SIZE	CODE	NUMBER	REV.
B	DD	M8543-Ø	

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS
			MODULE REVISION	A
D-UA-M8543-0-0	5		EBOX CONTROL #1	-
D-CS-M8543-0-CTL1	1		EBOX CONTROL #1 SPEC/FUNC & DIAG	-
D-CS-M8543-0-CTL2	1		EBOX CONTROL #1 DATA PATH CONTROL	-
D-CS-M8543-0-CTL3	1		EBOX CONTROL #1 CONSOLE FUNCTIONS	-
D-CS-M8543-0-CTL4	1		EBOX CONTROL #1 POWER, GND, CAPS	-
D-CS-M8543-0-RES	1		EBOX CONTROL #1 TERMINATORS	-
D-AH-M8543-0-5	4		EBOX CONTROL #1	-
		5011889	ETCH CIRCUIT BOARD	A
M8543-Ø-L			P.C. DESIGN DATA BASE	REF
M8543-0-PL			INSERTION P/L DATA BASE	REF
P00-M8543-0			PROCESS SHEET	REF

NOTES:

REVISIONS	CHG NO.	REV.
DATE		

digital

USED ON OPTION/MODEL	
KL10	

DRN.	R W Caunter	26 JAN 77
CHK'D	D M Klein	26 JAN 77
ENG.	Tom Eggers	8 Feb 77
PROD.	W Ehrley	8 FEB 77

TITLE: E BOX CONTROL #1

SIZE	CODE	NUMBER	REV.
B	DD	M8543-Ø	

SHEET 1 OF 1

DRB 126 EN-01149-16-N176(325)

MR

18 19 (QTY. 12) COMPONENT SIDE VIEW

SPARE

NOTES:

CHK	CHANGE NO	REV

SIGNATURES	DATE
DRN. J. Bragg	6 Feb 77
CHK'D	16 FEB 77
ENG. Tom Biggs	8 Feb 77
PROJ.ENG. Tom Biggs	8 Feb 77
PROD. W. Eadie	8 Feb 77

digital

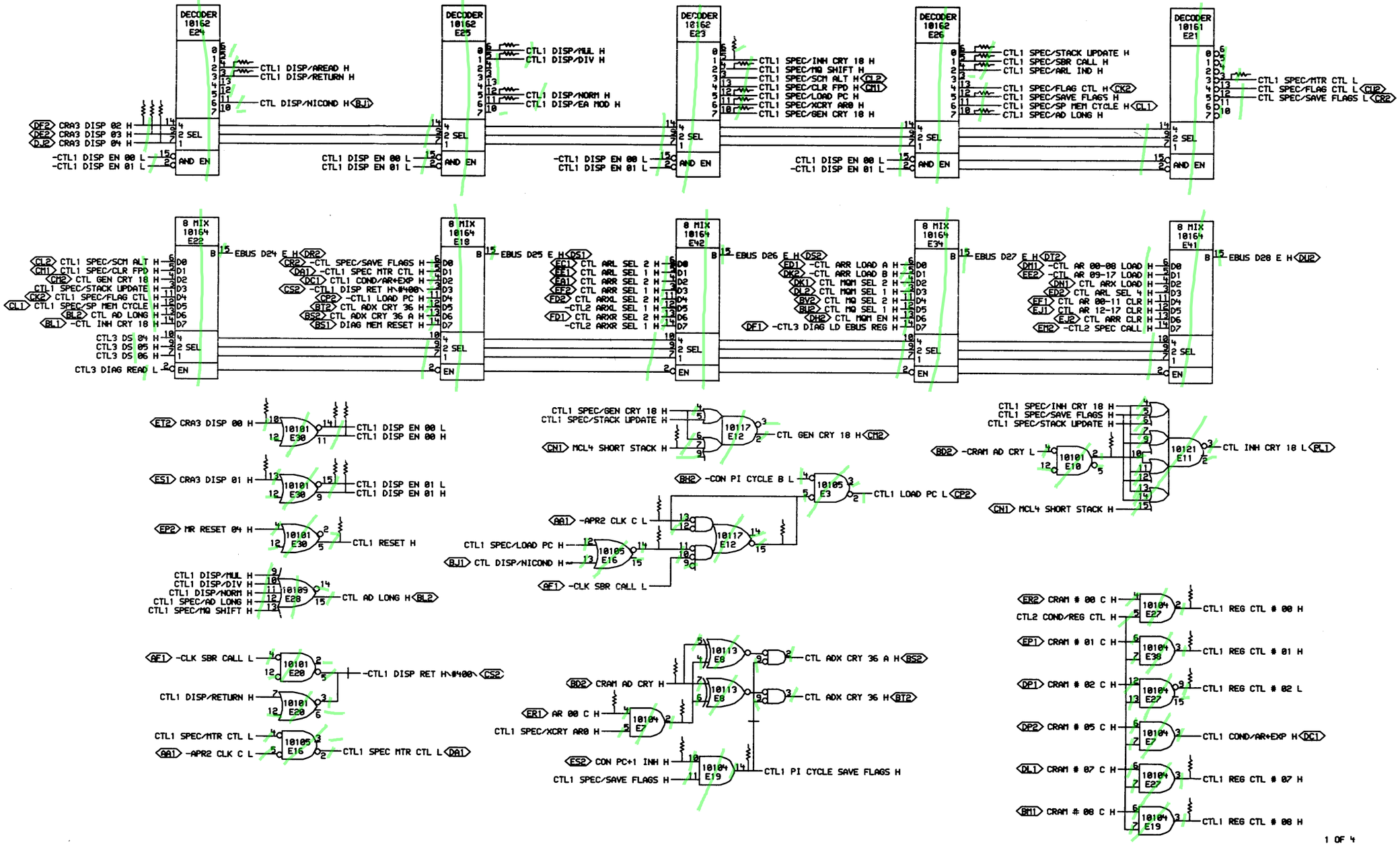
TITLE EBOX CONTROL #1

SCALE 2/1	SIZE	CODE	NUMBER	REV
SHT. 2 OF 5	D	UA	M8543-0-0	

ETCH REV A FIRST USED ON KL10-PV MR

1 MS# 30220

365



1 OF 4

REVISIONS		
CHK	CHANGE NO.	REV

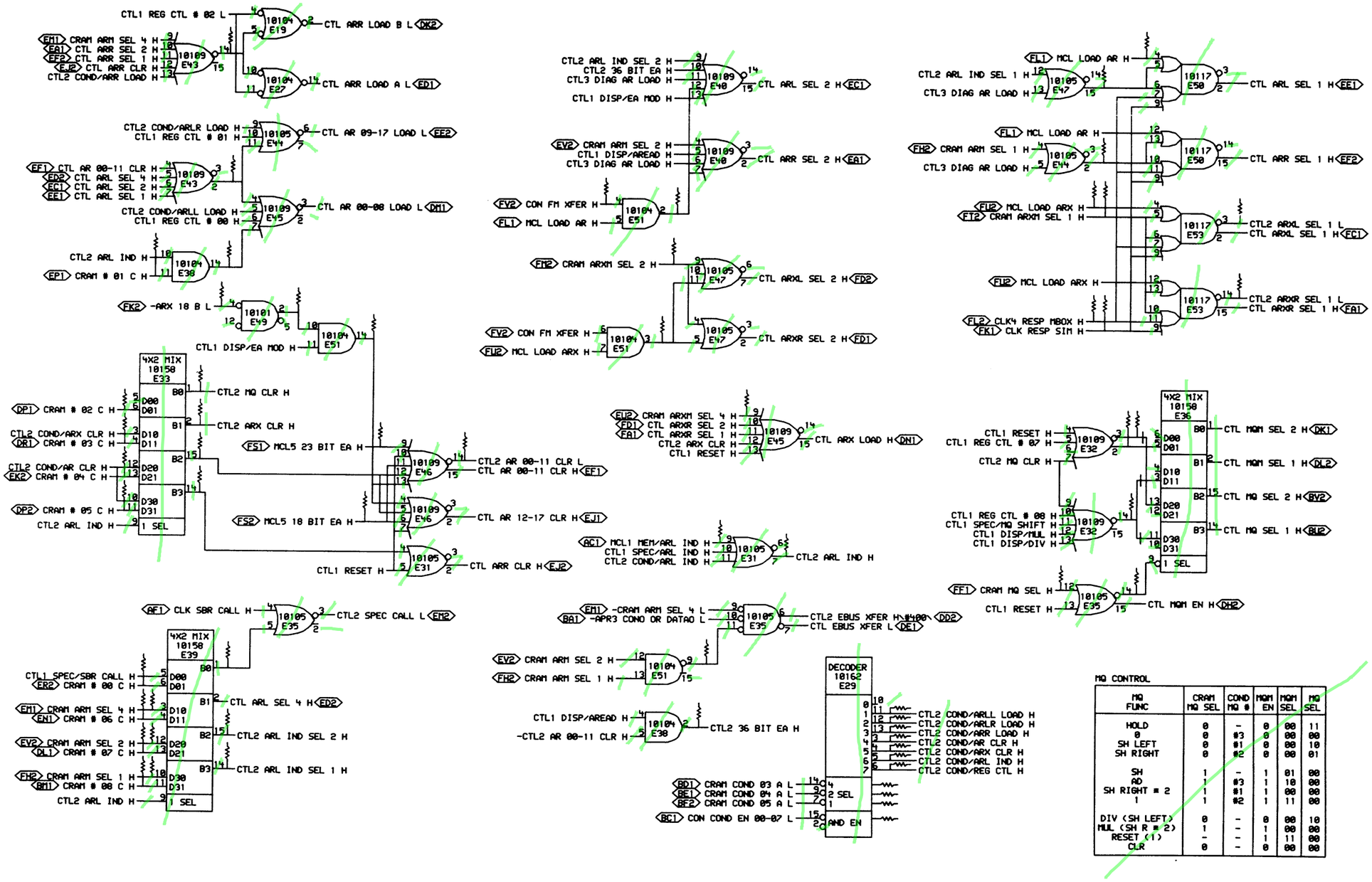
digital

DRN: M. Lacombe DATE: 25-JAN-77 ENG: Tom Eggen DATE: 25-Jan-77
CHK: Cliff Agnew DATE: 1/25/77 BOARD LOCATION: 46F36
SHEET 1 OF 1

TITLE: EBOX CONTROL #1 SPEC/FUNC & DIAG

CTL1EA.RLS(4,682) 26-JAN-77 21:28 NEXT HIGHER ASSEMBLY:
FIRST USED ON OPTION/MODEL: KL10-PV B-DD-M8543-0

SIZE	CODE	NUMBER	REV.
D	CS	M8543-0-CTL1	



MQ CONTROL

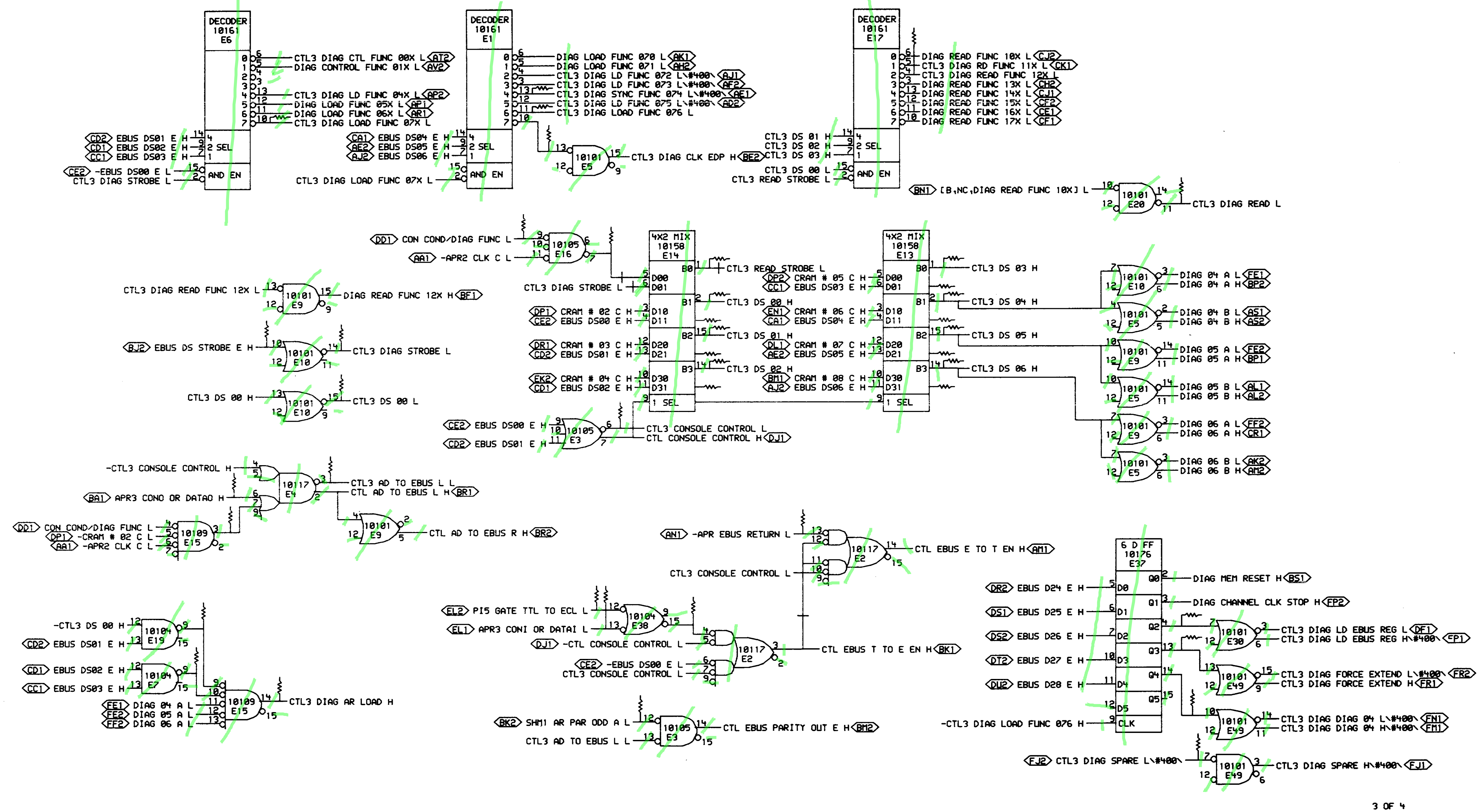
MQ FUNC	CRAM MQ SEL	COND MQ #	MQM EN	MQM SEL	MQ SEL
HOLD	0	-	0	00	11
0	0	#3	0	00	00
SH LEFT	0	#1	0	00	10
SH RIGHT	0	#2	0	00	01
SH	1	-	1	01	00
AD	1	#3	1	10	00
SH RIGHT = 2	1	#1	1	00	00
1	1	#2	1	11	00
DIV (SH LEFT)	0	-	0	00	10
MUL (SH R = 2)	1	-	1	00	00
RESET (1)	-	-	1	11	00
CLR	0	-	0	00	00

2 OF 4

REVISIONS		
CHK	CHANGE NO.	REV

digital	DRN. M. Looney	DATE 25-JAN-77	ENG. Tom Eggers	DATE 25-JAN-77	TITLE: EBOX CONTROL #1 DATA PATH CONTROL
	CHK. W. Hopkins	DATE 1/25/77	BOARD LOCATION: 4AE36		
			SHEET 1 OF 1		
CTL2EA.RLS[4,602] 24-JAN-77 21:19			NEXT HIGHER ASSEMBLY:	SIZE D	CODE CS
FIRST USED ON OPTION/MODEL: KL10-PV			B-DD-M8543-0		NUMBER M8543-0-CTL2

REV.



3 OF 4

REVISIONS: CHK | CHANGE NO. | REV

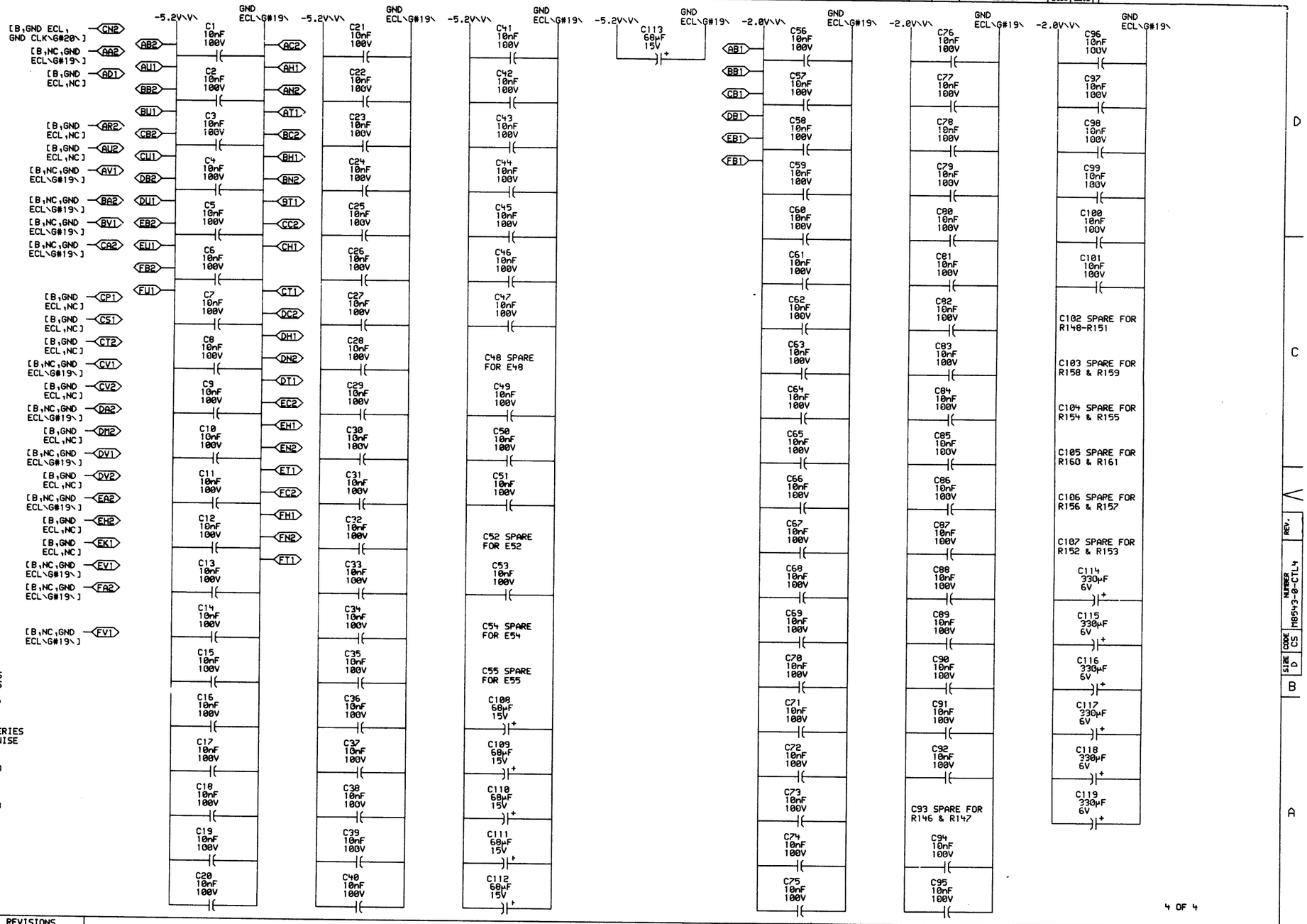
digital

DATE 25-JAN-77 | DATE 25Jan77 | DATE 11/25/77
BOARD LOCATION: 4AF36
SHEET 1 OF 1
CTL3EA.RLS[4,602] 24-JAN-77 21:58
NEXT HIGHER ASSEMBLY: B-DD-M8543-0
FIRST USED ON OPTION/MODEL: KL10-PV

TITLE: EBOX CONTROL #1 CONSOLE FUNCTIONS

SIZE D | CODE CS | NUMBER M8543-0-CTL3 | REV.

368



NOTE:

1. THE FOLLOWING PIN NUMBERS APPLY TO ECL DIP PACKAGES

GND	-5.2	MANUFACTURES' PART NUMBER
1 16	8	ALL 10,000 SERIES UNLESS OTHERWISE SPECIFIED
1 15 16	8	10110 & 10210
16	8	10158 & 10173

4 OF 4

REVISIONS		
CHK	CHANGE NO.	REV

DRN. B.Looney	DATE 25-JAN-77	ENG. Tom Eggo	DATE 2.5 Jan 77	TITLE: EBOX CONTROL #1 POWER, GND, CAPS
CHK'D [illegible]	DATE 1/25/77	BOARD LOCATION: 4AF36	SHEET 1 OF 1	
CTL4EA.RLSC4,602]	24-JAN-77 21:19	NEXT HIGHER ASSEMBLY: B-DD-M8543-0		SIZE D / CODE CS / NUMBER M8543-0-CTL4 / REV.
FIRST USED ON OPTION/MODEL: KL10-PV				

369

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R100(1)	CTL3	D5	68Ω	%E1(10)
R50(1)	CTL1	B2	68Ω	%E10(2)
R40(1)	CTL1	B4	68Ω	%E12(15)
R1(1)	CTL3	B7	68Ω	%E15(3)
R9(1)	CTL1	B5	68Ω	%E16(14)
R90(1)	CTL3	C5	68Ω	%E16(7)
R52(1)	CTL3	B7	68Ω	%E19(9)
R29(1)	CTL2	B2	68Ω	%E32(14)
R28(1)	CTL2	C2	68Ω	%E32(2)
R27(1)	CTL2	C2	68Ω	%E32(3)
R61(1)	CTL2	B7	68Ω	%E33(14)
R102(1)	CTL2	B7	68Ω	%E33(15)
R38(1)	CTL2	B2	68Ω	%E35(14)
R139(1)	CTL3	B2	68Ω	%E37(13)
R145(1)	CTL3	A2	68Ω	%E37(14)
R92(1)	CTL3	B2	68Ω	%E37(4)
R138(1)	CTL2	C7	68Ω	%E38(14)
R83(1)	CTL3	B5	68Ω	%E38(15)
R66(1)	CTL2	B7	68Ω	%E39(1)
R55(1)	CTL2	D7	68Ω	%E43(14)
R140(1)	CTL2	D7	68Ω	%E43(2)
R104(1)	CTL2	D2	68Ω	%E44(2)
R106(1)	CTL2	D2	68Ω	%E47(15)
R80(1)	CTL2	C7	68Ω	%E49(2)
R99(1)	CTL2	C6	68Ω	%E51(14)
R32(1)	CTL2	C5	68Ω	%E51(2)
R74(1)	CTL2	C5	68Ω	%E51(3)
R67(1)	CTL2	B4	68Ω	%E51(9)
R3(1)	CTL1	A5	68Ω	%E7(2)
R51(1)	CTL3	A7	68Ω	%E7(9)
R81(1)	CTL3	B4	68Ω	APR EBUS RETURN H
R5(1)	CTL1	B5	68Ω	APR2 CLK C H
R95(1)	CTL3	B5	68Ω	-APR3 CONI OR DATAI H
R62(1)	CTL3	B7	68Ω	APR3 CONO OR DATAO H
R45(1)	CTL1	A5	68Ω	AR 00 C H
R143(1)	CTL2	C7	68Ω	ARX 18 B H
R105(1)	CTL2	C2	68Ω	CLK RESP SIM H
R101(1)	CTL2	C2	68Ω	CLK4 RESP MBOX H
R124(1)	CTL2	A4	68Ω	-CON COND EN 00-07 H
R10(1)	CTL3	C6	68Ω	-CON COND/DIAG FUNC H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R76(1)	CTL2	D5	68Ω	CON FM XFER H
R53(1)	CTL1	A5	68Ω	CON PC+1 INH H
R93(1)	CTL1	B7	68Ω	CRA3 DISP 00 H
R91(1)	CTL1	B7	68Ω	CRA3 DISP 01 H
R13(1)	CTL1	D8	68Ω	CRA3 DISP 02 H
R16(1)	CTL1	D7	68Ω	CRA3 DISP 03 H
R19(1)	CTL1	D7	68Ω	CRA3 DISP 04 H
R56(1)	CTL2	A7	68Ω	CRAM # 00 C H
R94(1)	CTL2	C7	68Ω	CRAM # 01 C H
R89(1)	CTL2	C8	68Ω	CRAM # 02 C H
R84(1)	CTL2	B8	68Ω	CRAM # 03 C H
R88(1)	CTL2	B8	68Ω	CRAM # 04 C H
R48(1)	CTL2	B8	68Ω	CRAM # 05 C H
R117(1)	CTL2	A7	68Ω	CRAM # 06 C H
R112(1)	CTL2	A7	68Ω	CRAM # 07 C H
R63(1)	CTL2	A7	68Ω	CRAM # 08 C H
R4(1)	CTL1	A5	68Ω	CRAM AD CRY H
R69(1)	CTL2	A7	68Ω	CRAM ARM SEL 1 H
R34(1)	CTL2	A7	68Ω	CRAM ARM SEL 2 H
R68(1)	CTL2	A7	68Ω	CRAM ARM SEL 4 H
R107(1)	CTL2	D2	68Ω	CRAM ARXM SEL 1 H
R77(1)	CTL2	C5	68Ω	CRAM ARXM SEL 2 H
R137(1)	CTL2	C4	68Ω	CRAM ARXM SEL 4 H
R123(1)	CTL2	A4	68Ω	-CRAM COND 03 A H
R126(1)	CTL2	A4	68Ω	-CRAM COND 04 A H
R125(1)	CTL2	A4	68Ω	-CRAM COND 05 A H
R64(1)	CTL2	B3	68Ω	CRAM MQ SEL H
R14(1)	CTL1	B6	68Ω	CTL1 DISP EN 00 H
R120(1)	CTL1	B6	68Ω	-CTL1 DISP EN 00 H
R18(1)	CTL1	B6	68Ω	CTL1 DISP EN 01 H
R57(1)	CTL1	B6	68Ω	-CTL1 DISP EN 01 H
R96(1)	CTL1	D7	68Ω	CTL1 DISP/AREAD H
R23(1)	CTL1	D6	68Ω	CTL1 DISP/DIV H
R75(1)	CTL1	D6	68Ω	CTL1 DISP/EA MOD H
R21(1)	CTL1	D6	68Ω	CTL1 DISP/MUL H
R20(1)	CTL1	D6	68Ω	CTL1 DISP/NORM H
R15(1)	CTL1	D7	68Ω	CTL1 DISP/RETURN H
R2(1)	CTL1	A4	68Ω	CTL1 PI CYCLE SAVE FLAGS H
R142(1)	CTL1	B2	68Ω	CTL1 REG CTL # 00 H
R36(1)	CTL1	A2	68Ω	CTL1 REG CTL # 01 H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R54(1)	CTL1	A2	68Ω	-CTL1 REG CTL # 02 H
R22(1)	CTL1	A2	68Ω	CTL1 REG CTL # 07 H
R26(1)	CTL1	A2	68Ω	CTL1 REG CTL # 08 H
R134(1)	CTL1	B6	68Ω	CTL1 RESET H
R17(1)	CTL1	D3	68Ω	CTL1 SPEC/AD LONG H
R60(1)	CTL1	D3	68Ω	CTL1 SPEC/ARL IND H
R6(1)	CTL1	D4	68Ω	CTL1 SPEC/GEN CRY 18 H
R44(1)	CTL1	D4	68Ω	CTL1 SPEC/INH CRY 18 H
R12(1)	CTL1	D4	68Ω	CTL1 SPEC/LOAD PC H
R24(1)	CTL1	D4	68Ω	CTL1 SPEC/MQ SHIFT H
R11(1)	CTL1	D2	68Ω	-CTL1 SPEC/MTR CTL H
R49(1)	CTL1	D3	68Ω	CTL1 SPEC/SAVE FLAGS H
R71(1)	CTL1	D3	68Ω	CTL1 SPEC/SBR CALL H
R7(1)	CTL1	D3	68Ω	CTL1 SPEC/STACK UPDATE H
R46(1)	CTL1	D4	68Ω	CTL1 SPEC/XCRY AR0 H
R33(1)	CTL2	A5	68Ω	CTL2 36 BIT EA H
R98(1)	CTL2	B6	68Ω	-CTL2 AR 00-11 CLR H
R129(1)	CTL2	B4	68Ω	CTL2 ARL IND H
R72(1)	CTL2	A7	68Ω	CTL2 ARL IND SEL 1 H
R31(1)	CTL2	A7	68Ω	CTL2 ARL IND SEL 2 H
R133(1)	CTL2	C7	68Ω	CTL2 ARX CLR H
R162(1)	CTL2	C2	68Ω	-CTL2 ARXL SEL 1 H
R163(1)	CTL2	C2	68Ω	-CTL2 ARXR SEL 1 H
R128(1)	CTL2	A4	68Ω	CTL2 COND/AR CLR H
R58(1)	CTL2	A4	68Ω	CTL2 COND/ARL IND H
R141(1)	CTL2	A4	68Ω	CTL2 COND/ARLL LOAD H
R35(1)	CTL2	A4	68Ω	CTL2 COND/ARLR LOAD H
R70(1)	CTL2	A4	68Ω	CTL2 COND/ARR LOAD H
R127(1)	CTL2	A4	68Ω	CTL2 COND/ARX CLR H
R47(1)	CTL2	A4	68Ω	CTL2 COND/REG CTL H
R25(1)	CTL2	C7	68Ω	CTL2 MQ CLR H
R39(1)	CTL3	B7	68Ω	-CTL3 AD TO EBUS L H
R82(1)	CTL3	B5	68Ω	-CTL3 CONSOLE CONTROL H
R73(1)	CTL3	A7	68Ω	CTL3 DIAG AR LOAD H
R130(1)	CTL3	D6	68Ω	-CTL3 DIAG LOAD FUNC 076 H
R110(1)	CTL3	D7	68Ω	-CTL3 DIAG LOAD FUNC 07X H
R135(1)	CTL3	C2	68Ω	-CTL3 DIAG READ H
R113(1)	CTL3	D4	68Ω	-CTL3 DIAG READ FUNC 12X H
R144(1)	CTL3	A2	68Ω	CTL3 DIAG SPARE L\#400\
R85(1)	CTL3	C7	68Ω	-CTL3 DIAG STROBE H

RESISTOR LOC(PIN)	SHOWN DRW#	ON REF	VALUE	TERMINATES SIGNAL
R111(1)	CTL3	D6	68Ω	CTL3 DIAG SYNC FUNC 074 L\#400\
R86(1)	CTL3	C5	68Ω	CTL3 DS 00 H
R116(1)	CTL3	C7	68Ω	-CTL3 DS 00 H
R119(1)	CTL3	C5	68Ω	CTL3 DS 01 H
R118(1)	CTL3	C5	68Ω	CTL3 DS 02 H
R121(1)	CTL3	C3	68Ω	CTL3 DS 03 H
R132(1)	CTL3	C3	68Ω	CTL3 DS 04 H
R131(1)	CTL3	C3	68Ω	CTL3 DS 05 H
R136(1)	CTL3	C3	68Ω	CTL3 DS 06 H
R122(1)	CTL3	C5	68Ω	-CTL3 READ STROBE H
R87(1)	CTL3	C7	68Ω	EBUS DS STROBE E H
R42(1)	CTL3	C5	68Ω	EBUS DS00 E H
R41(1)	CTL3	C5	68Ω	EBUS DS01 E H
R37(1)	CTL3	C5	68Ω	EBUS DS02 E H
R38(1)	CTL3	C3	68Ω	EBUS DS03 E H
R109(1)	CTL3	C3	68Ω	EBUS DS04 E H
R115(1)	CTL3	C3	68Ω	EBUS DS05 E H
R114(1)	CTL3	C3	68Ω	EBUS DS06 E H
R78(1)	CTL2	D2	68Ω	MCL LOAD AR H
R79(1)	CTL2	D2	68Ω	MCL LOAD ARX H
R59(1)	CTL2	B4	68Ω	MCL1 MEM/ARL IND H
R8(1)	CTL1	B5	68Ω	MCL4 SHORT STACK H
R100(1)	CTL2	B6	68Ω	MCL5 18 BIT EA H
R103(1)	CTL2	B6	68Ω	MCL5 23 BIT EA H
R97(1)	CTL3	B5	68Ω	-P15 GATE TTL TO ECL H
R43(1)	CTL3	A5	68Ω	-SHM1 AR PAR ODD A H

NOTE:

1. ALL TERMINATORS HAVE PIN TWO CONNECTED TO -2.0V AND ARE 5% 1/4WATT UNLESS OTHERWISE SPECIFIED
2. ENTRIES ARE SORTED BY SIGNAL NAME
3. % INDICATES OUTPUT OF DIP LOC AND () INDICATES PIN NUMBER

REVISIONS		
CHK	CHANGE NO.	REV

DRN. C Smith	DATE 22-JAN-77	ENG. Tom Eggen
CHK'D. [illegible]	DATE 1/25/77	BOARD LOCATION:
M8543.RLS[4,6021] 22-JAN-77 15:36		SHEET 1 OF 1
FIRST USED ON OPTION/MODEL: KL10PV		NEXT HIGHER ASSEMBLY: B-DD-M8543-0

DATE 25 Jan 77

TITLE: EBOX CONTROL #1 TERMINATORS

SIZE	CODE	NUMBER	REV.
D	CS	M8543-0-RES	

370