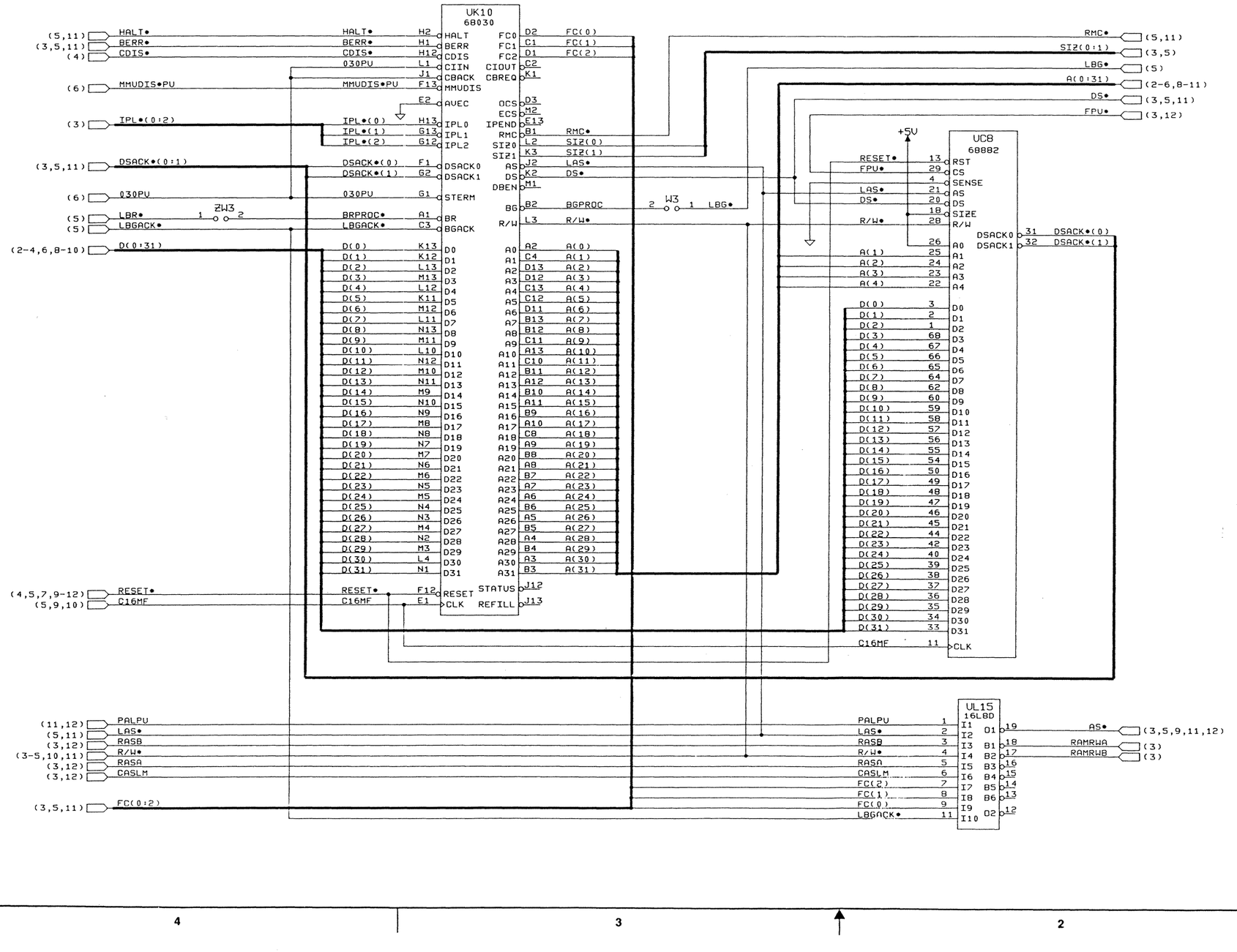
REV	ZONE	ECO#	REVISION	APPD	DATE
A		V1797	PRODUCTION RELEASE		

NOTE: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTANCE VALUES ARE IN OHMS, +/- 5%, 1/8 WATT.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. 10 MICROFARAD CAPACITORS ARE A NON-STANDARD PART (SH.4).
4. ALL CRYSTAL VALUES ARE IN HERTZ.
5. ( ) DENOTES SHEET TO SHEET REFERENCES.

CPU (68030)
FPU (68882)



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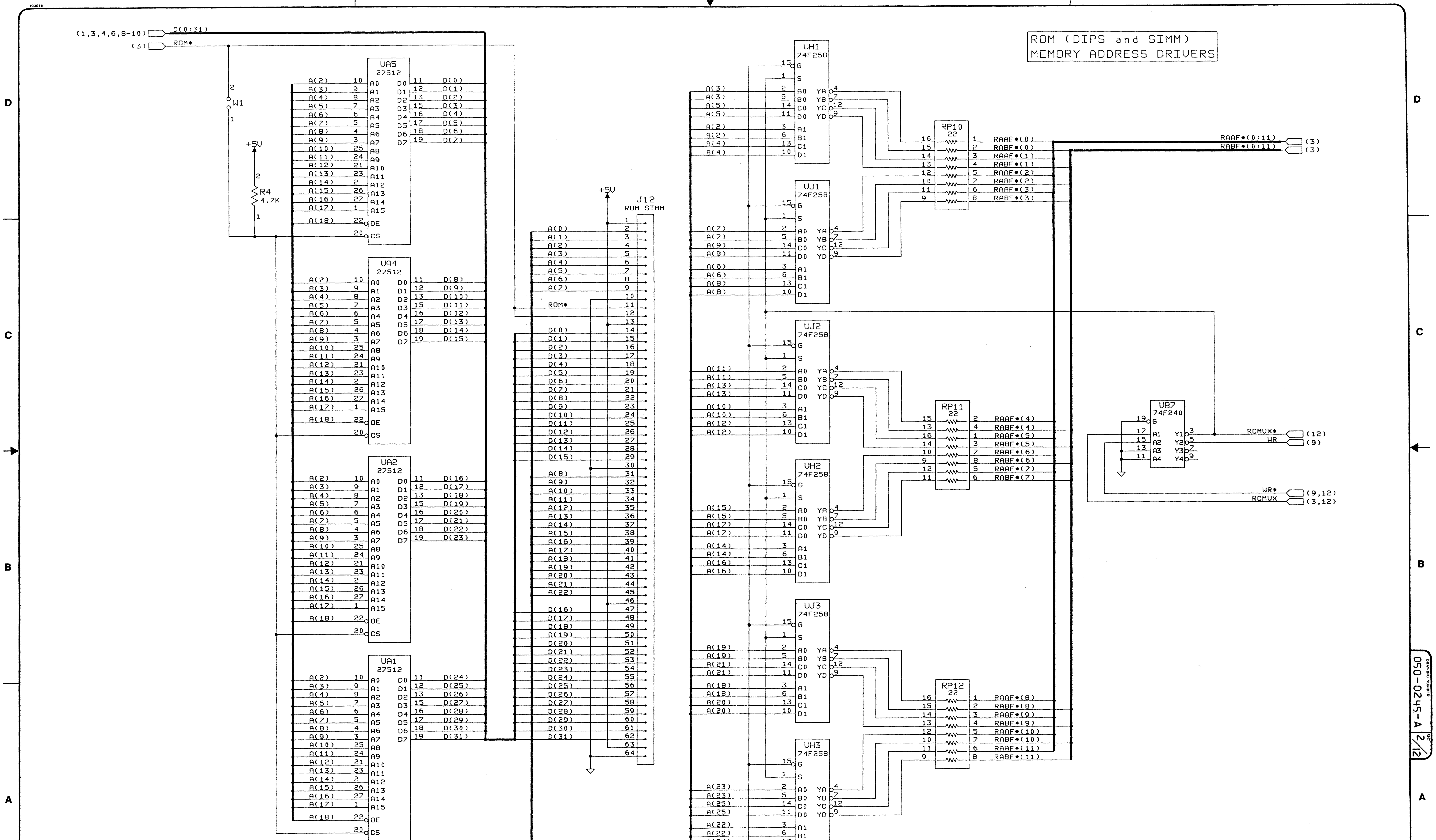
DRAWING NUMBER 050-0245-A SHT 1/12



Apple Computer, Inc.

SIZE	DRAWING NUMBER
D	050-0245-A
SCALE	SHT 2 OF 12

GLUECHIP RAM SIMM'S

(2) RAAF•(0:11)
(1,2,4,6,8-10) D(0:31)

(1) RAMRWA — R12 22 — RAMRWAF
(1) RAMRWB — R13 22 — RAMRWBF

S2
NMI
(NORMALLY OPEN)

UK13
GLUE CHIP

(4,7,12)	IRQ•(1:6)	IRQ•(1)	2	SLTIRQ1N	SCSDRQ	51
		IRQ•(2)	3	SLTIRQ2N	WRITEN	52
		IRQ•(3)	4	SLTIRQ3N	TSTOEN	53
		IRQ•(4)	5	SLTIRQ4N	A26	55 A(26)
		IRQ•(5)	6	SLTIRQ5N	A24	56 A(24)
		IRQ•(6)	7	SLTIRQ6N	DSACK1N	57
(4,12)	SLOTIRQ•		8	SLTIRQN	A22	58 A(22)
(11)	NMI•		9	NMIN	DSACK0N	59
(11,12)	PWRIRQ•		10	PWRIRQN	SCCENN	60
(8,11,12)	SCCIRQ•		11	SCCIRQN	A20	61 A(20)
(4,11,12)	VIAIRQ2•		12	VIAIRQ2N	SCCRDN	62
(1)	IPL•(0:2)	IPL•(2)	13	IPL2N	SCCWRN	63
(4,11,12)	VIAIRQ1•		14	VIAIRQ1N	RAMSI21	64
		IPL•(1)	15	IPL1N	SCSIDACKN	65
		IPL•(0)	16	IPL0N	IORN	66
(5)	C32MF		17	C32M	RAMSI20	67
(5,12)	C16G		18	C16M	IOWN	68
(1,5,11)	BERR•		19	BERRN	VIA2CSN	69
(4,8,12)	SYNC		20	SYNC	SI21	70
(4,8,12)	C3M		21	C3M	VIA1CSN	71
(8,12)	SYNC3M		22	SYNC3M	E	72
(1,5,11)	FC(0:2)	FC(2)	23	FC2	SI20	73 A(1)
(9,12)	SCSI•		24	SCSIN	A1	76
(9,12)	SWIM•		25	IWMN	RCMUX	77 A(0)
		FC(1)	26	FC1	A0	78
(2)	ROM•		27	ROMN	RASA	79
		A(17)	28	LA17	RASB	80
		FC(0)	29	FC0	CASLL	81
(1,12)	FPU•		30	FPUN	CASLM	82
		A(31)	31	A31	CASUM	83
(5,12)	NUBUS•	A(16)	32	LA16	CASUV	
		A(30)	33	NUBUSN		
(10,12)	SND•		34	A30		
		A(29)	35	SNDN		
		A(28)	36	A29		
		A(13)	37	A28		
		A(27)	38	LA13		
		A(25)	39	A27		
		A(16)	40	A25		
		A(15)	41	A16		
		A(14)	44	A15		
		A(13)	45	A14		
			46	A13		
(1,5,9,11,12)	AS•		47	ASN		
(1,5,11)	DS•		48	DSN		
(4,12)	OVERLAY		49	OVERLAY		
(10-12)	TEST•		50	TESTN		
(1,2,4-6,8-11)	A(0:31)					

DSACK•(1) — DSACK•(0:1) — (1,5,11)
DSACK•(0) — SCCEN• — (8,12)
RAMSI2(1) — RAMSI2(0:1) — SCCRD• — (8,12)
RAMSI2(0) — SCCWR• — (8,12)
SIZ(1) — SIZ(0:1) — SCSIDACK• — (4,12)
SIZ(0) — IOR• — (9,12)
IOW• — (9,12)
VIA2CS• — (4,12)
VIA1CS• — (4,12)
E — (4,12)
RCMUX — (2,12)
RASA — (1,12)
RASB — (1,12)
CASLL — (12)
CASLM — (1,12)
CASUM — (12)
CASUV — (12)

SCSIDRQ — (4,9,12)
R/W• — (1,4,5,10,11)
TESTOE• — (11,12)

UG7 74F240 — 1G, 2G; 1A1-1A4 / 2A1-2A4 → RP7 22 → SIM1-SIM8 RAMRWAF / RAMRWBF

	SIM1	SIM2	SIM3	SIM4
+5V	J11	J11	J9	J9
RCASLL• / RCASLM• / RCASUM• / RCASUV•	1	31	1	31
D(0) / D(8) / D(16) / D(24)	3	33	3	33
RAAF•(0)	4	34	4	34
RAAF•(1)	5	35	5	35
D(1) / D(9) / D(17) / D(25)	6	36	6	36
RAAF•(2)	7	37	7	37
RAAF•(3)	8	38	8	38
	9	39	9	39
D(2) / D(10) / D(18) / D(26)	10	40	10	40
RAAF•(4)	11	41	11	41
RAAF•(5)	12	42	12	42
D(3) / D(11) / D(19) / D(27)	13	43	13	43
RAAF•(6)	14	44	14	44
RAAF•(7)	15	45	15	45
D(4) / D(12) / D(20) / D(28)	16	46	16	46
RAAF•(8)	17	47	17	47
RAAF•(9)	18	48	18	48
RAAF•(10)	19	49	19	49
D(5) / D(13) / D(21) / D(29)	20	50	20	50
RAMRWAF / RAMRWBF	21	51	21	51
	22	52	22	52
D(6) / D(14) / D(22) / D(30)	23	53	23	53
RAAF•(11)	24	54	24	54
D(7) / D(15) / D(23) / D(31)	25	55	25	55
	26	56	26	56
RRASA0• / RRASA1•	27	57	27	57
PU	28	58	28	58
	29	59	29	59
	30	60	30	60

	SIM5	SIM6	SIM7	SIM8
+5V	J14	J14	J13	J13
RCASLL• / RCASLM• / RCASUM• / RCASUV•	1	31	1	31
D(0) / D(8) / D(16) / D(24)	3	33	3	33
RABF•(0)	4	34	4	34
RABF•(1)	5	35	5	35
D(1) / D(9) / D(17) / D(25)	6	36	6	36
RABF•(2)	7	37	7	37
RABF•(3)	8	38	8	38
	9	39	9	39
D(2) / D(10) / D(18) / D(26)	10	40	10	40
RABF•(4)	11	41	11	41
RABF•(5)	12	42	12	42
D(3) / D(11) / D(19) / D(27)	13	43	13	43
RABF•(6)	14	44	14	44
RABF•(7)	15	45	15	45
D(4) / D(12) / D(20) / D(28)	16	46	16	46
RABF•(8)	17	47	17	47
RABF•(9)	18	48	18	48
RABF•(10)	19	49	19	49
D(5) / D(13) / D(21) / D(29)	20	50	20	50
RAMRWBF	21	51	21	51
	22	52	22	52
D(6) / D(14) / D(22) / D(30)	23	53	23	53
RABF•(11)	24	54	24	54
D(7) / D(15) / D(23) / D(31)	25	55	25	55
	26	56	26	56
RRASB0• / RRASB1•	27	57	27	57
+5V PU	28	58	28	58
	29	59	29	59
	30	60	30	60

(2) RABF•(0:11)
(4,6,8,9,11) PU

DRAWING NUMBER 050-0245-A SHT 3/12

Apple Computer, Inc. | SIZE D | DRAWING NUMBER 050-0245-A | SCALE ——— | SHT 3 OF 12

RTC, ADB, SOFTPOWER, OP SYSTEM SUPPORT

VIA1

UK6 65C22

A(0:31)	A(9)	42	RS0	PA0	2 V1PA0
	A(10)	41	RS1	PA1	3 V1PA1
	A(11)	40	RS2	PA2	4 V1PA2
	A(12)	39	RS3	PA3	5 SYNC
				PA4	6 OVERLAY
D(0:31)	D(24)	36	D0	PA5	7 HDSEL
	D(25)	35	D1	PA6	8 ROMSENSE
	D(26)	34	D2	PA7	9 SCCWREQ•
	D(27)	32	D3		
	D(28)	31	D4	PB0	10 RTC-D
	D(29)	30	D5	PB1	12 RTC-CK
	D(30)	29	D6	PB2	13 RTC-CS•
	D(31)	28	D7	PB3	14 ADB-INT•
				PB4	15 ADB-ST0
R/W•	R/W•	24	R/W	PB5	16 ADB-ST1
E	E	27	PH0	PB6	17 V1PB6
PU	PU	26	CS1	PB7	18 V1PB7
VIA1CS•	VIA1CS•	25	CS0		
RESET•	RESET•	37	RESET	IRQ	23 VIAIRQ1•
VBLK•	VBLK•	44	CA1		
ADB-SCLK	RTC-1HZ	43	CA2		
ADB-DIO	ADB-SCLK	19	CB1		
	ADB-DIO	20	CB2		

VIA2

UH6 65C22

	A(9)	42	RS0	PA0	2 IRQ•(1)
	A(10)	41	RS1	PA1	3 IRQ•(2)
	A(11)	40	RS2	PA2	4 IRQ•(3)
	A(12)	39	RS3	PA3	5 IRQ•(4)
				PA4	6 IRQ•(5)
	D(24)	36	D0	PA5	7 IRQ•(6)
	D(25)	35	D1	PA6	8 RAMSIZ(0)
	D(26)	34	D2	PA7	9 RAMSIZ(1)
	D(27)	32	D3		
	D(28)	31	D4	PB0	10 CDIS•
	D(29)	30	D5	PB1	12 BUSLOCK•
	D(30)	29	D6	PB2	13 POWEROFF•
	D(31)	28	D7	PB3	14 V2PB3
				PB4	15 TM1A•
R/W•	R/W•	24	R/W	PB5	16 TM0A•
E	E	27	PH0	PB6	17 SNDEXT•
PU	PU	25	CS1	PB7	18 VBLK•
VIA2CS•	VIA2CS•	25	CS0		
RESET•	RESET•	37	RESET	IRQ	23 VIAIRQ2•
SLOTIRQ•	SLOTIRQ•	44	CA1		
SCSIDRQ	SCSIDRQ	43	CA2		
SNDINT•	SNDINT•	19	CB1		
SCSIIRQ	SCSIIRQ	20	CB2		

3 MORE NUBUS INTERRUPTS

UM5 RTC

	2	XTL0	VCC 8 +5V-RTC
	3	XTL1	
RTC-D	6	D	1HZ 1 RTC-1HZ
RTC-CK	7	SK	
RTC-CS•	5	CS	
	4	GND	

Y4 32.768K; C118 33pF; C116 10pF

UL6 ADB

ADB-DIO	14	DIO	P0	11	
C3M	26	CLK	P1	12	
ADB-SCLK	13	SCLK	P5	17	
ADB-ST0	27	ST0	P6	18	
ADB-ST1	28	ST1	P7	19	
ADB-INT•	16	INT	FDBI	3	ADBIO
RESET•	4	RST	FDBO	2	
			FDBO	1	ADBO•

+5V; D8 1N914; R37 4.7K; D9 1N914; BT1 3V,1/2AA LITH BAT; C112 0.1

R38 470; F1 1AMP; ZF1 1AMP; R45 27; D1 TRANSZORB; R39 4.7K; Q4 2N3904; D2 TRANSZORB

L1 LNET: ADBF, +5V-ADB, GND-ADBF, PWRON•; ADBIO; POWERON•

J2, J4: GND-ADBF, PWRON•, +5V-ADB, ADBF

C30 0.01; C23 0.01

R44 15K; S3 DPDT SWITCH MOMENTARY ACTION; C8 47

R43 100; R42 100K; R30 100K; UM2 74HC132; R27 4.7K; Q2 2N3906; D7 1N914; R28 220; C16 10; C9 47

R41 15K; R26 15K; R29 27; Q3 2N3904; R34 4.7K; R31 100K; D6 1N914; D5 1N914; D4 1N914

UK2 74HC132; UL2 74HC74; POWEROFF; C15 10; C10 47

W2: IRQ•(4), IRQ•(5), IRQ•(6)

ADBO• (12); POWERON• (12); ON• (12); +5V-TRKL (11); PFW (12); PFW• (7,11); OFF (12); FEEDBACK• (12); ENABLEOFF (12); OFF• (12); ONDELAY (12)

(8,12) SCCWREQ•; (11,12) ROMSENSE; (9,12) HDSEL; (3,12) OVERLAY; (3,8,12) SYNC; (11) V1PA2; (11) V1PA1; (11) V1PA0

(1,3,5,6,8-11) A(0:31); (1-3,6,8-10) D(0:31); (1,3,5,10,11) R/W•; (3,12) E; (3,6,8,9,11) PU; (3,12) VIA1CS•; (1,5,7,9-12) RESET•; (12) VBLK•; (12) ADB-SCLK; (12) ADB-DIO

(3,11,12) VIAIRQ1•; (12) V1PB7; (12) V1PB6; (12) ADB-ST1; (12) ADB-ST0; (12) ADB-INT•; (3,8,12) C3M; (12) PWR-RST•; (3,7,12) IRQ•(1:6)

(3,12) VIA2CS•; (3,12) SLOTIRQ•; (3,9,12) SCSIDRQ; (10,12) SNDINT•; (9,12) SCSIIRQ; (3,11,12) VIAIRQ2•; (10) SNDEXT•; (5,12) TM0A•; (5,12) TM1A•; (12) V2PB3; (12) POWEROFF•; (5,12) BUSLOCK•; (1) CDIS•; (3,12) RAMSIZ(0:1)

Apple Computer, Inc. SIZE D DRAWING NUMBER 050-0245-A SCALE —— SHT 4 OF 12

DRAWING NUMBER 050-0245-A SHT 4/12

NUBUS CONTROL LOGIC

(12) PD13
(3,12) C16G
(12) PD11
(12) PD14
(12) C32M
(3,12) NUBUS•
(1,3,9,11,12) AS•
(1,3,11) DS•
(1,3,11) BERR•
(1,3,11) HALT•
(1,11) RMC•
(1,11) R/W•
(1,3,4,10,11) DSACK•(0:1)
(1,3,11)
(1,3) SIZ(0:1)
(1,11) LAS•
(1) LBR•
(6,12) LBPU
(1) LBG•
(1) LBGACK•
(11,12) MBGACK•
(11,12) PBR•
(1,4,7,9-12) RESET•
(11,12) TESTNU•
(11,12) TESTOENU•
(3) C32MF
(1,3,11) FC(0:2)
(1-4,6,8-11) A(0:31)
(4,12) BUSLOCK•
(6,7) START•
(6,7) ACK•
(6,7) TM•(0)
(6,7) TM•(1)

+5V
Y3 40.0M
Y2 31.3344M
C88 0.01
C89 0.01
R22 68
R25 220
R23 220
R24 47
R21 47

UG11 74F240
UG11 74F240
UG8 NUCHIP

UF11 74AS374
R19 47
R20 220
C16MF (1,9,10)
C40M (12)
CLK• (6,7)

UA7 74F240
RQST• (6,7)
UA7 74F240
ARB•(0:3) (6,7)
UA7 74F240
UF7 74F240
UF7 74F240

NBAGAB (6,12)
NBAGAB2 (6,12)
NBAGBA• (6,12)
NBASAB2 (6,12)
NBACK (6,12)
NBDGAB (6,12)
NBDGBA• (6,12)
NBDSAB (6,12)
NBDSBA (6,12)
NBDCKA (6,12)
NBDCKB (6,12)
ARB0IN (12)
ARB1IN (12)
ARB2IN (12)
RQSTIN (12)
STARTIN (12)
ACKIN (12)
TM0IN (12)
TM1IN (12)
CN10M (12)
TM0A• (4,12)
TM1A• (4,12)
RQSTOE (12)
RQST (12)
CNTLOE (12)
START (12)
ACK (12)
TM0 (12)
TM1 (12)
SA(0:31) (6,12)

050-0245-A SHT 5/12

Apple Computer, Inc.
SIZE D
DRAWING NUMBER 050-0245-A
SCALE —
SHT 5 OF 12

NUBUS ADDRESS & DATA BUFFERS

(7) AD•(0:31)
(5,12) NBDGBA•
(5,12) NBDGAB
(5,12) NBDCKB
(5,12) NBDSBA
(5,12) NBDCKA
(5,12) NBDSAB

(5,12) NBAGBA•
(5,12) NBAGAB2
(5,12) NBACK
(5,12) NBASAB2
(5,12) NBAGAB
(3,4,8,9,11) PV

(1-5,8-11) A(0:31)
(5,12) SA(0:31)
(1-4,8-10) D(0:31)

UC9 / UD9 — 74ALS651

	NBAGBA•	NBAGAB2	NBACK	NBASAB2	AD•(24)	AD•(25)	AD•(26)	AD•(27)	AD•(28)	AD•(29)	AD•(30)	AD•(31)
	21	3	1	2	4	5	6	7	8	9	10	11
	GBA	GAB	CBA	SBA	CAB	SAB	A1	A2	A3	A4	A5	A6	A7	A8
	23	22										
	B1	B2	B3	B4	B5	B6	B7	B8				
	20	19	18	17	16	15	14	13				
UC9	SA(24)	SA(25)	SA(26)	SA(27)	SA(28)	SA(29)	SA(30)	SA(31)				
UD9	D(0)	D(1)	D(2)	D(3)	D(4)	D(5)	D(6)	D(7)				

UC10 / UD10 — 74ALS651

	NBAGBA•	NBAGAB	NBACK	PV	AD•(17)	AD•(16)	AD•(19)	AD•(18)	AD•(21)	AD•(20)	AD•(23)	AD•(22)
	21	3	1	2	4	5	6	7	8	9	10	11
	GBA	GAB	CBA	SBA	CAB	SAB	A1	A2	A3	A4	A5	A6	A7	A8
	23	22										
	B1	B2	B3	B4	B5	B6	B7	B8				
	20	19	18	17	16	15	14	13				
UC10	A(17)	A(16)	A(19)	A(18)	A(21)	A(20)	SA(23)	A(22)				
UD10	D(9)	D(8)	D(11)	D(10)	D(13)	D(12)	D(15)	D(14)				

UC12 / UD12 — 74ALS651

	NBAGBA•	NBAGAB	NBACK	PV	AD•(9)	AD•(11)	AD•(8)	AD•(13)	AD•(10)	AD•(15)	AD•(12)	AD•(14)
	21	3	1	2	4	5	6	7	8	9	10	11
	GBA	GAB	CBA	SBA	CAB	SAB	A1	A2	A3	A4	A5	A6	A7	A8
	23	22										
	B1	B2	B3	B4	B5	B6	B7	B8				
	20	19	18	17	16	15	14	13				
UC12	A(9)	A(11)	A(8)	A(13)	A(10)	A(15)	A(12)	A(14)				
UD12	D(17)	D(19)	D(16)	D(21)	D(18)	D(23)	D(20)	D(22)				

UC13 / UD13 — 74ALS651

	NBAGBA•	NBAGAB	NBACK	PV	AD•(1)	AD•(3)	AD•(5)	AD•(0)	AD•(7)	AD•(2)	AD•(4)	AD•(6)
	21	3	1	2	4	5	6	7	8	9	10	11
	GBA	GAB	CBA	SBA	CAB	SAB	A1	A2	A3	A4	A5	A6	A7	A8
	23	22										
	B1	B2	B3	B4	B5	B6	B7	B8				
	20	19	18	17	16	15	14	13				
UC13	SA(1)	A(3)	A(5)	SA(0)	A(7)	A(2)	A(4)	A(6)				
UD13	D(25)	D(27)	D(29)	D(24)	D(31)	D(26)	D(28)	D(30)				

RP2 — RPAK 270/470

+5V

	AD•(24)	AD•(26)	ACK•	SP•	SPV•	START•
	2	4	5	6	7	9
	AD•(25)	AD•(27)	AD•(29)	AD•(31)	AD•(28)	AD•(30)	START•
	15	14	13	12	11	10	9

START• (5,7)
SPV• (7)
SP• (7)
ACK• (5,7)

RP3 — RPAK 270/470

+5V

	AD•(12)	AD•(13)	AD•(15)	AD•(14)	AD•(17)	AD•(16)
	2	3	4	5	6	7
	AD•(18)	AD•(19)	AD•(21)	AD•(20)	AD•(22)	AD•(23)
	15	14	13	12	11	10

+5V
R2 120
CLK• (5,7)
C17 47pF
R1 68

RP4 — RPAK 270/470

+5V

	TM•(1)	AD•(0)	AD•(1)	AD•(2)	AD•(4)	AD•(6)	AD•(8)	TM•(0)
	1	2	3	4	5	6	7	9
	AD•(3)	AD•(5)	AD•(7)	AD•(9)	AD•(11)	AD•(10)
	15	14	13	12	11	10

TM•(1) (5,7)
TM•(0) (5,7)

PWMPU (9)
RQST• (5,7)
LBPU (5,12)

RP1 — 200

+5V

	LBPU	RQST•	PWMPU
	3	4	5
	ARB•(1)	ARB•(0)	ARB•(3)	ARB•(2)	030PU	MMUDIS•PU
	15	14	13	12	11	10

ARB•(0:3) (5,7)
030PU (1)
MMUDIS•PU (1)

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NUBUS SLOTS

(5,6) CLK•
(5,6) START•
(5,6) ARB•(0:3)
(4,11) PFW•
(6) AD•(0:31)
(5,6) TM•(0:1)
(1,4,5,9-12) RESET•
(6) SPV•
(6) SP•
(5,6) ACK•
(5,6) RQST•
(3,4,12) IRQ•(1:6)

SLOT 1

+5V
J1 (A B C)
-12V
SPV•
SP•
TM•(1)
AD•(1)
AD•(3)
AD•(5)
AD•(7)
AD•(9)
AD•(11)
AD•(13)
AD•(15)
AD•(17)
AD•(19)
AD•(21)
AD•(23)
AD•(25)
AD•(27)
AD•(29)
AD•(31)
ARB•(1)
ARB•(3)
ACK•
RQST•
IRQ•(1)
+12V
-5.2V

RESET•
TM•(0)
AD•(0)
AD•(2)
AD•(4)
AD•(6)
AD•(8)
AD•(10)
AD•(12)
AD•(14)
AD•(16)
AD•(18)
AD•(20)
AD•(22)
AD•(24)
AD•(26)
AD•(28)
AD•(30)
PFW•
ARB•(0)
ARB•(2)
START•
CLK•

SLOT 2

+5V
J3 (A B C)
-12V
SPV•
SP•
TM•(1)
AD•(1)
AD•(3)
AD•(5)
AD•(7)
AD•(9)
AD•(11)
AD•(13)
AD•(15)
AD•(17)
AD•(19)
AD•(21)
AD•(23)
AD•(25)
AD•(27)
AD•(29)
AD•(31)
ARB•(1)
ARB•(3)
ACK•
RQST•
IRQ•(2)
+12V
-5.2V

RESET•
TM•(0)
AD•(0)
AD•(2)
AD•(4)
AD•(6)
AD•(8)
AD•(10)
AD•(12)
AD•(14)
AD•(16)
AD•(18)
AD•(20)
AD•(22)
AD•(24)
AD•(26)
AD•(28)
AD•(30)
PFW•
ARB•(0)
ARB•(2)
START•
CLK•

SLOT 3

+5V
J6 (A B C)
-12V
SPV•
SP•
TM•(1)
AD•(1)
AD•(3)
AD•(5)
AD•(7)
AD•(9)
AD•(11)
AD•(13)
AD•(15)
AD•(17)
AD•(19)
AD•(21)
AD•(23)
AD•(25)
AD•(27)
AD•(29)
AD•(31)
ARB•(1)
ARB•(3)
ACK•
RQST•
IRQ•(3)
+12V
-5.2V

RESET•
TM•(0)
AD•(0)
AD•(2)
AD•(4)
AD•(6)
AD•(8)
AD•(10)
AD•(12)
AD•(14)
AD•(16)
AD•(18)
AD•(20)
AD•(22)
AD•(24)
AD•(26)
AD•(28)
AD•(30)
PFW•
ARB•(0)
ARB•(2)
START•
CLK•

(NOTE: -5.2 PINS ARE SHORTED TOGETHER, BUT -5.2 IS NOT SUPPLIED TO THEM.)

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SERIAL INTERFACE

UF14 26LS30
UF13 8530
UE15 75175
UD15 75175
UF15 26LS30
RP8 RCNET
RP6 RCNET
J8
J10
C69 0.01
R17 4.7K
-5V

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SWIM and SCSI INTERFACE

(1-4,6,8,10) D(0:31)
(1-6,8,10,11) A(0:31)
(3,12) SCSI•
(3,12) IOR•
(3,12) IOW•
(1,4,5,7,10-12) RESET•
(4,12) SCSIIRQ
(3,4,6,8,11) PU
(3,4,12) SCSIDRQ
(3,12) SCSIDACK•
(2,12) WR•
(3,12) SWIM•
(1,3,5,11,12) AS•
(1,5,10) C16MF
(4,12) HDSEL
(6) PWMPU
(2) WR

+5V
D3 1N4001
F2 1AMP
ZF2 1AMP
C95 0.01
+5-TERM (12)

UJ15 53C80
VDD 23
D(31:24) → D7 D6 D5 D4 D3 D2 D1 D0
A(6:4) → A2 A1 A0
SCSI• 17 CS
IOR• 19 IOR
IOW• 18 IOW
RESET• 7 RESET
SCSIIRQ 8 IRQ
PU 10 EOP
13 READY
SCSIDRQ 9 DRQ
SCSIDACK• 11 DACK
3 G1
G2 G3 G4 G5 42 36 12 31

DB0 37 DB0•
DB1 38 DB1•
DB2 39 DB2•
DB3 40 DB3•
DB4 41 DB4•
DB5 43 DB5•
DB6 44 DB6•
DB7 1 DB7•
DBP 35 DBP•
ATN 6 ATN•
BSY 4 BSY•
ACK 33 ACK5•
RST 2 RST•
MSG 29 MSG•
SEL 5 SEL•
C/D 30 C/D•
REQ 34 REQ•
I/O 32 I/O•

J18 SCSI

DB0•	2	1	
DB1•	4	3	
DB2•	6	5	
DB3•	8	7	
DB4•	10	9	
DB5•	12	11	
DB6•	14	13	
DB7•	16	15	
DBP•	18	17	
	20	19	
	22	21	
	24	23	
+5-TERM	26	25	
	28	27	
	30	29	
ATN•	32	31	
	34	33	
BSY•	36	35	
ACK5•	38	37	
RST•	40	39	
MSG•	42	41	
SEL•	44	43	
C/D•	46	45	
REQ•	48	47	
I/O•	50	49	

VL14 SWIM

RESET•	25	RESET	
	43	DEV	
A(9)	37	A0	
A(10)	40	A1	
A(11)	41	A2	
A(12)	42	A3	
D(24)	4	D0	
D(25)	5	D1	
D(26)	8	D2	
D(27)	9	D3	
D(28)	13	D4	
D(29)	14	D5	
D(30)	15	D6	
D(31)	18	D7	
AS•	27	Q3	
C16MF	26	PCLK	
	33	DAT1BYTE	
	10	MOTOEN	
WR•	2	WRDATA	
ENBL1•	20	ENBL1	
ENBL2•	19	ENBL2	
WRREQ•	3	WRREQ	
RDSEN	24	RDDATA	
	21	SENSE	
PH(0)	35	PH0	
PH(1)	32	PH1	
PH(2)	36	PH2	
PH(3)	31	PH3	
	16	3.5SEL	
	38	HEDSEL	

J16 RIBBON CONNECTOR

PH(0)	2	1	GND-DSK
PH(1)	4	3	
PH(2)	6	5	
PH(3)	8	7	
WRREQ•	10	9	
HDSEL	12	11	+5V-DSK
ENBL1•	14	13	+12V-DSK
RDSEN	16	15	
WRB	18	17	
PWMPU	20	19	

RP13 47

PH(0)	1	16	EDPH(0)
PH(1)	2	15	EDPH(1)
PH(2)	3	14	EDPH(2)
PH(3)	4	13	EDPH(3)
WRREQ•	5	12	EDWRREQ•
HDSEL	6	11	EDHDSEL
ENBL2•	7	10	EDENBL2•
RDSEN	8	9	EDRDSEN

C121 0.01
L11 FERRITE BEAD
+12V
C122 0.01
L10 FERRITE BEAD
ZF3 1AMP
F3 1AMP
C124 0.01
C123 0.01
L12 FERRITE BEAD
L9 FERRITE BEAD
R18 47

J20 DB-19

	20	
EDPH(0)	1	11
EDPH(1)	2	12
EDPH(2)	3	13
EDPH(3)	4	14
	5	15
EDWRREQ•	6	15
+5V-DSK	7	16
EDHDSEL	8	17
+12V-DSK	9	18
EDENBL2•	10	19
EDRDSEN	21	
WRB		
PWMPU		

-12V

J15 DB-25

	26	
REQ•	1	14
MSG•	2	15
C/D•	3	16
I/O•	4	17
RST•	5	18
ATN•	6	19
ACK5•	7	20
BSY•	8	21
SEL•	9	22
DBP•	10	23
DB0•	11	24
DB1•	12	25
DB2•	13	27
DB3•		
DB4•		
DB5•		
DB6•		
+5-TERM		
DB7•		

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SOUND INTERFACE

+12V
L4 FERRITE BEAD
R11 10
R10 10
C6 470uF
C38 0.1

UB15 SONY SOUND
AMP12V
+12V
LPF12V
SV0
SV1
SV2
SV3
VSENSE
TEST
PWM
AGND
CMNGND
RESET
TC
SOUND
VREF

(12) +12-SND
(12) +12V-L
(12) SV0
(12) SV1
(12) SV2
(12) SENSE
(12) TESTA
(12) PWMA
R16 330K

SND-L-A/D (12)
SND-L-DC (12)
SND-VREF (12)
C3 1.0
C2 47
R3 2.2
R6 180
R5 47
L2 FERRITE BEAD
L3 FERRITE BEAD
C36 0.001

J7 SPEAKER JACK
SND-SPKR

J5 STEREO PHONO JACK
AGND
RIGHT
LEFT
SND-R-ACF
SND-L-ACF
SND-SPKR
SNDEXT•

(12) +12V-R
(12) TESTB
(12) PWMB
(12) F-CLOCK
(4,12) SNDINT•

+5V
C31 0.01
UD14 DSC
+5A
AGND
INT
PWMA
PWMB
ANALOGA
ANALOGB
SV0
SV1
SV2
FILTERCLK
ATEST
XTALIN
XTALOUT
REFA
REFB
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
CS
R/W
C16M
RESET•

(1-4,6,8,9) D(0:31) D(24) D(25) D(26) D(27) D(28) D(29) D(30) D(31)
(1-6,8,9,11) A(0:31) A(0) A(1) A(2) A(3) A(4) A(5) A(6) A(7) A(8) A(9) A(10) A(11)
(3,12) SND•
(1,3-5,11) R/W•
(1,5,9) C16MF
(1,4,5,7,9,11,12) RESET•

C63 33pF
Y1 16.9344M
C64 33pF

R7 330K
R9 27
S1 RESET (NORMALLY OPEN)
R8 100
C37 0.1

UA15 SONY SOUND
AMP12V
+12V
LPF12V
SV0
SV1
SV2
SV3
VSENSE
TEST
PWM
AGND
CMNGND
RESET
TC
SOUND
VREF

TEST• (3,11,12)
SND-R-A/D (12)
SND-R-DC (12)
SNDEXT• (4)

C5 47
C28 0.1
C1 47
R15 180
L7 FERRITE BEAD
L8 FERRITE BEAD
R14 47
C41 0.001

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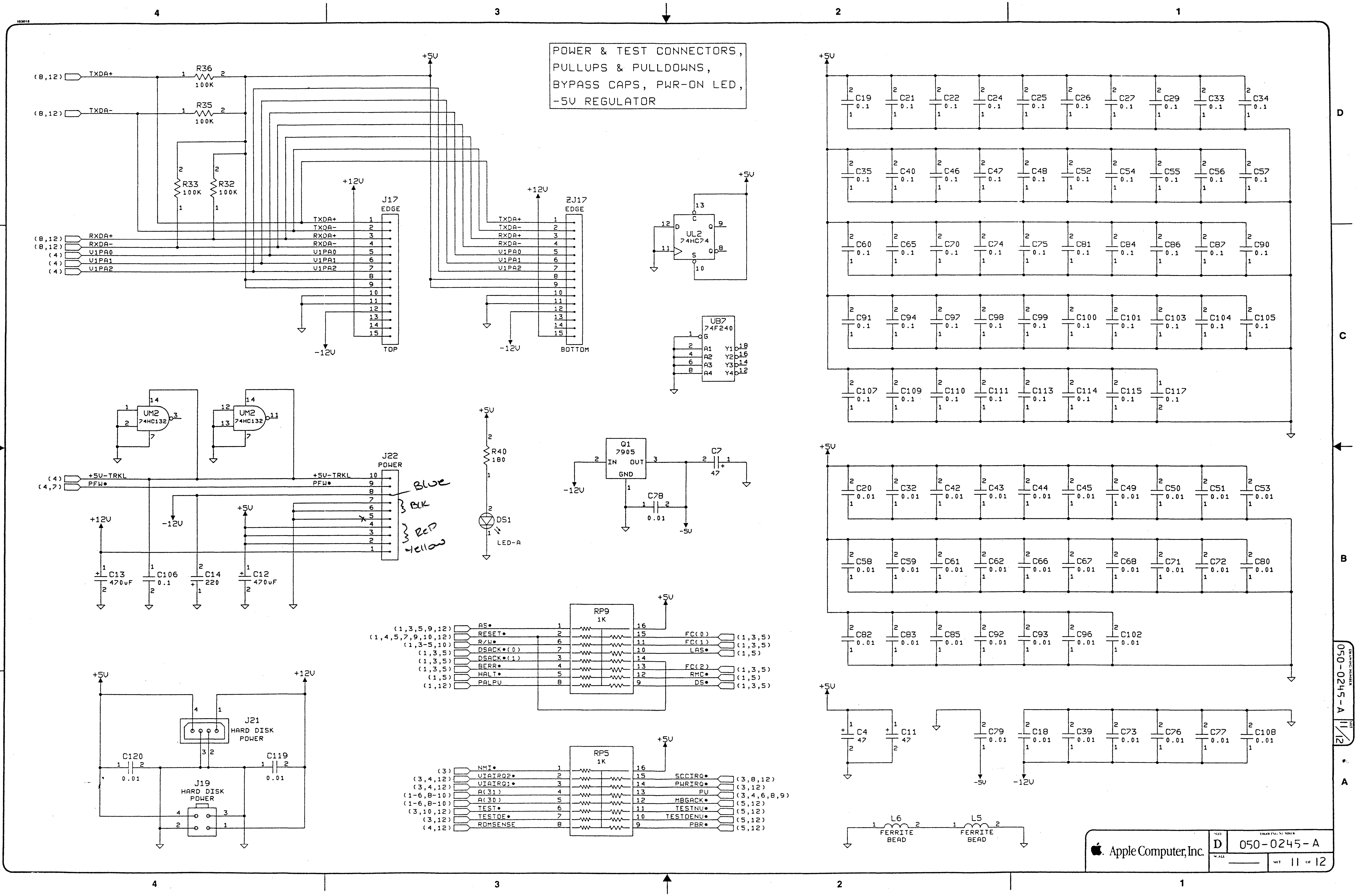
POWER & TEST CONNECTORS,
PULLUPS & PULLDOWNS,
BYPASS CAPS, PWR-ON LED,
-5V REGULATOR
J17 EDGE TOP
ZJ17 EDGE BOTTOM
TXDA+
TXDA-
RXDA+
RXDA-
V1PA0
V1PA1
V1PA2
R36 100K
R35 100K
R33 100K
R32 100K
UL2 74HC74
UB7 74F240
UM2 74HC132
J22 POWER
+5V-TRKL
PFW•
Blue
BLK
RED
Yellow
C13 470uF
C106 0.1
C14 220
C12 470uF
R40 180
DS1 LED-A
Q1 7905
C7 47
C78 0.01
J21 HARD DISK POWER
J19 HARD DISK POWER
C120 0.01
C119 0.01
RP9 1K
AS•
RESET•
R/W•
DSACK•(0)
DSACK•(1)
BERR•
HALT•
PALPU
FC(0)
FC(1)
LAS•
FC(2)
RMC•
DS•
RP5 1K
NMI•
VIAIRQ2•
VIAIRQ1•
A(31)
A(30)
TEST•
TESTOE•
ROMSENSE
SCCIRQ•
PWRIRQ•
PU
MBGACK•
TESTNU•
TESTOENU•
PBR•
L6 FERRITE BEAD
L5 FERRITE BEAD
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TEST POINTS, REFERENCE DESIGNATOR CHART, AND PCB ONLY PADS & HOLES

(4) ADBD•	T04H28	
(4) PFW	T02H28	
(4) OFF•	T02H20	
(4) ONDELAY	T02H18	
(4) ON•	T02H25	
(4) OFF	T02H19	
(2) RCMUX•	T02H17	
(4) FEEDBACK•	T02H16	
(4) POWEROFF•	T02H22	
(4) POWERON•	T02H14	
(4) ENABLEOFF	T02H21	
(4) PWR-RST•	T02H24	
(3,5) C16G	T13J03	
(10) F-CLOCK	T14D01	
(5) C40M	T12G01	
(5) C32M	T11G01	
(8) WS	T16C19	
(8) HSKIAF	T16C18	
(8) HSKOAF	T16C10	
(8) GPIAF	T16C14	
(8) HSKIBF	T16C06	
(8) HSKOBF	T16C04	
(8) GPIBF	T16C05	
(5,11) PBR•	T13D37	
(5) PD11	T15C29	
(5) PD13	T15C26	
(5) PD14	T15C30	
(1,11) PALPU	T16C24	
(9) +5-TERM	T16C47	
(5,6) NBAGAB	T13C07	
(5,6) NBAGAB2	T13C21	
(5,6) NBAGBA•	T13C22	
(5,6) NBASAB2	T13C20	
(5,6) NBACK	T13C12	
(5,6) NBDGAB	T13D08	
(5,6) NBDGBA•	T13D15	
(5,6) NBDSAB	T13D06	
(5,6) NBDSBA	T13D07	
(5,6) NBDCKA	T13C19	
(5,6) NBDCKB	T13D14	
(5) ACK	T13D16	
(5) ACKIN	T08G20	
(5,11) TESTNU•	T13D27	
(5,11) TESTOENU•	T07F08	
(5,11) MRGACK•	T08F24	
(5,6) LBPU	T08F23	

(5) ARB0IN	T13C35	
(5) ARB1IN	T13C33	
(5) ARB2IN	T13C28	
(5) RQSTIN	T13D11	
(5) START	T06G01	
(5) STARTIN	T07F02	
(5) TM0IN	T08G12	
(5) TM0	T13D12	
(5) TM1IN	T08F20	
(5) TM1	T08G18	
(5) RQST	T13D34	
(5) RQSTOE	T13D36	
(5) CNTLOE	T08G15	
(2,9) WR•	T07F01	
(5) CN10M	T08F01	
(8) RXDA	T15C23	
(8) TXDA	T16C22	
(8) CTSA•	T16C23	
(8) RTSA•	T16C17	
(8) DTRA•	T15C20	
(8) DCDA•	T15C14	
(8) RXDB	T15C22	
(8) TXDB	T15C19	
(8) CTSB•	T15C21	
(8) RTSB•	T15C18	
(8) DCDB•	T16C16	
(8) DTRB•	T16C21	
(3,11) PWRIRQ•	T15C60	
(3,8,11) SCCIRQ•	T16C56	
(3,4,11) VIAIRQ1•	T16C55	
(3,4,11) VIAIRQ2•	T15C55	
(3) CASLL	T16C64	
(1,3) CASLM	T15C62	
(3) CASUM	T15C54	
(3) CASUU	T15C65	
(2,3) RCMUX	T16C60	
(1,3,5,9,11) AS•	T16C58	
(1,3) RASA	T15C61	
(1,3) RASB	T16C57	
(3,8) SYNC3M	T15C24	
(3,4,8) C3M	T13J01	
(3,4) E	T12K01	
(1,3) FPU•	T15C45	
(3,9) IOR•	T15C43	
(3,9) IOW•	T15C42	
(3,5) NUBUS•	T15C37	

(3,8) SCCEN•	T15C32	
(3,8) SCCRD•	T16C28	
(3,8) SCCWR•	T15C31	
(3,9) SCSIDACK•	T16C40	
(3,9) SCSI•	T16C41	
(3,10) SND•	T16C09	
(3,9) SWIM•	T15C52	
(3,4) VIA2CS•	T15C68	
(3,4) VIA1CS•	T16C54	
(3,11) TESTOE•	T15C34	
(8,11) RXDA+	T16C03	
(8,11) RXDA-	T15C03	
(8,11) TXDA+	T16C12	
(8,11) TXDA-	T16C13	
(8) HSKIA	T15C13	
(8) HSKOA	T16C15	
(8) GPIA	T15C09	
(8) RXDB+	T15C07	
(8) RXDB-	T15C08	
(8) TXDB+	T15C02	
(8) TXDB-	T16C01	
(8) HSKIB	T15C06	
(8) HSKOB	T16C08	
(8) GPIB	T16C07	
(3,4,7) IRQ•(4)	T04H12	
(3,4,7) IRQ•(5)	T04H11	
(3,4,7) IRQ•(6)	T04H10	
(3,4) RAMSIZ(0)	T04H09	
(3,4) RAMSIZ(1)	T04H07	
(4,5) BUSLOCK•	T04H06	
(4) V2PB3	T04H03	
(4,5) TM1B•	T04H02	
(4,5) TM0A•	T04H01	
(4) VBLK•	T04H23	
(3,4) SLOTIRQ•	T02H23	
(3,4,9) SCSIDRQ	T04H08	
(4,10) SNDINT•	T04H04	
(4,9) SCSIIRQ	T04H05	
(3,4,8) SYNC	T04H34	
(3,4) OVERLAY	T04H21	
(4,9) MDSEL	T04H20	
(4,11) ROMSENSE	T04H25	
(4,8) SCCWREQ•	T04H24	
(4) ADB-INT•	T04H29	
(4) ADB-ST0	T04H32	
(4) ADB-ST1	T04H30	

(4) V1PB6	T04H13	
(4) V1PB7	T04H14	
(4) ADB-SCLK	T04H26	
(4) ADB-DIO	T04H27	
(10) SV0	T15A02	
(10) SV1	T15A03	
(10) SV2	T15A04	
(3,10,11) TEST•	T15A05	
(1,4,5,7,9-11) RESET•	T15B05	
(10) SENSE	T15A06	
(10) SND-R-A/D	T15A07	
(10) SND-L-A/D	T15B07	
(10) SND-L-DC	T15B10	
(10) +12-SND	T15A11	
(10) SND-R-DC	T15A10	
(10) +12V-R	T15A13	
(10) +12V-L	T15B13	
(10) TESTB	T15A14	
(10) TESTA	T15B14	
(10) PWMB	T15A16	
(10) PWMA	T15B16	
(10) SND-VREF	T15A15	
	T15B15	

(5,6) SA(0:31)	SA(0)	T13D01
	SA(1)	T13D03
	SA(23)	T13C18
	SA(24)	T13D22
	SA(25)	T13C23
	SA(26)	T13D23
	SA(27)	T13C24
	SA(28)	T13D24
	SA(29)	T13D25
	SA(30)	T13D26
	SA(31)	T13C26

GND	T15A08	
	T15B08	
	T15A01	

FIDUCIALS

M1 TOP SIDE

M2 TOP SIDE

M3 BOTTOM SIDE

M4 BOTTOM SIDE

MOIRES

U50 U51 U52

TOOLING HOLES

ZT3 ZT4 ZT5 ZT6 ZT8 ZT9

ZT19 ZT20 ZT21 ZT22 ZT23 ZT24

MOUNTING HOLES (FOR STIFFENER)

ST1 ST2 ST3 ST4

ST5 ST6 ST7 ST8

VIAS (ON COLD GROUND)

ZT100 ZT101 ZT102 ZT103 ZT104 ZT105

ZT106 ZT107 ZT108 ZT109 ZT110 ZT111

REFERENCE DESIGNATIONS

LAST USED	NOT USED
BT1, C124, D9, DS1, F3, J22, L12, Q4, R45, RP13, S3, W3, Y4	

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