



5120

IBM 5120

Computing System Logic Manual

SY34-0193-0

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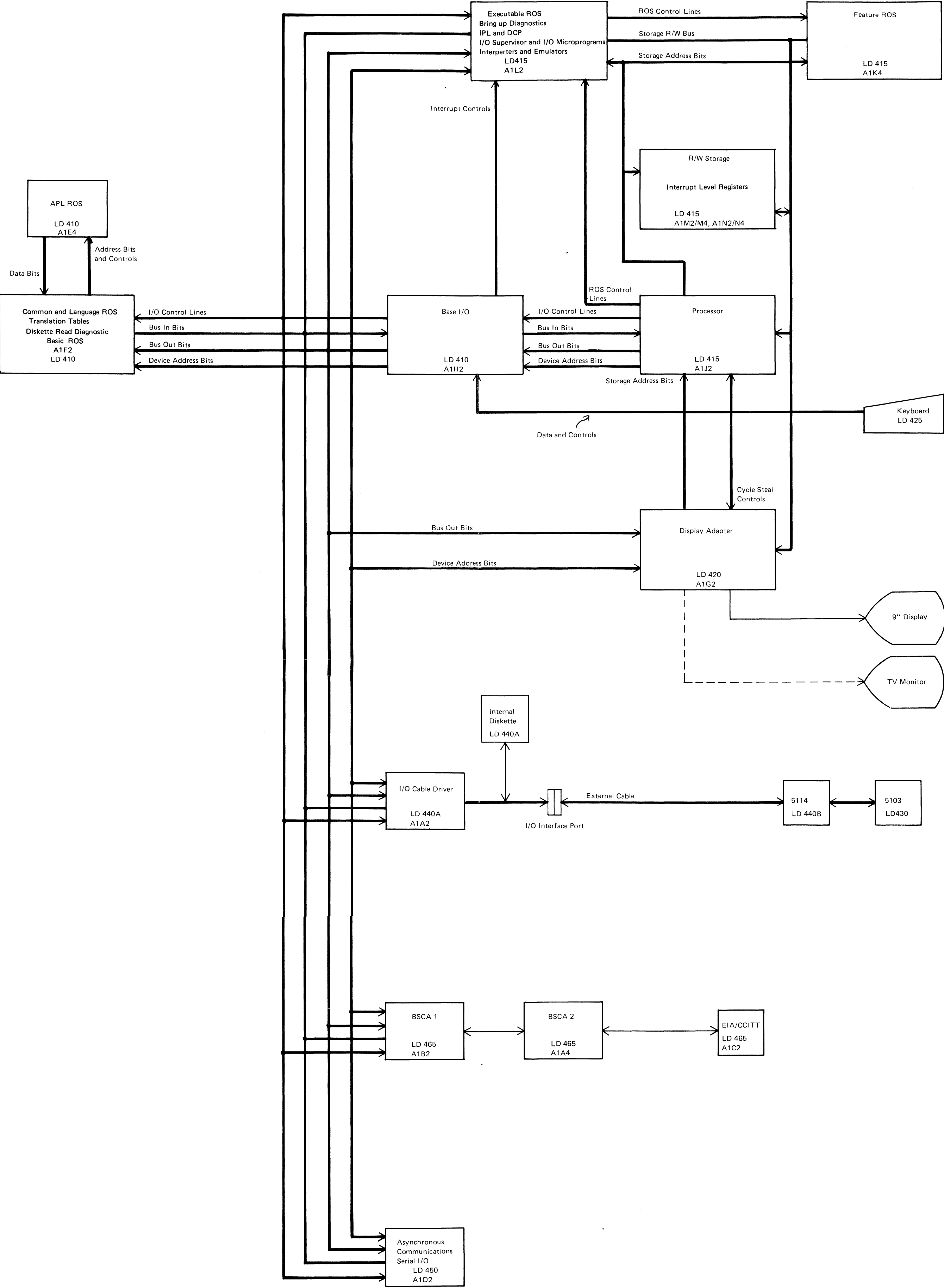
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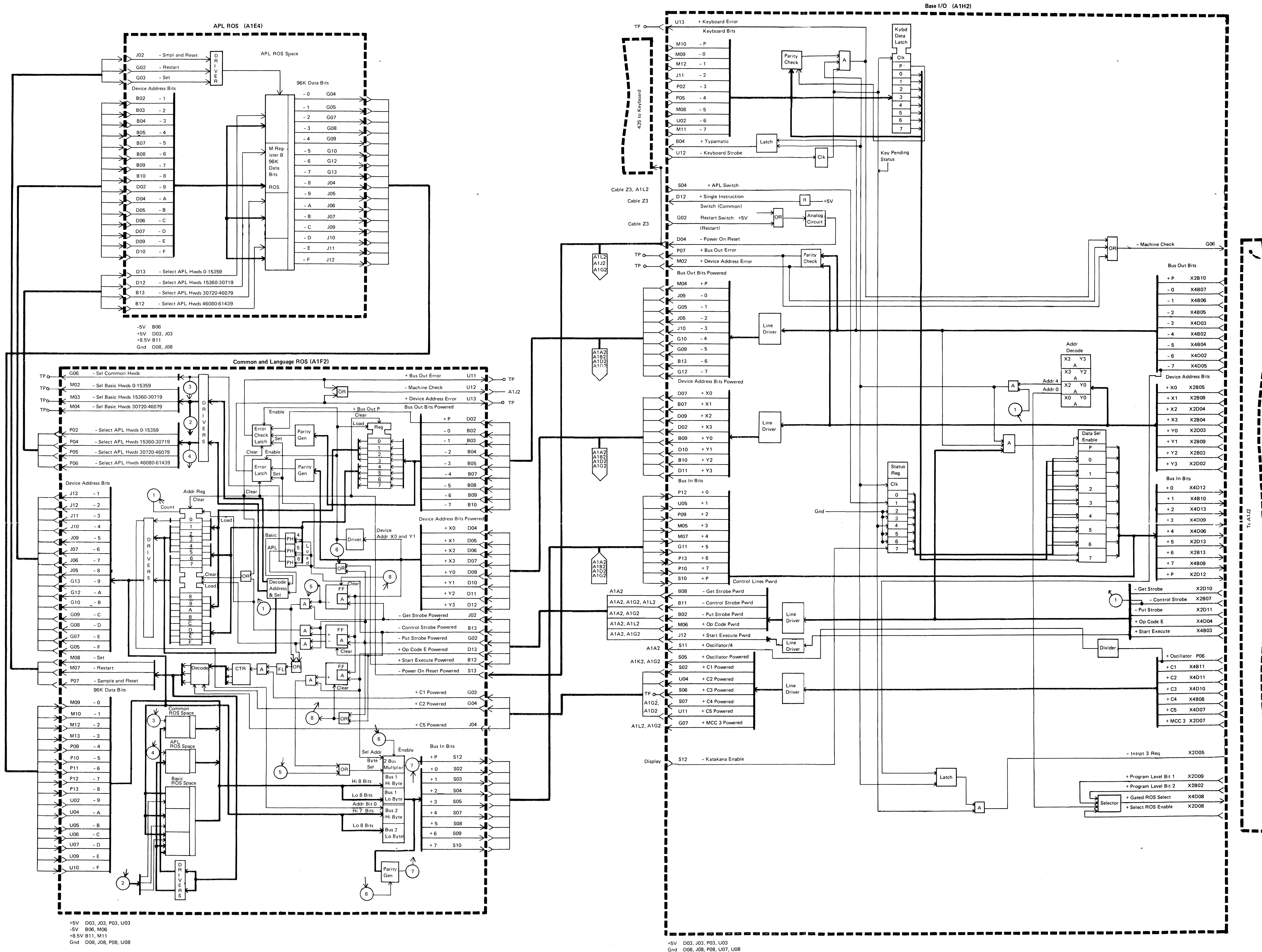
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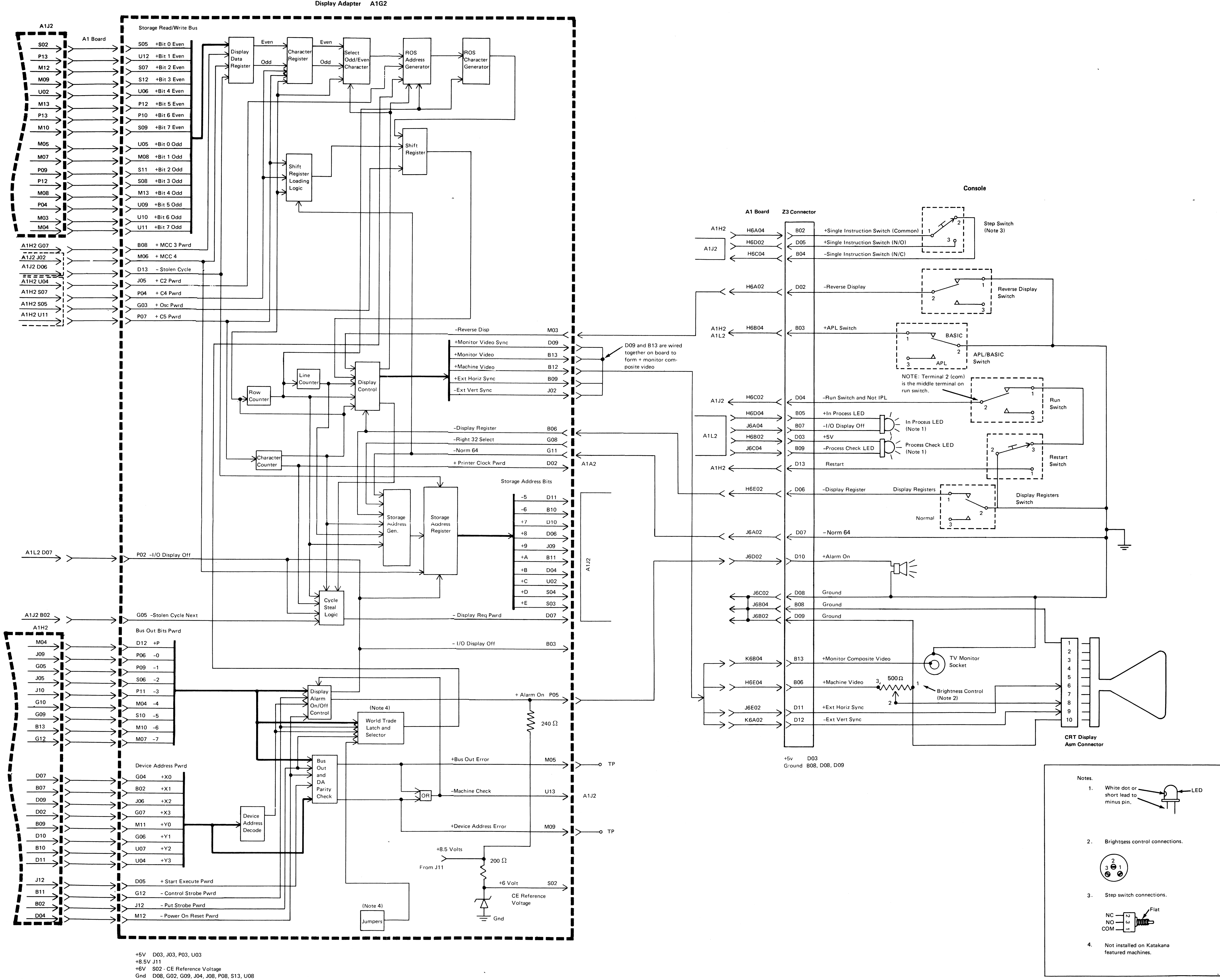
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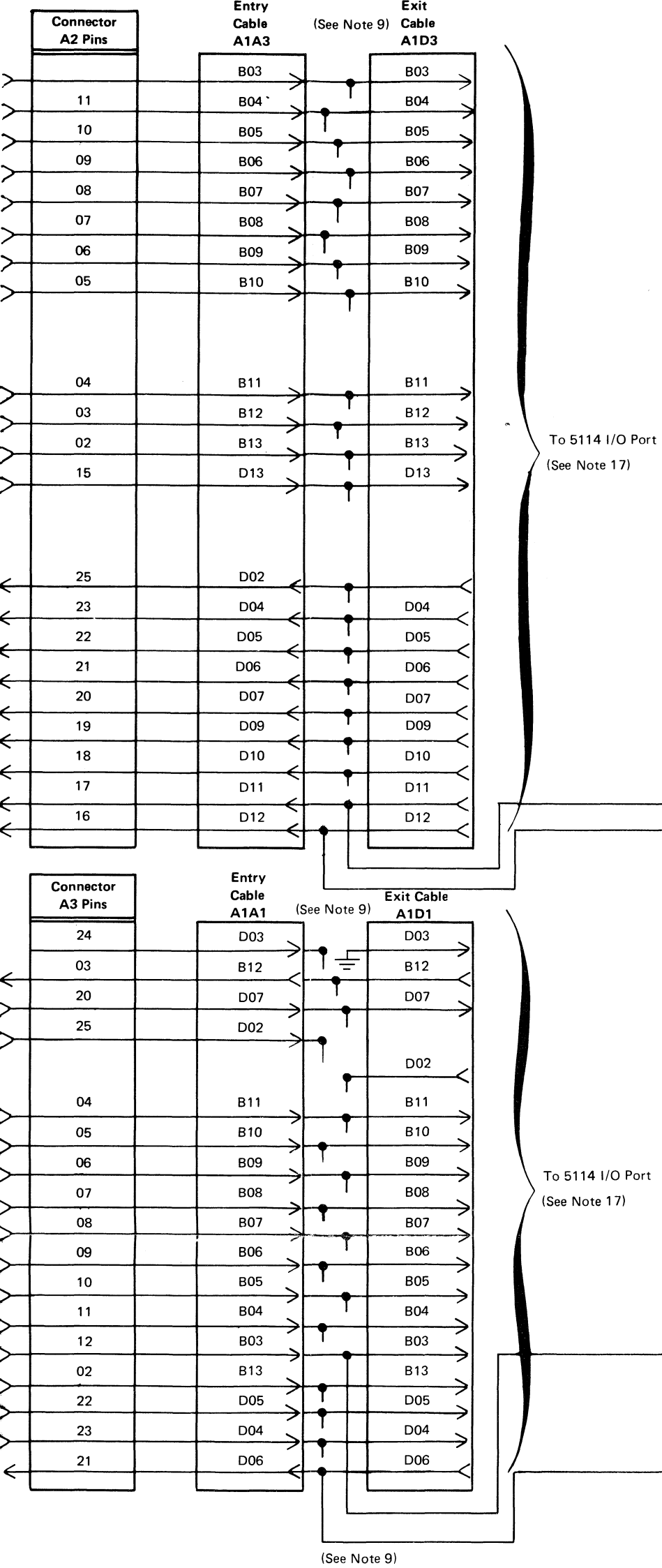




Base I/O
APL ROS
Common/Language ROS

410

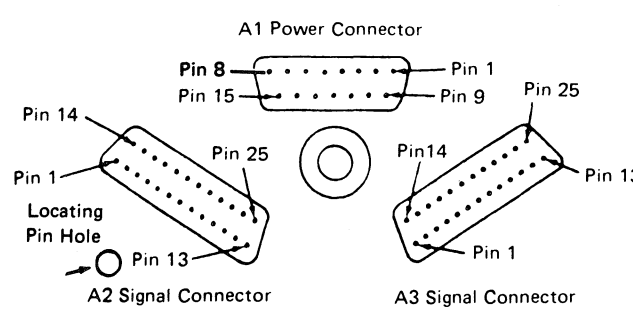




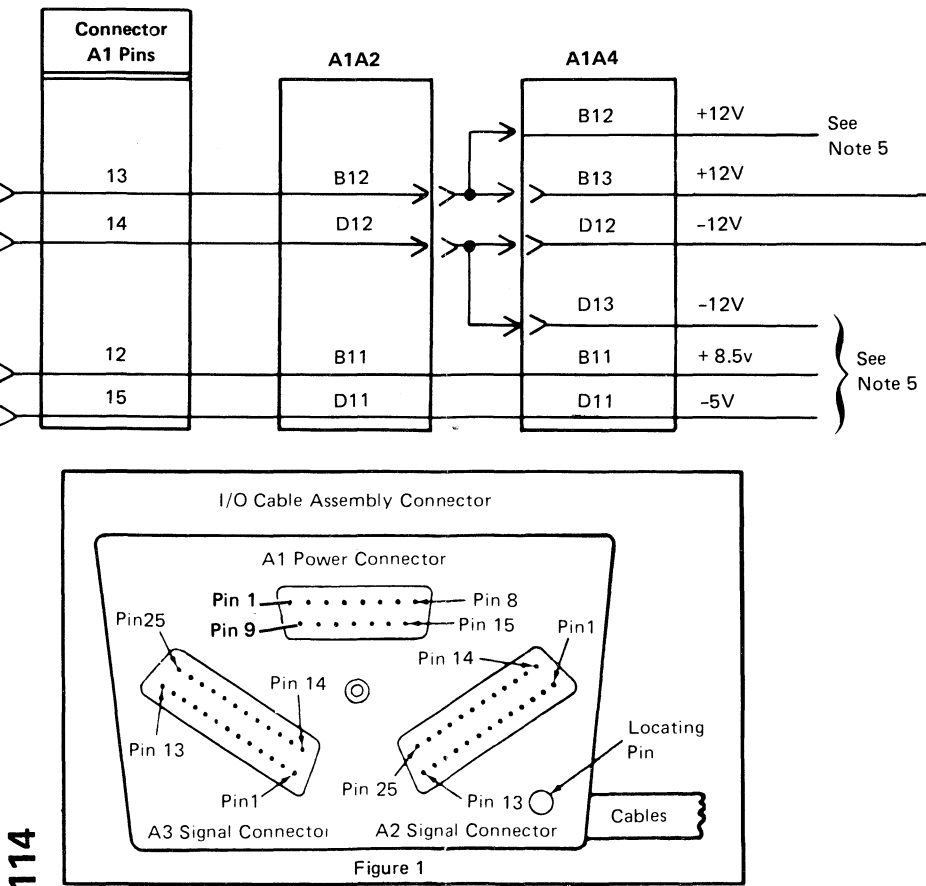
- Notes:
- A2 I/O Signal Cable enters A1 Board via A1A3 and exits via A1D3 to the I/O Interface Port A2.
 - A3 I/O Signal Cable enters A1 Board via A1A1 and exits via A1D1 to the I/O Interface Port A3.
 - Drive 3 & 4 is created in the 5114 by grounding that line in the 5110 Internal Diskette Drive Board (B1).
 - On some machines, the VFO circuitry is on a separate card in the A1B1 position.
 - These voltages go to the A1 Power Connector on the 5114 I/O Interface Port.
 - +5V from the 5110 terminates at the 5114. The 5114 generates +5V for internal use and use for all I/O devices attached after it. Also, there is no ground via the power cable (A1).
 - TB 1 Connections

	60 Hz			50 Hz		
	100 Vac	115 Vac		100 Vac	220 Vac	235 Vac
P3-13	TB1-2	TB1-3	TB1-2	TB1-3	TB1-4	
P3-14	TB1-4	TB1-4	TB1-5	TB1-5	TB1-5	

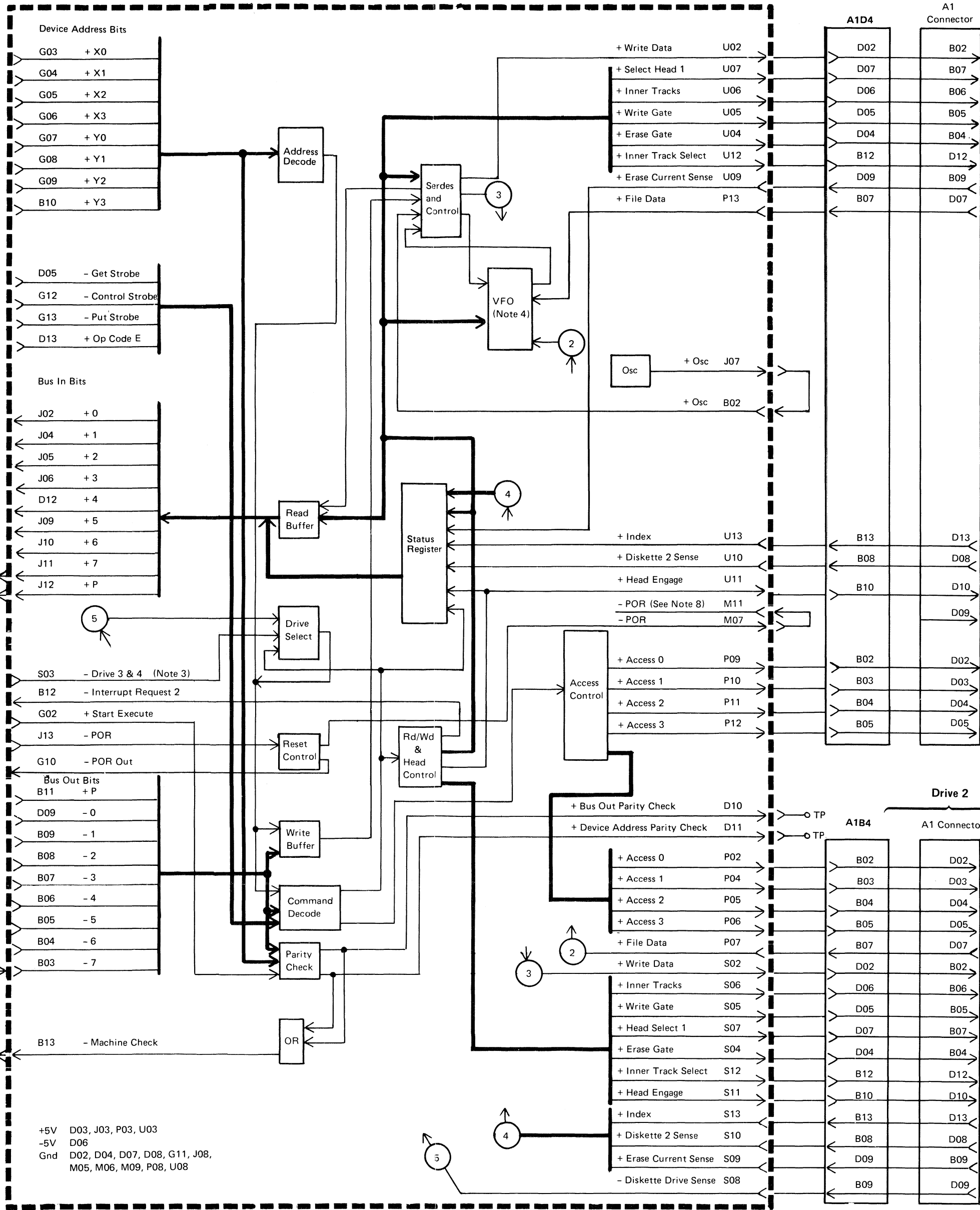
- POR is the General Reset Line for the Adapter Card.
- A1D3 & A1D1 are cable outputs for additional devices or terminator. The wiring from A1A3 and A1A1 to the A1C1 card are all as shown by pins D11, D12 of A1A3 and pins B03 and D06 of A1A1.
- Some power supplies do not have C2. In this case F1 is 8A.



- Notes 11 through 16 apply to diskette drive control card P/N 4178065.
- + Current Enabled.
 - + Hd Load Solenoid.
 - + Hd Load Osc.
 - + 14 Vdc
 - Gnd
 - Gnd
 - A1D3 & A1D1 are cables to the I/O port (see Figure 1) for additional devices or terminator. The wiring from A1A3 and A1A1 to the A1C1 card are all as shown by pins D11, D12 of A1A3 and pins B03 and D06 of A1A1.

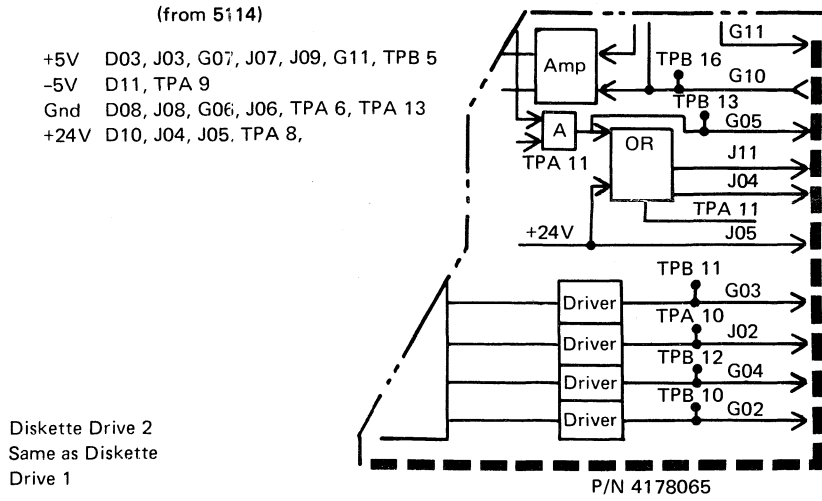
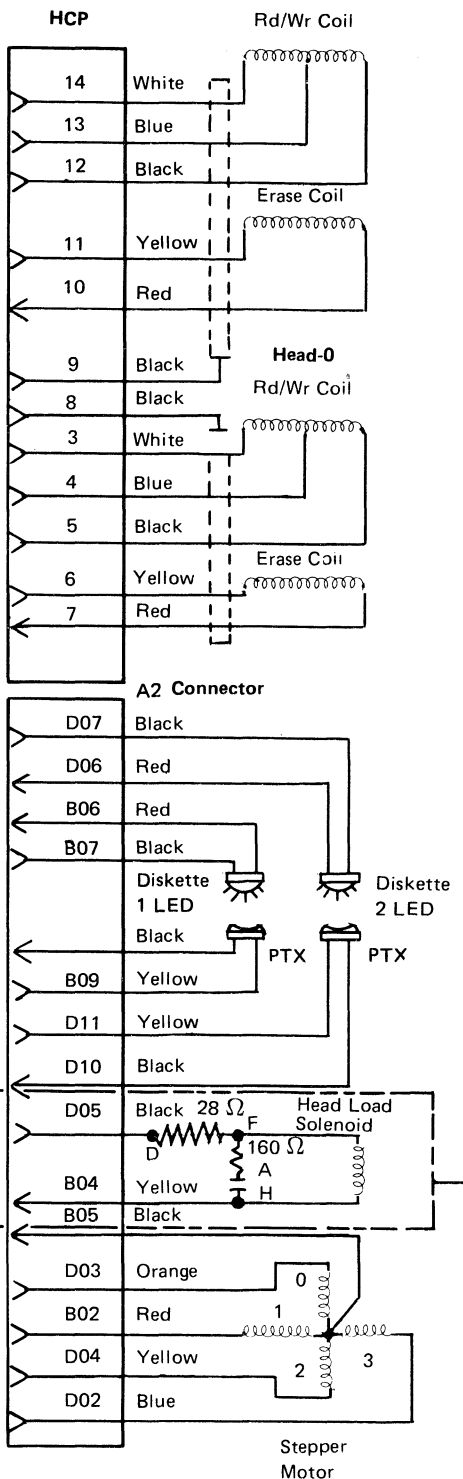
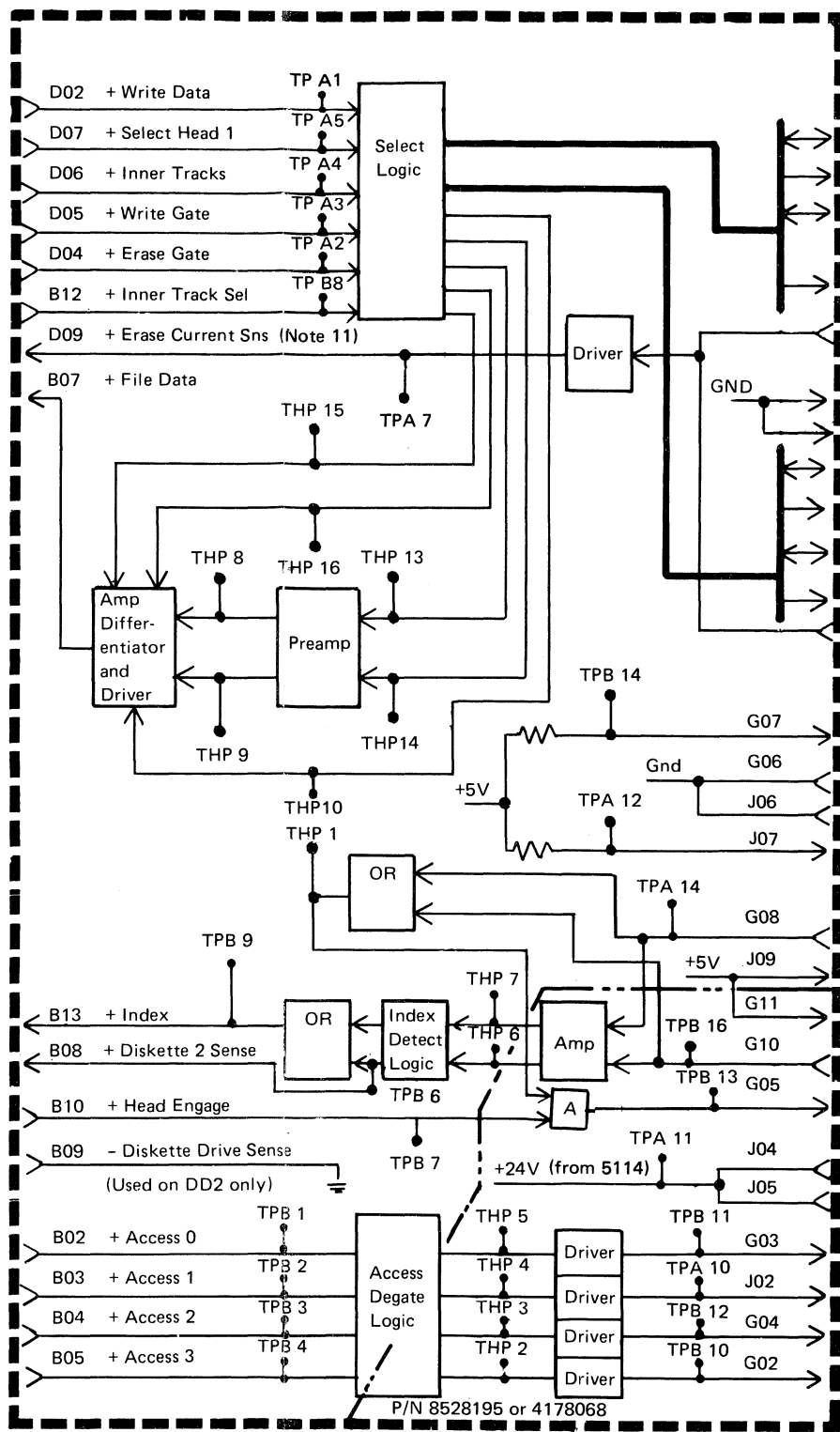


Diskette Drive Adapter A1C1



Drive 1

Diskette Drive Control



LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+APL SWITCH										S04				P04		Z3B03(H6B04)
+BUS IN BIT P	D12		D12			M04		S12		S10				P07		
+BUS IN BIT 1										X2D12	X2D12					
+BUS IN BIT 0	D02		D02					S02		P12	D12			P12		
+BUS IN BIT 0										X4D12	X4D12					
+BUS IN BIT 1	D04		D04			P02		S03		U05				P13		
+BUS IN BIT 1										X4B10	X4B10					
+BUS IN BIT 2	D05		D05			G11		S04		P09				S02		
+BUS IN BIT 2										X4D13	X4D13					
+BUS IN BIT 3	D06		D06					S05		M05				S03		
+BUS IN BIT 3										X4D09	X4D09					
+BUS IN BIT 4	D07		D07			J11		S07		M07				S04		
+BUS IN BIT 4										X4D06	X4D06					
+BUS IN BIT 5	D09		D09					S08		G11				S05		
+BUS IN BIT 5										X2D13	X2D13					
+BUS IN BIT 6	D10		D10					S09		P13				U02		
+BUS IN BIT 6										X2B13	X2B13					
+BUS IN BIT 7	D11		D11			G10		S10		P10				U04		
+BUS IN BIT 7										X4B09	X4B09					
+BUS OUT BIT P										X2B10	X2B10					

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+BUS OUT BIT P	G11		G11			J12		D02	D12	M04				J06		
-BUS OUT BIT 0 PWRD	G10		G10			J10		B02	P06	J09				J07		
-BUS OUT BIT 1 PWRD	G09		G09			G09		B03	P09	G05				M03		
-BUS OUT BIT 2 PWRD	G08		G08			G08		B04	S06	J05				J02		
-BUS OUT BIT 4 PWRD	G06		G06			G06		B07	M04	G10				J09		
-BUS OUT BIT 5 PWRD	G05		G05			G05		B08	S10	G09				G10		
-BUS OUT BIT 6 PWRD	G04		G04			J06		B09	M10	B13				J13		
-BUS OUT BIT 7	G03		G03			J07		B10	M07	G12				J10		
-BUT OUT BIT 3	G07					G07		B05	P11	J10				J05		
-CONTROL STROBE PWRD	B12		B12			M09		B13	G12	B11				M04		
+C1 PWRD						S07		G03		S02						
+C2 PWRD								G04	J05	U04						
+C4 PWRD						D12			P04	S07						
+C5 PWRD								J04	P07	U11						
+DEVICE ADDR X0										X2B05	X2B05					
+DEVICE ADDR X0 PWRD	B03		B03			M08		D04	G04	D07				M12		
+DEVICE ADDR X1										X2B08	X2B08					
+DEVICE ADDR X1 PWRD	B04		B04			P07		D05	B02	B07				G09		
+DEVICE ADDR X2										X2D04	X2D04					
+DEVICE ADDR X2 PWRD	B05		B05			U09		D06	J06	D09				G07		

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+DEVICE ADDR X3										X2B04	X2B04					
+DEVICE ADDR X3 PWRD	B06		B06			U12		D07	G07	D02				G13		
+DEVICE ADDR Y0										X2D03	X2D03					
+DEVICE ADDR Y0 PWRD	B07		B07			S08		D09	M11	B09				G05		
+DEVICE ADDR Y1										X2B09	X2B09					
+DEVICE ADDR Y1 PWRD	B08		B08			M06		D10	G06	D10				G08		
+DEVICE ADDR Y2										X2B03	X2B03					
+DEVICE ADDR Y2 PWRD	B09		B09			M07		D11	U07	B10				M10		
+DEVICE ADDR Y3										X2D02	X2D02					
+DEVICE ADDR Y3 PWRD	B10		B10			U10		D12	U04	D11				G12		
+DEVICE ADDRESS Y1										X2B09	X2B09					
+EXT HORIZ. DRIVE	J05					U07			B09							Z3D11(J6E02)
-GET STROBE PWRD	B11		B11							B08						
-INTERRUPT 1 REQ			G12			G12			J02	S13						
-INTERRUPT 1 REQ										X2D06	X2D06					
-INTERRUPT 2 REQ	G12					J09				D13						
-INTERRUPT 2 REQ										X2B06						
-MACHINE CHECK	J06		J06			M05		U12	U13	G06	S09			D06		
+MCC 3 PWRD									B08	G07				G06		
+MCC 4									M06		J02		J05	M05		

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+MONITOR VIDEO OUT										D09						Z3B13(K6B04)
+MONITOR VIDEO OUT										B13						
+OP CODE E PWRD	D13		D13					D13		M06				B10		
+OSC PWRD									G03	S05						
-POWER ON RESET PWRD	J02		J02			S10		S13	M12	D04	B11			M02		Z4D07(K6B02)
-PUT STROBE PWRD	B13		B13			P09		G02	J12	B02						
-RESTART SWITCH										G02				D05		Z3D13(K6B02)
-SELECT ROS											B04		G06	P02		
-SELECT ROS											G06					
+START EXECUTE PWRD	J07		J07			U05		B12	D05	J12						
-STORAGE ADDR BIT A PWRD											U04			G09	U10	B12
-STORAGE ADDR BIT B PWRD											S04			G08	U09	B13
-STORAGE ADDR BIT C PWRD											S05			G07	U07	D11
-STORAGE ADDR BIT D PWRD											U05			J07	S07	D10
-STORAGE ADDR BIT E PWRD											U06			J06	M13	B09
-STORAGE ADDR BIT 0										B06				G04	U06	
-STORAGE ADDR BIT 0										X4B12	X4B12					
-STORAGE ADDR BIT 1										S09				G13	U13	
-STORAGE ADDR BIT 1										X4B13	X4B13					
-STORAGE ADDR BIT 2										D05				J12	U12	

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

-STORAGE ADDR BIT 2										X2B11	X2B11					
-STORAGE ADDR BIT 2 PWRD										D07					G08	
-STORAGE ADDR BIT 3										B05			J13	U11		
-STORAGE ADDR BIT 3										X2B12	X2B12					
-STORAGE ADDR BIT 4 PWRD										D04			G12	S13		
-STORAGE ADDR BIT 5									D11	B07			G11	S12		
-STORAGE ADDR BIT 6									B10	B09			J11	P10		
-STORAGE ADDR BIT 7 PWRD										D13			J10	S10	J06	
-STORAGE ADDR BIT 8 PWRD										D09			J09	S09	G05	
-STORAGE ADDR BIT 9 PWRD										S03			G10	S08	G04	
-STORAGE R/W BUS BIT P EVEN										M11			D09	D09	D05	
-STORAGE R/W BUS BIT P EVEN										S11						
-STORAGE R/W BUS BIT P ODD										J06			B13	B13	B02	
-STORAGE R/W BUS BIT P ODD										P10						
+STORAGE R/W BUS BIT 0 EVEN								S05		P02			D02	D02	J12	
+STORAGE R/W BUS BIT 0 EVEN										S02						
+STORAGE R/W BUS BIT 0 ODD								U05		G07			B07	D10	B07	
+STORAGE R/W BUS BIT 0 ODD										M06						
+STORAGE R/W BUS BIT 1 EVEN								U12		P13			D04	D04	J11	
+STORAGE R/W BUS BIT 1 EVEN										U11						

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+STORAGE R/W BUS BIT 1 ODD									M08				B08	D12	D07	
+STORAGE R/W BUS BIT 1 ODD																
+STORAGE R/W BUS BIT 2 EVEN									S07				B04	B04	J09	
+STORAGE R/W BUS BIT 2 EVEN										P06						
+STORAGE R/W BUS BIT 2 ODD									S11				D07	D13	B08	
+STORAGE R/W BUS BIT 2 ODD										P09						
+STORAGE R/W BUS BIT 3 EVEN									S12				B05	B05	J07	
+STORAGE R/W BUS BIT 3 EVEN										M05						
+STORAGE R/W BUS BIT 3 ODD									S08				G02	G02	D04	
+STORAGE R/W BUS BIT 3 ODD										M09						
+STORAGE R/W BUS BIT 4 EVEN									U06				D05	B02	J05	
+STORAGE R/W BUS BIT 4 EVEN										P12						
+STORAGE R/W BUS BIT 4 ODD									M13				G03	G03	B05	
+STORAGE R/W BUS BIT 4 ODD										J12						
+STORAGE R/W BUS BIT 5 EVEN									P12				D06	B03	J04	
+STORAGE R/W BUS BIT 5 EVEN										M08						
+STORAGE R/W BUS BIT 5 ODD										M13						
+STORAGE R/W BUS BIT 5 ODD									U09				D12	G04	B04	
+STORAGE R/W BUS BIT 6 EVEN										S12						
+STORAGE R/W BUS BIT 6 EVEN									P10				B02	B08	D12	
+STORAGE R/W BUS BIT 6 EVEN										J09						
+STORAGE R/W BUS BIT 6 EVEN										P04						
+STORAGE R/W BUS BIT 6 EVEN										P07						
+STORAGE R/W BUS BIT 6 EVEN										P11						

LINE NAME	A2	A4	B2	C2	C4	D2	E4	F2	G2	H2	J2	K2	K4	L2	M2	CABLE

+STORAGE R/W BUS BIT 6 ODD									U10				D13	J04	D02	
+STORAGE R/W BUS BIT 6 ODD																
+STORAGE R/W BUS BIT 7 EVEN									S09				B03	B09	D13	
+STORAGE R/W BUS BIT 7 EVEN										M03						
+STORAGE R/W BUS BIT 7 ODD										S06						
+STORAGE R/W BUS BIT 7 ODD									U11				B12	B12	D06	
+STORAGE R/W BUS BIT 7 ODD										G13						
+STORAGE R/W BUS BIT 7 ODD										M04						
+WRITE EVEN TIMED										U07				J11	J02	
+WRITE ODD TIMED										B08				J12	J10	