PDP 11 I/O Connectors

Metheus Pin	DRV-11 Input	DRV-11 Output	DRV-11B Input	DRV-11B Output	DR11-W Input	DR11-W Output	DEC Pin
1	Open	Open	Gnd	Gnd	Gnd	Gnd	A
2	Open	Open	BusyL	CycReqH	BusyL	CycRqAH	B
3	DTransH	o0	Gnd	Gnd	Gnd	Gnd	C
4	Open	Open	AttnH	Init2H	AttnH	Ac1Fc2H	D
5	i2	Open	Gnd	Gnd	Gnd	Gnd	E
6	Open	Open	a00	ReadyH	a00	ReadyH	F
7	i2	Open	Gnd	Gnd	Gnd	Gnd	H
8	Gnd	Gnd	BaIncH	WcIncH	BaIncH	WcIncH	J
9	CsrO	o1	Fnct3	SCycH	Fnct3	BurstL	K
10	Gnd	o4	Fnct3	StatusA	Fnct3	StatusA	L
11	i15	Gnd	Gnd	Gnd	Gnd	Gnd	M
12	i14	o5	cO	InitH	cO	InitH	N
13	i13	InitH	Gnd	Gnd	Gnd	Gnd	P
14	Gnd	o6	Fnct2	Stat8	Fnct2	Stat8	R
15	ReqBH	Gnd	Gnd	Gnd	Gnd	Gnd	S
16	Gnd	o7	c1	StatC	c1	StatC	T
17	i12	o3	Gnd	Gnd	Gnd	Gnd	U
18	i11	Gnd	Fnct1	StatC	Fnct1	StatC	V
19	i10	o8	Gnd	Gnd	Gnd	Gnd	W
20	Gnd	o9	Gnd	Gnd	Gnd	EndCycH	X
21	i9	Gnd	Gnd	Gnd	Gnd	Gnd	Y
22	i8	o10	Gnd	Gnd	Gnd	CreqBH	Z
23	Gnd	o11	Gnd	Gnd	Gnd	Gnd	AA
24	i3	o12	Gnd	Gnd	Gnd	Gnd	BB
25	i7	Gnd	i7	o7	i7	o7	CC
26	Gnd	Csr1	i8	o8	i8	o8	DD
27	i6	Gnd	i6	oA	iA	oa	EE
28	Open	o13	i9	o9	i9	o9	FF
29	i5	o14	i5	o5	i5	o5	HH
30	Gnd	o15	i10	o10	i10	o10	JJ
31	i4	Gnd	i4	o4	i4	o4	KK
32	Ini	ReqAH	i1	o1	i1	o1	LL
33	Gnd	Gnd	i3	o3	i3	o3	MM
34	InitH	o2	i12	o12	i12	o12	NN
35	Gnd	Gnd	i2	o2	i2	o2	PP
36	InitH	o2	i13	o13	i13	o13	RR
37	Gnd	Gnd	i1	o1	i1	o1	SS
38	i0	Open	i14	o14	i14	o14	TT
39	Gnd	Gnd	i0	o0	i0	o0	UU
40	Open	DatReqH	i15	o15	i15	o15	VV

Serial Cable

14 Pin Connector	Rs232 Connector
14	1 (Gnd)
13	2 (TxD)
12	3 (RxD)
11	4 (Rts)
10	5 (Cts)
9	6 (Dsr)
8	7 (Gnd)
7	20 (Dtr)
6	19
5	18
4	17
3	16
2	15
1	14

Display I/O Interface

New Pin	Signal Name	Old Pin
1	Gnd	--
2	Gnd	--
3	+5	1
4	Gnd	32
5	OdatHLdEnL	2
6	IdatStbH	31
7	+5	3
8	OdatStbH	30
9	+5	4
10	SOdatRdyH	29
11	FETCHL/CCLK	5
12	InitL	28
13	ReadyL	6
14	ProcClk	27
15	Gnd	7
16	IdatRdyH	26
17	InitL	8
18	ClIdRdyH	25
19	-5	9
20	N/A	24
21	~~IdatRqEnL~~ Db5	10
22	Db7	23
23	IdatRqEnL	11
24	Db6	22
25	Db3	12
26	Db5	21
27	Db2	13
28	Db4	20
29	Db1	14
30	OdatRqEnL	19
31	Db0	15
32	OdatRdyL	18
33	IdatStbH	16
34	Gnd	17
35	~~CCLK~~ CCLK	--
36	Gnd	--

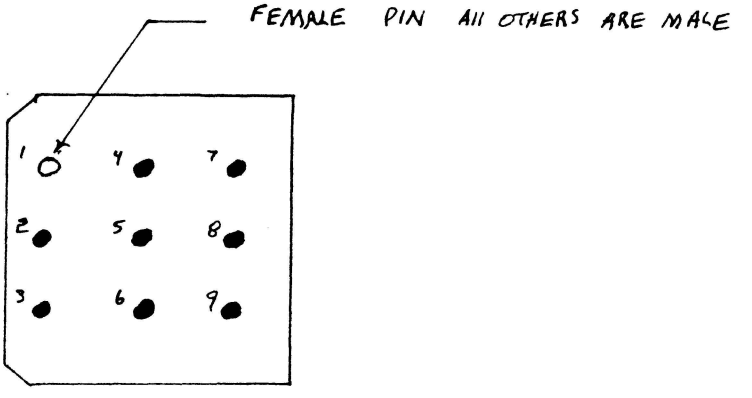
IORESETL

OMEGA jumper selectable

- open

DC - POWER CONN.

OMEGA 400



1) -5v

2) +5v

3) grd.

4) grd.

5) grd.

6) grd.

7) -5v

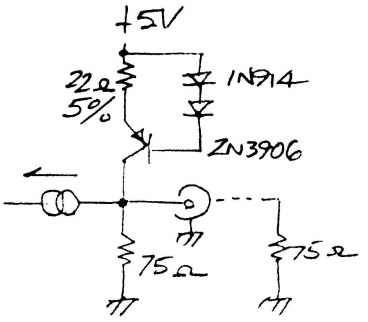
8) grd

9) +5v

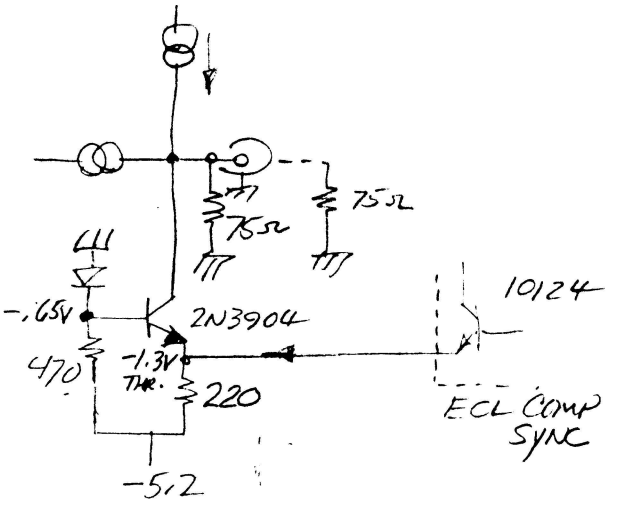
VIDEO SIGNAL SPECIFICATIONS:

AMPLITUDE –

RED, BLUE



GREEN



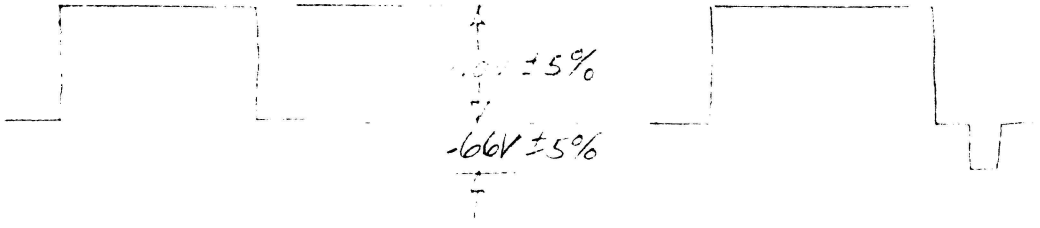
$$V_{MAX} = \left(\frac{.65V}{22\Omega}\right) \times \left(\frac{75\Omega}{2}\right) \simeq \underline{1.11\ V} \pm 5\%$$

$$V_{BLANK} = V_{MAX} - I_{DAC_{MAX}} \times \frac{75\Omega}{2}$$

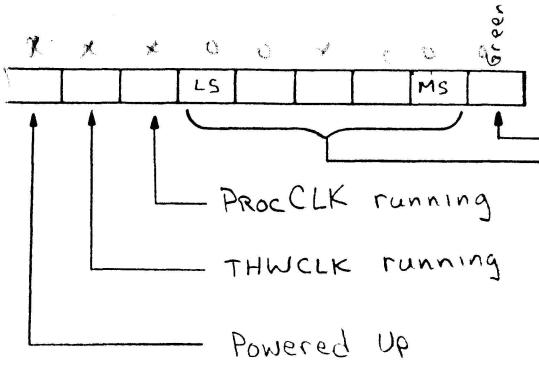
$$= V_{MAX} - 16\, I_{REF} \times \frac{75}{2} = V_{MAX} - 16\left(\frac{2.5}{1.5K}\right) \times \frac{75}{2} + V_{BLACK}$$

$$= 1.11 - 1 \simeq \underline{.11\ V \pm 5\%}$$

ON GREEN, SYNC SUBTRACTS $\frac{(-1.3)-(-5.2)}{220} \times \frac{75\Omega}{2} = .66V \pm 5\%$



Ω420 Ω440 LED's



ØØ	
Ø1	Not Sequencing, stuck at Ø
Ø2	ALU can't increment RØ
Ø3	data bus problem
Ø4	bad loop counter
Ø5	bad I/O card
Ø6	bad scratch pad ram
Ø7	bad CRT controller
Ø8	display problem
Ø9	bad signature
ØA	
ØB	
ØC	
ØD	
ØE	
ØF	
1X	memory test failure, X = plane #