REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

LAST REFERENCE DESIGNATION USED	
INTEGRATED CIRCUIT	U71
CAPACITOR	C37
RESISTOR	R24
RESISTOR MODULE	RU2
TRANSISTOR	Q4
DIODE	CR5
CONNECTOR	J1
OSCILLATOR	Y1

REF. DESIG.	GATES USED PER TOTAL	PART NUMBER
U12	NOT USED	SPARE
U29	2 / 4	74S32

SIDE 2		SIDE 1	
+5V	A	BIRO5L	SOLDER SIDE
	B	BIRG6L	
GND	C	BDAL16L	
	D	BDAL17L	
BDOUTL	E		
BRPLYL	F		
BDINL	H		
BSYNCL	J		
BWTBTL	K		
BIRO4L	L		
BIAKIL	M		
BIAKOL	N	BDMRL	
BBS7L	P		
BDMGIL	R		
BDMGOL	S		
BINITL	T	GND	
BDALOL	U		
BDALIL	V		
+5V	A	BDCOKH	COMPONENT SIDE
	B	BPOKH	
GND	C		
	D		
BDAL2L	E		
BDAL3L	F		
BDAL4L	H		
BDAL5L	J		
BDAL6L	K		
BDAL7L	L		
BDAL8L	M		
BDAL9L	N	BSACKL	
BDAL10L	P	BIRG7L	
BDAL11L	R		
BDAL12L	S		
BDAL13L	T	GND	
BDAL14L	U		
BDAL15L	V		

CONNECTOR A

CONNECTOR B

J1

1	2	1643
3	4	
5	6	
7	8	
9	10	TWO SIDED
11	12	
13	14	SIDE SEL
15	16	
17	18	HEAD LOAD
19	20	INDEX
21	22	READY
23	24	
25	26	DRV SEL 1
27	28	DRV SEL 2
29	30	
31	32	
33	34	DIR
35	36	STEP
37	38	WRITE DATA
39	40	WRITE GATE
41	42	TRACK Ø
43	44	WRT PROT
45	46	RAW
47	48	
49	50	

PRIORITY LEVEL CONFIGURATION

PRIORITY LEVEL	ASSERT LEVEL	MONITOR LEVEL	JUMPER 34/35	34/33	40/41	39/40	31/32	31/30	43/42	43/44	37/38	37/36
4 *	4	5,6	OUT	IN	OUT	IN	IN	OUT	OUT	IN	IN	OUT
5	4,5	6	OUT	IN	IN	OUT	IN	OUT	OUT	IN	OUT	IN
6	4,6	7	IN	OUT	OUT	IN	OUT	IN	IN	OUT	IN	OUT
7	4,6,7	NONE	IN	OUT	IN	OUT	OUT	IN	IN	OUT	OUT	IN

* FACTORY PRESET

ADDRESS	STANDARD	ALTERNATE
DEVICE	177170	177174
VECTOR	264	270

MISCELLANEOUS OPTIONS

OPTION	JUMPERS: DRIVE SELECT 3/2	1/2	SIDE SELECT 6/7	6/5	6/8	WIRE CURRENT 9/10	BOOTSTRAP 26/25	26/27	WRITE PRECOMP 18/19	18/17	FACTORY TEST 15/16	13/14	20/21	11/12	DEVICE READY 47/49	49/48	22 BIT ADDRESS 45/46
BOOTSTRAP ENABLED							IN	OUT			MUST ALWAYS BE OUT	DO NOT REMOVE - FOR TEST ONLY	DO NOT REMOVE - FOR TEST ONLY	DO NOT REMOVE - FOR TEST ONLY			
BOOTSTRAP ** DISABLED							OUT	IN									
WRITE PRECOMP ** ENABLED									IN	OUT							
WRITE PRECOMP DISABLE									OUT	IN							
WRITE CURRENT CONTROL ENABLED						IN											
WRITE CURRENT ** CONTROL DISABLED						OUT											
SINGLE OR DOUBLE ** SIDED DRIVERS	OUT	IN	IN	OUT	OUT												
ONE DOUBLE SIDED DRIVE DRIVE 0 = SIDE 0 DRIVE 1 = SIDE 1	IN	IN	OUT	IN	OUT												
STANDARD READY															OUT	IN	
TRUE READY															IN	OUT	
ENABLE 22 BIT ADDRESSING																	OUT
DISABLE 22 BIT ADDRESSING																	IN

NEXT ASSY.	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
±1/64 .XX ±.020 ±0°30'
.XXX±.010

MATERIAL

FINISH

DO NOT SCALE DRAWING

DRAWN	G.O'Kinsey	12-29-82
CHECKED		
ENGINEER		
APPROVED		
APPROVED		

Sigma Information Systems Inc.

TITLE: SCHEMATIC DIAGRAM — SDC-RXV31, FLOPPY CONTROLLER

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC

SCALE NONE | WORK ORDER NO. | SHEET 1 OF 8

REV NC
SH 1
DWG NO SD400255

Q BUS INTERFACE

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

BDAL0 L (4/B-1) TDA0 — AU2 — U16 BUS2 — RDA0 (4/B8)
BDAL1 L (4/B-1) TDA1 — AV2 — U16 IN1 — RDA1 (3/C-8),(4/B-8)
BDAL2 L (4/B-1) TDA2 — BE2 — U16 BUS3 — RDA2 (3/D-8),(4/B-8)
BDAL3 L (4/B-1) TDA3 — BF2 — U16 BUS4 — RDA3 (3/D-8),(4/B-8)
U16: 8641

BDAL4 L (4/B-1) TDA4 — BH2 — U3 BUS2 — RDA4 (3/D8) (4/B8)
BDAL5 L (4/B-1) TDA5 — BJ2 — U3 IN1 — RDA5 (3/D8) (4/B8)
BDAL6 L (4/B-1) TDA6 — BK2 — U3 BUS3 — RDA6 (3/D8) (4/B8)
BDAL7 L (4/B-1) TDA7 — BL2 — U3 BUS4 — RDA7 (3/D8) (4/B8)
(3/D-1) INT ENB — U26 (7438) — U3 ENBA
(3/B-4) SELCSR — U26 (7438) — U3 ENBB
U3: 8641

BDAL8 L (4/B-1) TDA8 — BM2 — U14 BUS2 — RDA8 (3/C-8),(4/B-8)
BDAL9 L (4/B-1) TDA9 — BN2 — U14 IN2 — RDA9 (3/D-8),(4/B-8)
BDAL10 L (4/B-1) TDA10 — BP2 — U14 BUS3 — RDA10 (3/C-8),(4/B-8)
BDAL11 L (4/B-1) TDA11 — BR2 — U14 BUS4 — RDA11 (3/C-8),(4/B-8)
U14: 8641

BDAL12 L (4/A-1) TDA12 — BS2 — U1 BUS2 — RDA12 (3/C-8),(4/B-8)
BDAL13 L (4/A-1) TDA13 — BT2 — U1 IN2 — RDA13 (4/B-8)
BDAL14 L (4/A-1) TDA14 — BU2 — U1 IN3 — RDA14 (3/A-8),(4/A-8)
BDAL15 L (4/A-1) TDA15 — BV2 — U1 BUS4 — RDA15 (4/A-8)
(6/A-1) BUS ENB — 74S04 U36 — U1 ENBA
(6/A-1) TBS7-PRECOMP — U26 (7438) — U1 ENBB — BS7 (2/D-5)
U1: 8641

BDIN L (6/C-1) TDIN — AH2 — U11 BUS3 — RDIN (3/B-3,B-8),(6/C-8)
BDOUT L (6/C-1) TDOUT — AE2 — U11 IN3 — RDOUT (3/B-8),(6/C-8)
BSYNC L (6/C-1) TSYNC — AJ2 — U11 BUS2 — RSYNC (3/C-8),(6/C-8)
BRPLY L (3/C-5) TRPLY — AF2 — U11 IN2 — RRPLY (6/C-8)
U11: 8641

BINIT L — AT2 — U8 — RINIT (3/A-8)
(2/B-6) BS7 — U8 — RBS7
BBS7L — AP2 — U8
BDMGI L — AR2 — U8 — DMGI (3/C-3)
BIAKI L — AM2 — U8 — IAK1 (6/C-8)
R21 180, R18 390, +5V
R17 180, R16 390, +5V
U8: 8640

PU2

(6/C-1) DMR — U10 — AN1 BDMRL
TSACK — U10 — BN1 BSACK L
IRQ — U10 — AL2 BIRQ4 L
TWTBT — U10 — AK2 BWTBTL
U10: 7438

R23 390 — GND
R22 180 — +5V

(6/A-2) EN17L — U9 — AC1 BDALIG L
(4/C-1) A16 — U9
(4/C-1) A17 — U9 — AD1 BDALI7 L
(3/B-1) ENB DMGO — U9 — AS2 BDMGO L
(3/B-1) INT GRANT — U9 — AN2 BIAKO L
U9: 7438

R19 390 — GND
R20 180 — +5V

BDCOK H — BA1 — BDCOK H (8/A-8)
BPOK H — BB1
BIRQ5 L — AA1 — W44 W43 W42
BIRQ7 L — BP1 — W38 W37 W36
BIRQ6 L — AB1 — W32 W31 W30
U7: 8641 — $\overline{DCOK}$ (3/A-8); $\overline{POK}$ (3/A-8),(6/A-8)
W39 W40 W41 W33 W35 W34 — U20 (74S02) — INT PRIORITY (3/B3)

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 2 OF 8	

REV. NC — SH. 2 — DWG. NO. SD400255

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

Q BUS CONTROL

(2/D-6) RDA2, RDA3
(2/C-6) RDA4, RDA5, RDA6, RDA7, RDA9
(2/B-6) RDA11
(2/C-6) RDA8
(2/C-6) RDA10, RDA12
(2/C-1) RBS7
93427 U25 — A0 A1 A2 A3 A4 A5 A6 A7 CS1 CS2 — Q0 Q1 Q2 Q3
+5V
1K RU2
U18 74S10
PU2
74LS175 U27 — CLR A B C D CLK — QA QB QC QD
W22 W23 W24 W25 W26 W27
MATCH (6/A-8)
BOOT (6/A-8)
LA01 (6/A-8)
PU1
(2/D-6) RDA1
(2/A-6) RSYNC
(6/C-1) REPLY
U38 74S04
U30 74S00
TRPLY (2/A-8)
(6/C-1) LOG RPLY ENB
U30 74S00
U32 74S08
U18 74S10
(2/A-6) RDIN
(2/A-6) RDOUT
U19 74S86
U31 74S11
SEL CSR (2/C-8)
U31 74S11
STB CSR (3/D-3)
U30 74S00
(2/B-6) RDA14
(2/D-1) RINIT
U38 74S04
(2/B-1) DCOK
(2/B-1) POK
U19 74S86
U20 74S02
U19 74S86
INT (3/B-3,D-3),(4/C-2),(6/C3,C6)

PU1
(2/C-6) RDA6
(3/B-5) STBCSR
U48 74276
INT ENB (2/C-8),(6/C-8)
(3/A-5) INT

PU2
(6/C-1) DMR
U33 74S74
DMGRANT (6/C-8)
(2/D-1) DMGI
U19 74S86
R15 100Ω
C29 820pf
U32 74S08
ENB DMGO (2/A-4)

PU2
(6/C-1) IRQ
(2/B-1) INT PRIOR
U32 74S08
U33 74S74
INT GRANT (6/C-8)
(2/A-6) RDIN
INT GRANT (2/B-4)
(3/A-5) INT

REV. NC
SH 3
DWG NO 5D400255

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 3 OF 8	

FORM NO 002

MUP-8 BIT

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

(5/B-1) BR18
(5/C-1) BR14, BR15
(5/B-1) BR16, BR17
(5/C-1) BR10, BR11, BR12, BR13
(5/A-1) BR22, BR23, BR21
(5/B-1) IDO, ID1, ID2, ID3
PU2
(7/D-1) 6MHz
(6/D-1) WRTRAM, STBBA
(5/C-1) BR9
(5/A-1) SELBUS
(5/D-1) BR7, BR6, BR5, BR4, BR3, BR2, BR1, BRØ

U46 2901 RAM 3 Q3
U47 2901 RAM 3 Q3
U38 74S04
U29 74S32
U26 7438
RU2 +5V 1K
RU12 +5V 1K
U5 74LS174
U6 7438
BF1 BA21L
BE1 BA20L
BD1 BA19L
BC1 BA18L
A17
A16
(6/C-1) TSACK
(3/A-5) INT
U15 TMS4044
RAM DATA (6/A-8)
F=Ø (6/D-8)
7F (6/B-8),(8/C-8)
CARRY (6/B-8)

U13 74LS257
U12 74LS257
U17 74LS396
U4 74LS396
TDAØ, TDA1, TDA2, TDA3 (2/D-8)
TDA8, TDA9 (2/C-8)
TDA10, TDA11 (2/B-8)
TDA4, TDA5, TDA6, TDA7 (2/B-8)
TDA12, TDA13, TDA14, TDA15 (2/C-8)

(2/D-6) RDAØ
(2/C-6) RDA8
(2/D-6) RDA1
(2/C-6) RDA9
(2/D-6) RDA2
(2/B-6) RDA10
(2/D-6) RDA3
(2/B-6) RDA11
(2/C-6) RDA4
(2/B-6) RDA12
(2/C-6) RDA5
(2/B-6) RDA13
(2/C-6) RDA6
(2/B-6) RDA14
(2/C-6) RDA7
(2/B-6) RDA15

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		5D400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 4 OF 8	

DWG NO 5D400255 REV NC SH 4

FORM NO 002

CONTROL ROM & INSTRUCTION DECODE

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

(6/C-4) MA0 MA1 MA2 MA3
(6/B-4) MA4 MA5 MA6 MA7
(6/A-4) MA8 MA9
(6/A-4) MA10

82S185 U68 100013-105
82S185 U67 100013-104
82S185 U66 100013-103
82S185 U65 100013-102
82S185 U64 100013-101
82S185 U63 100013-100
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 P/E1 O1 O2 O3 O4
W14
W13

745374 U59
(7/D-1) 6MHz
D0 D1 D2 D3 D4 D5 D6 D7 CPI CS Y0 Y1 Y2 Y3 Y4 Y5 Y6 Y7
BR0 BR1 BR2 BR3 (4/A-8),(6/C-3)
BR4 BR5 (4/A-8),(6/C-2)
BR6 BR7 (4/A-8),(6/C-8)

R0 R1 R2 R3 (6/C-6)
R4 R5 R6 R7 (6/B-6)
R8 R9 (6/A-6)
R15 (6/D-8)

745374 U57
BR8 (6/C-8)
BR9 (4/B-8)
BR10 BR11 BR12 BR13 (4/D-8)
BR14 (4/D-8),(6/D-5)
BR15 (4/D-8)

745288 U37 Vcc GND +5V
A0 A1 A2 A3 A4 CS Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7
ID0 (4/D-8)
ID1 (4/C-8)
ID2 (4/C-8),(8/D-8)
ID3 (4/C-8),(8/D-8)
CC0 CC1 (6/D-3)
BS0 BS1 (6/D-5)

745374 U55
BR16 BR17 BR18 (4/D-8)
BR21 BR22 BR23 (4/D-8)

74S08 U32
74S04 U38
SEL BUS (4/B-8)

R17 R16 (6/D-8)

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 5 OF 8	

REV. NC
SH. 5
DWG NO. SD400255

FORM NO. 002

BRANCH MUX & MICRO SEQUENCER

CONTROL DECODE & CONTROL LATCH

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

+5V — R25 1K — W45 — W46

(7/D-1) 6MHz

(5/C-1) R15

(5/A-1) R16, R17

(4/C-1) F=Ø

(7/B-2) DATA FLG

(7/B-2) SEP DATA, SEP CLK

(2/D-2) IAKI — U18 — (3/B-1) INTGRANT — 74S10

74LS251 U42: A=7/D-1 6MHz; B=5/C-1 R15; C=5/A-1 R16, R17; D0=4/C-1 F=Ø; D1=7/B-2 DATA FLG; D2=7/B-2 SEP DATA; D3=7/B-2 SEP CLK; D4=(2/D-2) IAKI; D5=(3/B-1) INTGRANT; D6=+5V; D7=GND; S=GND; Y=5; W=6

74276 U48: J=9, C=8, K=7, Q=6

74S288 U49: A0=10 (5/B-1 BSØ), A1=11 (5/B-1 BS1), A2=12 (5/C-1 BR14), A3=13, A4=14, CS=15, GND=8, +5V=16; Q0=1, Q1=2, Q2=3, Q3=5, Q4=6, Q5=7, Q6=9, Q7

74LS251 U35: (5/D-1) BR6, BR7; (5/C-1) BR8; (3/D-1) INT ENB; (3/C-1) DMGRANT; (2/A-6) RDOUT, RDIN, RSYNC, RRPLY; Y=5; W=6

74LS251 U34: R14 1K — J1-10 — W16 — W15; (8/A-1) INDEX, READY, TRACKO, WRT PROTECT; (7/C-1) RDATA; (4/C-1) 7F; (4/C-1) CARRY; Y=5; W=6

74LS251 U36: +5V — 1K RP12 — ALT VECTOR — W28 — W29; (3/D-5) MATCH, BOOT; (3/C-5) LAOI; (2/B-1) POR; (8/B-3) CRC ERR; (8/C-3) CRC DATA; (4/C-1) RAM DATA; Y=5; W=6

2911 U60: (7/D-1) 6MHz; (5/D-1) RØ, R1; (5/C-1) R2, R3; (3/A-5) INT; W12 W11; Y0=12 MAØ, Y1=13 MA1, Y2=14 MA2, Y3=15 MA3 (5/D-8)

2911 U58: (5/C-1) R4, R5, R6, R7; Y0=12 MA4, Y1=13 MA5, Y2=14 MA6, Y3=15 MA7 (5/D-8)

2911 U56: (5/C-1) R8, R9; Y0=12 MA8, Y1=13 MA9, Y2=14 MA10 (5/D-8)

74S139 U44: (5/B-1) CCØ, CC1; (7/D-1) E6MHz; Y0=12 WRT RAM (4/C-8),(8/B-8); Y1=11 STB BA (4/C-8); Y2=10; Y3=9

74S139 U44: (5/D-1) BR4, BR5; Y0=4; Y1=5; Y2=6; Y3=7

74259 U22: (5/D-1) BR1, BR2, BR3, BRØ; (3/A-5) INT; Q0=4 TSYNC, Q1=5 TDOUT, Q2=6 TDIN (3/A-8); Q3=7 REPLY (3/C-8); Q4=9 TWTBT (2/C-4); Q5=10 IRQ (2/C-4),(3/B-3); Q6=11 DMR (2/C-4),(3/C-3); Q7=12 TSACK (2/C-4),(4/D-3)

74259 U23: Q0=4 LOG RPLY ENB (3/B-8); Q1=5 ENB CRC (8/C-8); Q2=6 CALC CRC (8/B-8); Q3=7 MFM (7/C-8),(8/C-8); Q4=9 VCO SYNC (7/C-8); Q5=10 DATA FLG ENB (7/A-8); Q6=11 HOLD PLL (7/A-8); Q7=12 WRITE GATE (8/A-8,D-8)

74259 U24: Q0=4 DRIVE SEL 1 (8/B-8); Q1=5 DRIVE SEL 2 (8/A-8); Q2=6 HEAD LOAD, Q3=7 SIDE SEL (8/B-8); Q4=9 DIRECTION (8/A-8); Q5=10 STEP (8/A-8); Q6=11 TBS7-PRECOMP (2/B-8),(8/B8,C8); Q7=12 BUS ENB (2/B-8)

74259 U21: Q0=4; Q1=5; Q2=6; Q3=7 EN17 L (2/C-5); Q4=9; Q5=10; Q6=11; Q7=12

SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 6 OF 8	

DWG. NO. SD400255 REV. 8

FORM NO. 002

DATA SEPERATION & MASTER TIMING

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

(8/A-1) RAW
(6/B-1) VCO SYNC
MFM
(3/A-5) INT
(6/B-1) HOLD PLL
(6/B-1) DATA FLG ENB

E6MHz (6/D-2)
6MHz (6/D-8),(8/C-8)
6 MHz (4/C8),(5/D-4),(6/C-6)
RDATA (6/B-8)
PL CLK (8/C-8)
SEP DATA (6/D-8)
SEP CLK (6/D-8)
DATA FLAG (6/D-8),(8/C-8)

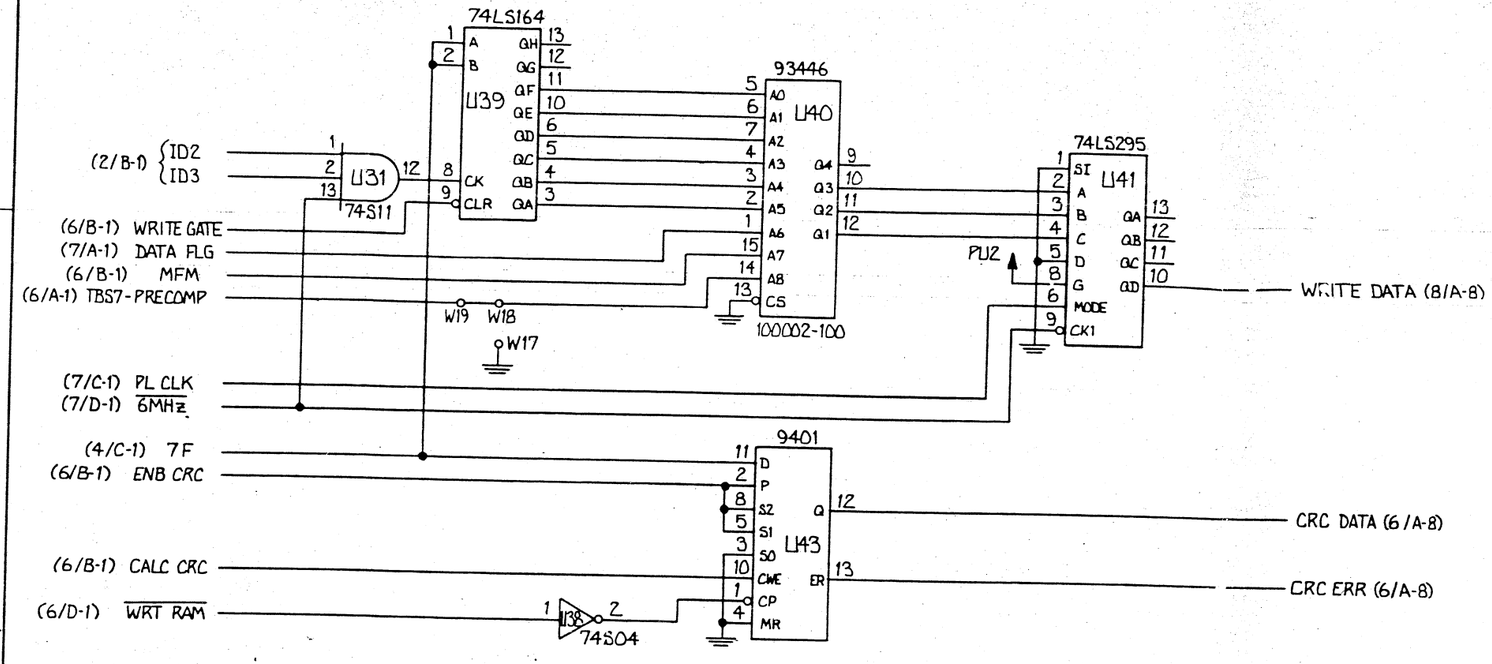
SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 7 OF 8	

DWG NO SD400255 REV NC SH 7

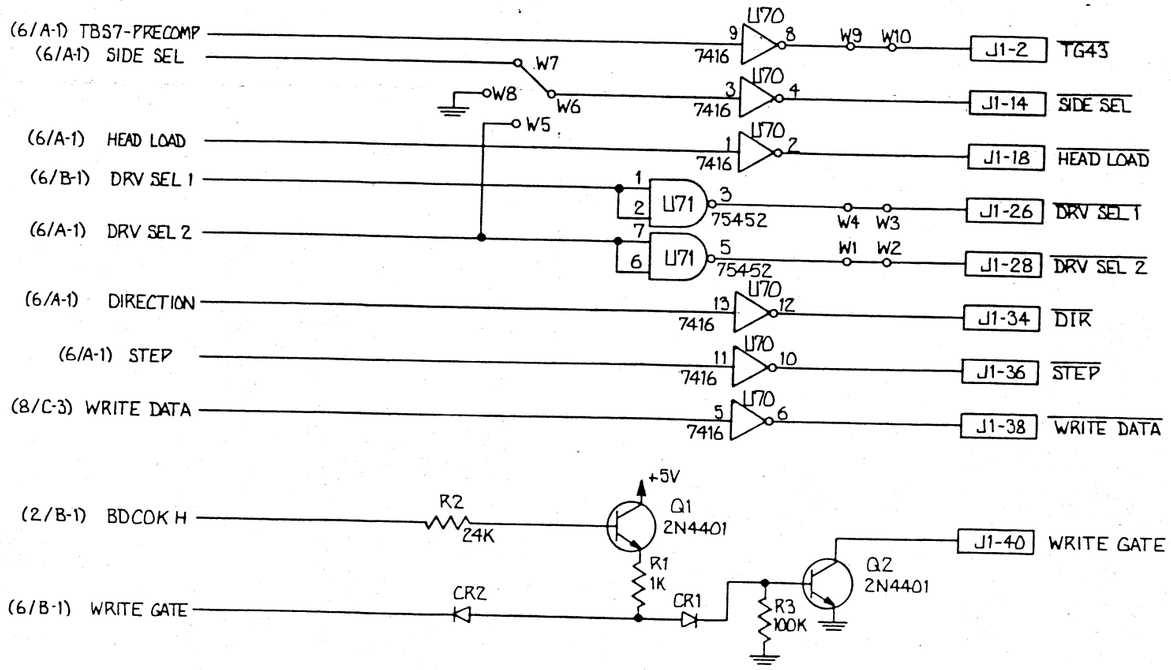
FORM NO 002

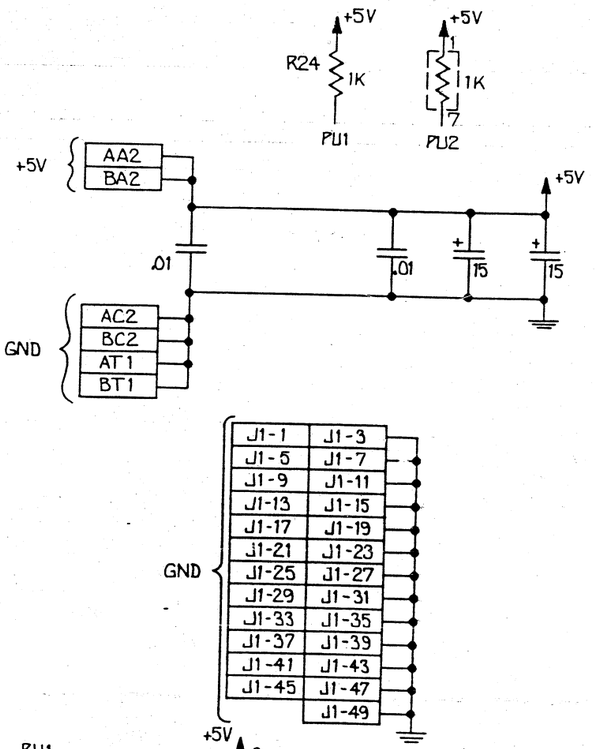
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED

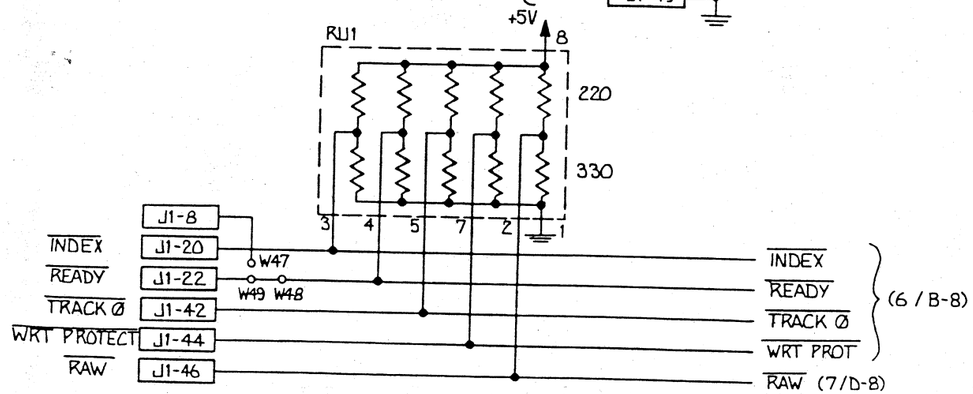
WRITE PRECOMP & CRC GENERATOR



DRIVE INTERFACE







SIZE	CODE IDENT. NO.	DRAWING NO.	REV.
D		SD400255	NC
SCALE NONE	WORK ORDER NO.	SHEET 8 OF 8	

REV. NC
SH. 8
DWG. NO. SD400255

FORM NO. 902