

WAGO-001

1	A		
	B		
	C		
	D		
2	A		
	B		
	C		
	D		
3	A		
	B	fused end (1 amp) fuse 1	yel
	C	feed end fuse 1	yel
	D	To Wago-001 75D (+5v)	wht
4	A	WEIN2 POSITIVE HV PROGRAM	brn
	B	To WAGO-001-5B	
	C		
	D	DAC1068 ch.16	yel
5	A	WEIN2 NEGATIVE HV PROGRAM	RED
	B	To WAGO-001-4B	
	C		
	D		
6	A	WEIN2 Power relay	YEL
	B		
	C		
	D	IP-OPTO terminal 1	
7	A	WEIN2 Polarity relay	GRN
	B		
	C		
	D	IP-OPTO terminal 17	
8	A	WEIN2 +HV readback	ORG
	B		
	C		
	D	xvme-566 ADC channel 29 (terminal 38)	
9	A	WEIN2 -HV readback	BLU
	B		
	C		
	D	xvme-566 ADC channel 30 (terminal 40)	
10	A	WEIN2 CABLE GROUND	BLK
	B		
	C		
	D	WAGO-001-81D (ground)	
11	A	Wein1 +HV prog	red
	B	Wein1 -HV prog	grey
	C		
	D	DAC1068 ch 15	Yel
12	A	5VDC to Laser servos PSLAS25 (old servo chassis)	
	B	fused end (2 amp) fuse 9	yel
	C	feed end fuse 9	yel
	D	+5VDC on Wago-001 76C	grn
13	A	GND to laser servos PSLAS25 (old servo chassis)	
	B	WAGO-001 84A GND	grn
	C		
	D		
14	A		
	B		
	C		
	D		
15	A		
	B		
	C		
	D		

16	A		
	B		
	C		
	D		
17	A		
	B	fused end (1 amp) fuse 2	yel
	C	feed end fuse 2	yel
	D		
18	A		
	B	fused end (1 amp) fuse 3	org
	C	feed end fuse 3	org
	D		
19	A		
	B		
	C		
	D		
20	A	CAT5 #23 Org & Org/Wht	
	B	24V from wago 91B	
	C		
	D		
21	A	CAT5 #23 GRN Laser table temperature	
	B		
	C		
	D	Xvme-566 ADC channel 16 (terminal 22)	
22	A	CAT5 #23 WHT/GRN Laser table humidity	
	B		
	C		
	D	Xvme-566 ADC channel 17 (terminal 25)	
23	A	CAT5 #23 blue gun temperature	
	B		
	C		
	D	Xvme-566 ADC channel 18 (terminal 29)	
24	A	CAT5 #23 wht/blu gun humidity	
	B		
	C		
	D	Xvme-566 ADC channel 19 (terminal 31)	
25	A		
	B		
	C		
	D		
26	A		
	B		
	C		
	D		
27	A		
	B		
	C		
	D		
28	A		
	B		
	C		
	D		
29	A		
	B		
	C		
	D		
30	A		
	B		
	C		
	D		

31	A	WAGO-001-83A Ground	
	B		
	C		
	D	Common from +/-12V supply	BLU
32	A	GND to WEIN2 Chassis	
	B		
	C		
	D		
33	A	GND to CAT5 Viewer chassis	wht
	B		
	C		
	D	GND to MOTT light relay	blk
34	A		
	B		
	C		
	D		
35	A	+12V to CAT5 viewer chassis	BLK
	B		
	C		
	D	+12V from power supply	ORG
36	A		
	B		
	C		
	D		
37	A		
	B		
	C		
	D	+12V to MOTT light relay	red
38	A		
	B		
	C		
	D		
39	A		
	B		
	C		
	D		
40	A	Vac-Valve enable for P-Source region. (+24vdc when active)	white
	B		
	C		
	D		
41	A		
	B		
	C		
	D		
42	A		
	B		
	C		
	D		
43	A		
	B		
	C		
	D		
44	A		
	B		
	C		
	D		
45	A		
	B		
	C		
	D		

46	A	
	B	
	C	
	D	
47	A	
	B	
	C	
	D	
48	A	
	B	
	C	
	D	
49	A	
	B	
	C	
	D	
50	A	
	B	
	C	
	D	
51	A	
	B	
	C	
	D	Wht-0rg from PSLAS19 (CAT5) ND filter servo readback
52	A	
	B	
	C	
	D	Org from PSLAS19 (CAT5) Spirocon servo readback
53	A	
	B	
	C	
	D	Wht-Grn from PSLAS19(CAT5) Gun Switch mirror servo readback
54	A	
	B	
	C	
	D	Blue from PSLAS19(CAT5) Servo box1 servo #4 readback
55	A	Yellow to XVME244 out ch. 18 "do nothing waveplate"
	B	
	C	
	D	Wht-Blue from PSLAS19(CAT5)
56	A	Blue from IPOPTO drive terminal 31
	B	
	C	
	D	Green from PSLAS19(CAT5) Drives Spiricon servo
57	A	Violet from XVME244 digital out ch. 15
	B	
	C	
	D	Wht-Brn from PSLAS19(CAT5) Gun switch mirror servo drive
58	A	
	B	
	C	
	D	Brown of PSLAS19(CAT5) Servo box 1 servo #4 drive
59	A	
	B	
	C	
	D	Laser room interlock OK relay common. (for EPICS) grn
60	A	
	B	
	C	
	D	Laser room interlock OK relay N.C. (for EPICS) blk

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61	A			
	B			
	C			
	D			
62	A			
	B			
	C			
	D			
63	A			
	B			
	C			
	D	+12V from power supply beneath WAGO blocks		
64	A			
	B			
	C			
	D			
65	A			
	B			
	C			
	D			
66	A			
	B			
	C			
	D			
67	A	+15vdc		
	B	+15vdc		
	C	+15vdc		
	D	+15vdc		
68	A	+15vdc		
	B	+15vdc		
	C	+15vdc		
	D	+15vdc	Helicity voltage monitor power	yellow
69	A	+15vdc		
	B	+15vdc		
	C	+15vdc		
	D	+15vdc		
70	A	+15vdc	Feed from +/- 15vdc supply	wht/red
	B	+15vdc		
	C	+15vdc	CAT5 power to 30Hz PZT chassis	grn
	D	+15vdc	Dipole Amplifier	red
71	A	-15vdc		
	B	-15vdc		
	C	-15vdc	CAT5 power to 30Hz PZT chassis	wht-grn
	D	-15vdc	Helicity voltage monitor power	blue
72	A	-15vdc		
	B	-15vdc		
	C	-15vdc		
	D	-15vdc	Dipole Amplifier	grn
73	A	-15vdc		
	B	-15vdc		
	C	-15vdc		
	D	-15vdc	Org-Wht to PSLAS07 (TiSap control power)	
74	A	-15vdc	Feed from +/- 15vdc supply	wht/yel
	B	-15vdc		
	C	-15vdc		
	D	-15vdc		
75	A	fuse1 +5vdc		
	B	fuse1 +5vdc	Stepper Motor Chassis	red
	C	fuse1 +5vdc		
	D	fuse1 +5vdc	Wago-001 3D	wht

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76	A	fuse1 +5vdc	feed from 10amp fuse #1 of 5vdc supply.	red/blk
	B	fuse1 +5vdc		
	C	fuse1 +5vdc	5VDC to Pol Analyzer Wago-001 12D	grn
	D	fuse1 +5vdc		
77	A	fuse2 +5vdc		
	B	fuse2 +5vdc		
	C	fuse2 +5vdc	To 37pin trunk pin 6 (PZT/IA net 5V)	
	D	fuse2 +5vdc		
78	A	fuse2 +5vdc	feed from 10amp fuse #2 of 5vdc supply.	red/yel
	B	fuse2 +5vdc		
	C	fuse2 +5vdc		
	D	fuse2 +5vdc		
79	A	fuse3 +5vdc		
	B	fuse3 +5vdc		
	C	fuse3 +5vdc	Tunnel rack X-conn terminal 14	gone? blue
	D	fuse3 +5vdc	Brn to helicity chassis	
80	A	fuse3 +5vdc	feed from 10amp fuse #3 of 5vdc supply.	red/grn
	B	fuse3 +5vdc		
	C	fuse3 +5vdc		
	D	fuse3 +5vdc	CAT5 power to 30HZ pzt chassis	
81	A	com (gnd)		
	B	com (gnd)		
	C	com (gnd)		
	D	com (gnd)	WAGO-001-10D Gnd to wein2 chassis	
82	A	com (gnd)	gnd to temporary temperature monitors	blue
	B	com (gnd)		
	C	com (gnd)	Laser room interlock chassis gnd	red
	D	com (gnd)	helicity voltage monitor power	grn
83	A	com (gnd)	Wago-001 31A	wht
	B	com (gnd)		
	C	com (gnd)	CAT5 gnd to 30HZ pzt chassis	
	D	com (gnd)	Common to Dipole amplifier	blk
84	A	com (gnd)	Wago-001 13B	grn
	B	com (gnd)		
	C	com (gnd)	tune mode controller power PSLAS07	Brn & wht-Grn
	D	com (gnd)	To shroud relay pin 9	
85	A	com (gnd)	14kV supply common	wht/blk
	B	com (gnd)	14kV supply common	wht wht/yel
	C	com (gnd)		
	D	com (gnd)	14kV supply common	vio
86	A	com (gnd)	Water Flow Meter Switch Common	brn
	B	com (gnd)		
	C	com (gnd)		wht/red
	D	com (gnd)		brn
87	A	com (gnd)	to DIN rail Module for IP-digital 24 terminal 50	wht
	B	com (gnd)		
	C	com (gnd)		
	D	com (gnd)	to 37 pin trunk terminal 7 (PZT/IA system common)	
88	A	com (gnd)	to DIN rail Module for IP-OPTO terminal 50	wht
	B	com (gnd)	Stepper Motor Chassis GND	blk
	C	com (gnd)	Tunnel rack X-conn terminal 12	grey
	D	com (gnd)	XVME-244 breakout Gnd feed	brn
89	A	com (gnd)	common from +5vdc supply	grn
	B	com (gnd)		
	C	com (gnd)	GND to Glassman 450KV relay chassis	wht/red
	D	com (gnd)		wht
90	A	com (gnd)	Common from +24vdc supply	blk
	B	com (gnd)	Common from +/- 15vdc supply	wht/blk
	C	com (gnd)	Cesiator Stepper box Termial #2	wht/red
	D	com (gnd)	gnd to patch panel IN01B03 #1 BNC for power meter SSR	blk

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91	A	+24vdc	to wago-001 38A	vio	Fused as group 1 Amp Fuse # 4
	B	+24vdc	to wago 20D for Temp / Humidity sensors		
	C	+24vdc			
	D	+24vdc	To shroud relay pin 12		
92	A	+24vdc			fused as group 1 Amp Fuse # 5
	B	+24vdc	fused end (1 amp) fuse 4 from wago-001 100B	org	
	C	+24vdc	24V to 450kV glassman relay chassis		
	D	+24vdc	Feed to patchpanel IN01B03 #1 bnc for power meter SSR		
93	A	+24vdc	feed to water flow switch	org	fused as group 1 Amp Fuse # 5
	B	+24vdc			
	C	+24vdc			
	D	+24vdc	Laser room interlock chassis 24v	wht	
94	A	+24vdc	feed to water flow switch	blk	fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc	fused end (1 amp) fuse 5 from wago-001 100B	org	
	D	+24vdc	24V to terminal 12 of 100KV Interlock relay (Shroud)	wht	
95	A	+24vdc			fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc			
	D	+24vdc			
96	A	+24vdc			fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc			
	D	+24vdc		org	
97	A	+24vdc	To DIN Module IP-OPTO Pin 32	wht	fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc			
	D	+24vdc			
98	A	+24vdc			fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc			
	D	+24vdc			
99	A	+24vdc			fused as group 2 Amp Fuse # 12
	B	+24vdc			
	C	+24vdc	fused end (2 amp) fuse 12 from wago-001 100C	red	
	D	+24vdc			
100	A	+24vdc	Main feed from +24vdc supply	red	fused as group 2 Amp Fuse # 12
	B	+24vdc	feed end to fuses 4&5	org	
	C	+24vdc	feed end to fuse 12	red	
	D	+24vdc			

System: Polarized Source

Owner: Hansknecht

Filename: WAGO\_001.xls

<u>Terminal #</u>	<u>Control Type</u>	<u>Control Item</u>	<u>Wire Color</u>
1	V-OUT CH. 0		
2	CH. 0 RETURN		
3			
4			
5			
6			
7	V-OUT CH. 1		
8	CH. 1 RETURN		
9			
10			
11			
12			
13	V-OUT CH. 2		
14	CH. 2 RETURN		
15			
16			
17			
18			
19	V-OUT CH.3		
20	CH. 3 RETURN		
21			
22			
23			
24			
25			
26	V-OUT CH. 4		
27	CH. 4 RETURN		
28			
29			
30			
31			
32	V-OUT CH. 5		
33	CH. 5 RETURN		
34			
35			
36			
37			
38	V-OUT CH.6		
39	CH. 6 RETURN		
40			
41			
42			
43			
44	V-OUT CH. 7	30Hz PZT amplitude	
45	CH. 7 RETURN	30 Hz PZT return	
46			
47			
48			
49			
50			

NOTES: The DAC VME-628 card is an 8 channel 12 bit DAC. Outputs are currently set for 0 to +10vdc  
 The Card resides in IOCIN6 slot 7. IOCIN6 is in Rack IN01B05. The breakout point for measurement  
 is in the top rear of IN01B05. Target screen: DAC628\_1.adl



1	Channel 1	DEAD		
2	Channel 9			
3	Ground			
4	Channel 2	DEAD		
5	Channel 10			
6	Ground			
7	Channel 3	Fiber Laser A SHG output	PHOTODIODE (CAT5 #11)	
8	Channel 11			
9	Ground			
10	Channel 12			
11	Channel 4	Fiber Laser B SHG output	PHOTODIODE (CAT5#11)	
12	Ground			
13	Channel 5	Fiber Laser C SHG output	PHOTODIODE (CAT5#11)	
14	Channel 13	SEED A TEMPERATURE	Grn Cat5	Pulled?
15	Ground		Brn Cat5	Pulled?
16	Channel 14	SEED B TEMPERATURE	Blu Cat5	Pulled?
17	Channel 6			
18	Ground			
19	Channel 7			
20	Channel 15	SEED C TEMPERATURE	wht-blu Cat5	Pulled?
21	Ground			
22	Channel 16	Laser table temp wago 21D	Red(also 500ohms to ground on terminal 24)	
23	Channel 8			
24	Ground	500 ohm ground attachment		
25	Channel 17	Laser table humid wago 22D	yel(also 500ohms to ground on terminal 27)	
26	Channel 25			
27	Ground	500 ohm ground attachment		
28	Channel 26			
29	Channel 18	gun temp wago 23D	Red(also 500ohms to ground on terminal 30)	
30	Ground	500 ohm ground attachment		
31	Channel 19	gun humid wago 24D	Red(also 500ohms to ground on terminal 33)	
32	Channel 27			
33	Ground	500 ohm ground attachment		
34	Channel 28			
35	Channel 20			
36	Ground			
37	Channel 21			
38	Channel 29	WEIN2 (HORIZONTAL) VOLTAGE MONITOR +		
39	Ground			
40	Channel 30	WEIN2 (HORIZONTAL) VOLTAGE MONITOR-		
41	Channel 22			
42	Ground			
43	Channel 23			
44	Channel 31	WEIN1 (VERTICAL) + VOLTAGE MONITOR		
45	Ground			
46	Channel 32	WEIN1 (VERTICAL) - VOLTAGE MONITOR		
47	Channel 24			
48	Ground			
49	Gnd (ext trig, PDI)			
50	ext trigger.			

XVME244 in

0	IGL1I00DIOFLRD.0	FSD OK from macropulse chassis	
1	IGL1I00DIOFLRD.1	BCM A OK	
2	IGL1I00DIOFLRD.2	BCM B OK	
3	IGL1I00DIOFLRD.3	PSS A OK	
4	IGL1I00DIOFLRD.4	PSS B OK	
5	IGL1I00DIOFLRD.5	18V OK	
6	IGL1I00DIOFLRD.6	Bypass active	
7	IGL1I00DIOFLRD.7		
8	IGL1I00DIOFLRD.8	PSS A shutter is open	GRN PSSLAS 10
9	IGL1I00DIOFLRD.9	PSS B shutter is open	Wht-Blu PSSLAS 10
10	IGL1I00DIOFLRD.10		
11	IGL1I00DIOFLRD.11		
12	IGL1I00DIOFLRD.12	ND servo IN	Black to WAGO51A
13	IGL1I00DIOFLRD.13	SPIRICON servo IN	Wht to WAGO52A
14	IGL1I00DIOFLRD.14		
15	IGL1I00DIOFLRD.15		
16	IGL1I00DIOFHRD.0		
17	IGL1I00DIOFHRD.1		
18	IGL1I00DIOFHRD.2		
19	IGL1I00DIOFHRD.3	Gun switch mirror position from servo box 1 servo #3	BLK to WAG
20	IGL1I00DIOFHRD.4	servo readback servo box1 servo	Wht to WAGO 54A
21	IGL1I00DIOFHRD.5		
22	IGL1I00DIOFHRD.6		
23	IGL1I00DIOFHRD.7		
24	IGL1I00DIOFHRD.8	Glassman 350KV HV Status (H=ON L=OFF)	
25	IGL1I00DIOFHRD.9	Glassman 350KV HV SF6 Interlock OK	
26	IGL1I00DIOFHRD.10	Glassman 350KV 15deg Dipole Interlock OK	
27	IGL1I00DIOFHRD.11	Glassman 350KV Global Interlock OK	
28	IGL1I00DIOFHRD.12	Glassman 350KV QE bias retracted OK	
29	IGL1I00DIOFHRD.13	Glassman 350KV PSSA OK	
30	IGL1I00DIOFHRD.14	Glassman 350KV PSSB OK	
31	IGL1I00DIOFHRD.15	Glassman 350KV Ready	

Note: All digital inputs are voltage sensing. (needs >1.25mA for logic high)  
 Logic low is < 3vdc Logic high is > 10 vdc (up to 35vdc)  
 Test performed showed 24V through 13.74K energized input. Voltage drop across



IP-DIGITAL24

1	Din CH. 1	Green when Wein filter HV is ON		yel
2	GND			
3	Din CH. 2	Wein HV position A		wht-blu
4	GND			
5	Din CH. 3	Wein HV position B		red-blk
6	GND			
7	Din CH. 4	broken		
8	GND			
9	Din CH. 5	broken		
10	GND			
11	Din CH. 6	broken		
12	GND			
13	Din CH. 7	Dipole @ proper Current		
14	GND			
15	Din CH. 8			
16	GND			
17	Din CH. 9			
18	GND			
19	Din CH. 10	gun 2 H.V shroud OK		Grn
20	GND			
21	Din CH. 11	Power Meter Inserted	PSLAS26	wht-org
22	GND			
23	Din CH. 12	G0 1/2 wave plate	PSLAS26	blu
24	GND			
25	Din CH. 13			
26	GND			
27	Din CH. 14			
28	GND			
29	Din CH. 15			
30	GND			
31	Din CH. 16			
32	GND			
33	Din CH. 17			
34	GND			
35	Din CH. 18			
36	GND			
37	Din CH. 19			
38	GND			
39	Din CH. 20			
40	GND			
41	Din CH. 21			
42	GND			
43	Din CH. 22			
44	GND			
45	Din CH. 23	(broken)		
46	GND			
47	Din CH. 24	$\lambda/2$ plate position	PSLAS26	org
48	GND			
49				
50	GND	EXTERNAL GND IN FROM WAGO-001 terminal 87A		wht

NOTE: ALL DIGITAL INPUT LINES ARE PULLED HIGH TO 5VDC WITH INTERNAL 10K RESISTOR  
GROUND THE INPUT TO SIGNAL AN INPUT. DO NOT ATTACH TO >5VDC LINE.

IP-OPTO DRIVER

1	Dout CH. 1	WEIN2 ON/OFF RELAY			IGL1I00ShutterT
2	+ 24V IN				
3	Dout CH. 2	Power Meter	wht-blu	PSLAS26	IGL1I00PowerMT
4	+ 24V IN				
5	Dout CH. 3	WEIN1 ON/OFF RELAY	red		IGL1I0014KVT
6	+ 24V IN				
7	Dout CH. 4	H.V. switch for 14 KV.	wht-brn		
8	+ 24V IN				
9	Dout CH. 5	(broken)			IGL1I000D16_4
10	+ 24V IN				
11	Dout CH. 6	Spiricon Servo	Blue	to WAGO56	IGL1I00LSModVT
12	+ 24V IN				
13	Dout CH. 7	30HZ mirror (mode) On/off			ICS1I00Diode
14	+ 24V IN				
15	Dout CH. 8	POCKELS CELL ON/OFF			IGL1I000D16_8
16	+ 24V IN				
17	Dout CH. 9	WEIN2 POLARITY RELAY			IGL1I000D16_9
18	+ 24V IN				
19	Dout CH. 10	BROKEN	wht		IGL1I000D16_10
20	+ 24V IN				
21	Dout CH. 11	30HZ mirror STATE (X-Y)			ICS1I00MoveT
22	+ 24V IN				
23	Dout CH. 12				ICS1I00PowerT
24	+ 24V IN				
25	Dout CH. 13	5 MEV mott light	wht-red		IGL1I000D16_13
26	+ 24V IN				
27	Dout CH. 14	30hz Mirror direction select	grn		IGL1I000D16_14
28	+ 24V IN				
29	Dout CH. 15				IGL1I000D16_15
30	+ 24V IN				
31	Dout CH. 16	$\lambda/2$ Plate Solenoid	grn	PSLAS26	IGL1I000D16_16
32	+ 24V IN	EXTERNAL +24V IN FROM WAGO-001 terminal 91A		wht	
33	GND				
34	GND				
35	GND				
36	GND				
37	GND				
38	GND				
39	GND				
40	GND				
41	GND				
42	GND				
43	GND				
44	GND				
45	GND				
46	GND				
47	GND				
48	GND				
49	GND				
50	GND	EXTERNAL GND FROM WAGO-001 terminal 88A		wht	

NOTE: DIGITAL OUTPUTS PROVIDE +24VDC ON OUTPUT WHEN ACTIVATED.

1 AMP PER CHANNEL MAX. 8 AMP TOTAL AGGREGATE CURRENT.

Backplane of DIN block has been modified to jumper +24vdc and gnd as necessary.

Backplane of DIN block has been modified for shorts of power rail - 33 to 50 shorted

- All even 2 to 32 shorted

pico motors

driver slot number	6conductor phone cable	slot/conn/channel assignment	breakout channel designation	PURPOSE	PicoMotor Screen Name	
driver slot 1	cable 1	111	A	A STEERING	A1	
driver slot 1	cable 1	112	B	A STEERING	A1	
driver slot 1	cable 1	113	C	G0 DT	DT	
driver slot 1	cable 2	121	A	B STEERING	B1	
driver slot 1	cable 2	122	B	B STEERING	B1	
driver slot 1	cable 2	123	C	G0 X	T1	
driver slot 1	cable 3	131	A	C STEERING	C1	
driver slot 1	cable 3	132	B	C STEERING	C1	
driver slot 1	cable 3	133	C	G0 Y	T1	
driver slot 1	cable 4	141	A	A SEED	A2	
driver slot 1	cable 4	142	B	A SEED	A2	
driver slot 1	cable 4	143	C		DT2	
driver slot 2	cable 5	211	A	B SEED	B2	
driver slot 2	cable 5	212	B	B SEED	B2	
driver slot 2	cable 5	213	C		S1	R201 Hall C
driver slot 2	cable 6	221	A	C SEED	C2	G0 OC X
driver slot 2	cable 6	222	B	C SEED	C2	G0 OC Y
driver slot 2	cable 6	223	C		S2	R200 Hall A IA
driver slot 2	cable 7	231	A	G0 PUMP	P1	G0 Pump X
driver slot 2	cable 7	231	B	G0 PUMP	P1	G0 Pump Y
driver slot 2	cable 7	233	C		S3	
driver slot 2	cable 8	241	A		T2	G0 Etalon X
driver slot 2	cable 8	242	B		T2	G0 Etalon Y
driver slot 2	cable 8	243	C		S4	G0 Biref tune filter

CAT5 map

Tunnel component	Component schematic title	Intermediate cable schematic	Cable number	Control schematic title
		Cat5extended.sch	pslas01	
		Cat5extended.sch	pslas02	
		Cat5extended.sch	pslas03	
		Cat5extended.sch	pslas04	
		Cat5extended.sch	pslas05	
		Cat5extended.sch	pslas06	
RS232 to laser power meter		Cat5extended.sch	pslas07	IPOCTAL 232 7
		Cat5extended.sch	pslas08	
		Cat5extended.sch	pslas09	
Laser Attenuator D		Cat5extended.sch	pslas10	ctrlstepper.sch
Photodiodes for A,B,C PPLN output		Cat5extended.sch	pslas11	
Laser Attenuator A	Cat5stepper.sch	Cat5extended.sch	pslas12	ctrlstepper.sch
Laser Attenuator B	Cat5stepper.sch	Cat5extended.sch	pslas13	ctrlstepper.sch
Laser Attenuator C	Cat5stepper.sch	Cat5extended.sch	pslas14	ctrlstepper.sch
X-stage stepper	Cat5stepper.sch	Cat5extended.sch	pslas15	ctrlstepper.sch
Y-stage stepper	Cat5stepper.sch	Cat5extended.sch	pslas16	ctrlstepper.sch
Bad cable? Don't use.		Cat5extended.sch	pslas17	
		Cat5extended.sch	pslas18	
Servo Box 1 (ND,Spirocon,gun switch)		Cat5extended.sch	pslas19	
POLAR (rotatable 1/2 waveplate)		Cat5extended.sch	pslas20	
Table video	Cat5video.sch	Cat5extended.sch	pslas21	ctrlsasvideo.sch
Laser video CCD	Cat5video.sch	Cat5extended.sch	pslas22	ctrlsasvideo.sch
Temperature and humidity sensors		Cat5extended.sch	pslas23	
POCKELS CELL DIAL INDICATORS	RS-232	Cat5extended.sch	pslas24	IPOCTAL 232 ch. 8
laser servo power (PM and half waveplate)*		Cat5extended.sch	pslas25	
laser servo command and readback		Cat5extended.sch	pslas26	

\* Also powers power meter head switch relay

37 pin trunk

**37 pin multi-conductor trunk cable from service bldg to laser hut**

Pin#	Purpose		color downstairs	hut breakout
1	Pockel power relay common return (ISB gnd)		BRN	relay coil term 13
2	Pockel Power relay 24V for on/off from epics		YEL	relay coil term 14
3	30Hz PZT X-Y direction select signal		ORG	
4	gnd for 30Hz direction signal		BLK	
5	Caryn's RTP voltage programming via isolator	Channel 1	blk	15 pin dsub
6	Caryn's RTP voltage programming via isolator	Channel 2	brn	15 pin dsub
7	Caryn's RTP voltage programming via isolator	Channel 3	red	15 pin dsub
8	Caryn's RTP voltage programming via isolator	Channel 4	org	15 pin dsub
9	Caryn's RTP voltage programming via isolator	Channel 5	yel	15 pin dsub
10	Caryn's RTP voltage programming via isolator	Channel 6	grn	15 pin dsub
11	Caryn's RTP voltage programming via isolator	Channel 7	blu	15 pin dsub
12	Caryn's RTP voltage programming via isolator	Channel 8	vio	15 pin dsub
13				
14				
15				
16				
17				
18				
19				
Note:skip first terminal on 2nd row				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				



## BNC patch map

### BNC PATCH PANEL MAP

- 1
- 2
- 3
- 4
- 5
- 6 499MHZ trigger to laser table for scope
- 7
- 8 30HZ pzt signal
- 9
- 10