on the cables for the back of the RR at C0.

connect	X I
between Nu	Y I
Drive and URI	Z I
	F

#3 Foci



- BNC - 1** Ultra Violet Lamp MCI #2 LM F
- 1.** Focus Camera Limit Switches F
- 2.** Resolver # 3 (Not Used) PICK -
- SHV** To camera MCD Flip In
- Ren.** High Voltage for Camera Screen X
- BNC - 2** To Camera Cathode In Y
- BNC - 3** To Camera Cathode Out
- 3.** Y axes Steering Limit Switches
- 4.** Motor Flip In
- 5.** Motor Y axes steering
- 6.** Motor Camera Focus
- 7.** Resolver X axes steering
- 8.** X axes Steering Limit Switches
- 9.** Flip In Limit Switches
- 10.** Linear Pot for camera focus
- 11.** Motor X axes steering
- 12.** Resolver Y axes steering



- 1.** Resolver # 1 (Not Used)
 - 2.** Limit Switchs 3 & 4 (Not Used)
 - 3.** Resolver # 2 (Not Used)
 - 4.** Linear Pot for camera focus
 - 5.** Resolver # 3 X axes x
 - 6.** Limit Switchs 5 & 6
 - 7.** Focus Camera Limit Switchs
 - 8.** Motor 1 Camera
 - 9.** Motor 4 X axes steering
 - 10.** Limit Switchs 1 & 2 (Not Used)
 - 11.** Motor 2 X axes steering (Not Used)
 - 12.** Motor 3 Y axes steering (Not Used)
- Ren 1** High Voltage for Camera Screen
SHV 1 To camera
BNC -1 To Ultra Violet Lamp
BNC -2 To Camera Cathode In
BNC -3 To Camera Cathode Out

7-19-1 Read Back
 P-Bar 4.94
 Proton 5.15

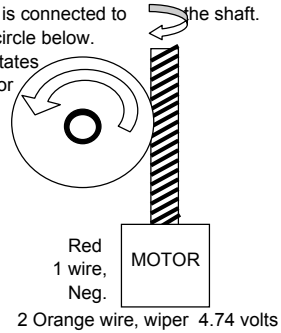
Pick-Off Mirror Controls

20000 counts = 1 inch
 counts in the - direction runs motor in REV direction.
 counts in the + direction runs motor in FORWARD direction.

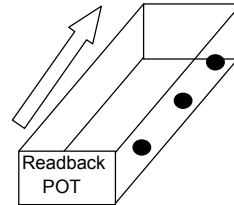
P-BAR	Inner limit			
	19.40 mm out	1.09 volts	9.91 volts	Power Supply
16 mm	0 location (outen)	4.98 volts		
	10,000 in	3.80		
	20,000	2.71		
	30,00	1.60		
	15.87 mm--see light Comes in 19.94	1 volt	9.91v on PS	
		$\text{pos(mm)} = \frac{V - 4.89v}{-0.1953}$		
Stuff Alan Hann told Chuck Brown over the phone				

If the counts is set to 1000, the motor will run in a FORWARD direction, which is clockwise in drawing below, (viewed from the top), and this will run the mirror in. The pot wiper is moved In the direction of the big arrow , next to the Readback POT. The mirror is connected to the shaft. indicated by the circle below.

As it rotates the mirror moves inward on the spirals.



3 Yellow wire, Positive
P-bar shown



Pick-Off Mirror Controls

PNE Pins	A	B	C	D	E	F	G	H	Shield	N. C.
JO Motor #1	1	2	4	5	3	3	3	3	3	1 Red, 2 Blk, 3 Grn & Shield, 4 Wht, 5 Blk
ENCODER	6	5	4	3	2	1			8	7 1 Red, 2 Blk, 3 Grn, 4 Blk, 5 Wht, 6 Blk, 8 Shield
ENCODER	6	5	4	3	2	1			8	7 1 Red, 2 Blk, 3 Grn, 4 Blk, 5 Wht, 6 Blk, 8 Shield
PICK - OFF	5	4	2	1	3	3			3	1 Brn, 2 Org, 3 Shield, 4 Blk, 5 Red
X MOTOR	5	4	2	1	3	3	3	3		1 Blk, 2 Wht, 3 Grn & Shield, 4 Blk, 5 Red
Y MOTOR	5	4	2	1	3	3	3	3		1 Blk, 2 Wht, 3 Grn & Shield, 4 Blk, 5 Red
#2 MOTOR	5	4	2	1	3	3	3	3		1 Blk, 2 Wht, 3 Grn & Shield, 4 Blk, 5 Red
us MOTOR	5	4	2	1	3	3	3	3		1 Blk, 2 Wht, 3 Grn & Shield, 4 Blk, 5 Red
LM #1 2 & 3	5	1	5	5	5				4	1 Red, 2 Wht & Grn, 3 Grn, 5 Blk & Shield
LM X 3 & 2	5	1	5	5	5				4	1 Red, 2 Grn, 3 Wht & Grn, 5 Blk & Shield
LM Y 3 & 2	5	1	5	5	5				4	1 Red, 2 Grn, 3 Wht & Grn, 5 Blk & Shield
Focus Limit	3 & 2	5	1	5	5		5		E & 4	1 Red, 2 Grn, 3 Wht & Grn, 5 Blk & Shield
Flip-In Limit	3 & 2	5	1	5	5				4	1 Red, 2 Grn, 3 Wht & Grn, 5 Blk & Shield
OFF LIMIT	2 & 3	5	1	5	5				5	1 Red, 2 Wht, 3 Wht, 5 Blk & Shield

1 Reasolver
 2 Reasolver
 3 Reasolver

Burndy male to Burndy Female
 Pin A to Pin A and so on.

Color code for Motor cables
 16/8

A	Vil
B	Blu
C	Grn
D	Yel
E	Org
F	Red
G	Brn
H	Blk

5 **9**
Y MOTOR **X MOTOR**

Cable #4 Proton Pick Off		I am not sure what this is. 7-23-01, Dale
Y-Axis		
Cable #1	A Blk B Brn C Red D Org E Yel F Grn G Shield	Cable #4
		A Yel B Grn C Blu D Vil E Blk F Brn G Shield
X-Axis		
#1	A Blu B Vil C Blk D Brn E Red F Org G Shield	Cable #5
		A Red B Org C Yel D Grn E Blu F Vil G Shield

3/13/2002

SYNC LIGHT BOX

Pick-Off Mirror Controls

Wires pulled if from downstairs C-0 to the service building @ C0

Proton	P-Bar	Pick off	total	cond	cables	cond/cable
4 - limit sw's - 6 cond	2 limit sw's	2 limit sw's	8	48	3 22/10 3 22/6	30 <u>18</u> 48
4 - Motors - 6 cond	2 Motors	2 Motors	8	48	5 16/8 1 16/8	40 <u>8</u> 48
2 - Resolver - 8 cond	1 Resolver		3	24	3 22/10	30
1 - Linear Pot - 3 cond	1 Linear Pot	2 Linear Pot	4	12	2 22/6	12
1 Pico Motor	1 Pico Motor		1	6	1 22/6	6
Spare cables				6	1 16/8 1 22/6	8 6
				138		

total cables	Org.	additional		
	6	1 7	22/6	42
	0	6 6	22/10	60
	5	2 7	16/8	54
		<u>20</u>	total cond. =	<u>156</u>