AIR TRAINING COMMAND

COMPUTER SYSTEMS DEPARTMENT

AN/FSQ-7 CENTRAL COMPUTER

VOLUME 2

CIRCUIT DIAGRAMS

June 1966

Course Nr. ABR30533-1

KEESLER AFB, MISS

FOR ATC INSTRUCTIONAL PURPOSES ONLY

This Schematics and Logic Diagrams Book provides student Study material in support of Course ABR30533-1.

SCHEMATICS

FOR

CENTRAL COMPUTER SYSTEM

OF

AN/FSQ-7
COMBAT DIRECTION CENTRAL

June 1966

MILITARY PRODUCTS DIVISION

INTERNATIONAL BUSINESS MACHINES CORPORATION

KINGSTON, NEW YORK

UNCLASSIFIED

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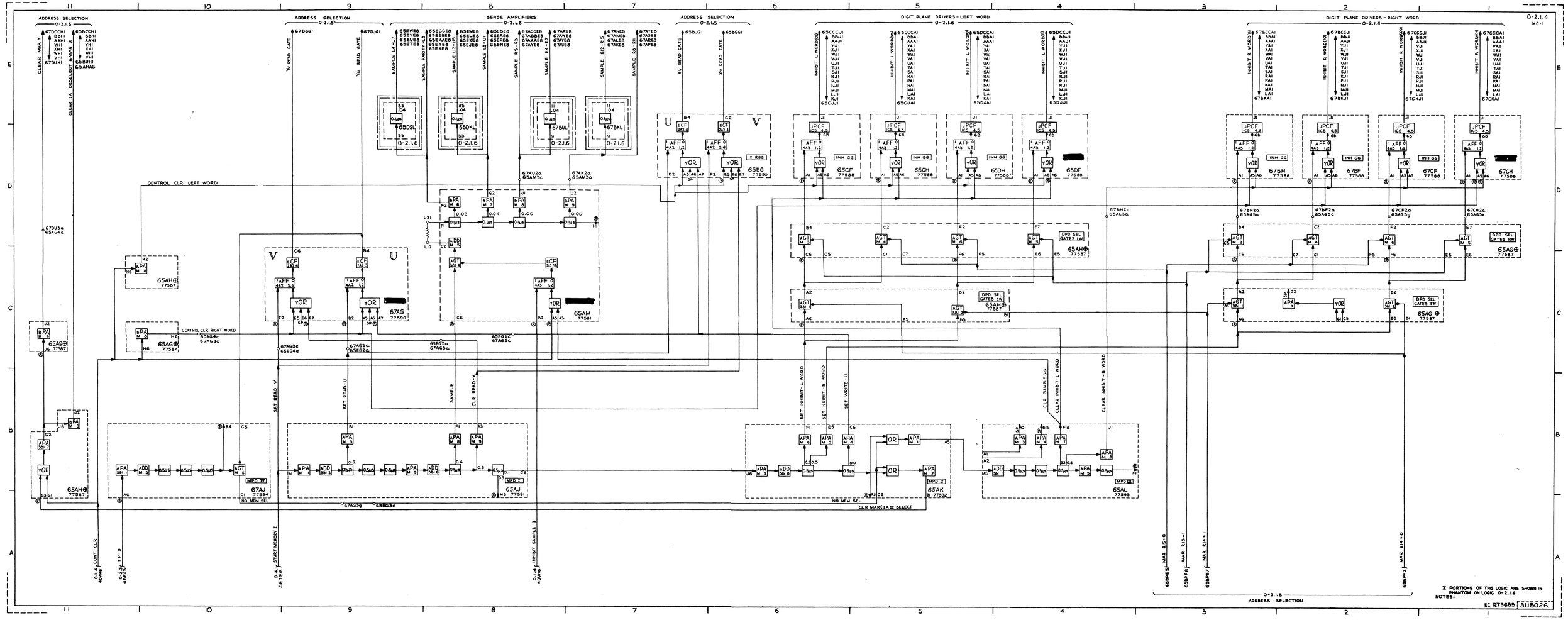
ADDRESS SELECTION
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CONTROL CLR LEFT WORD
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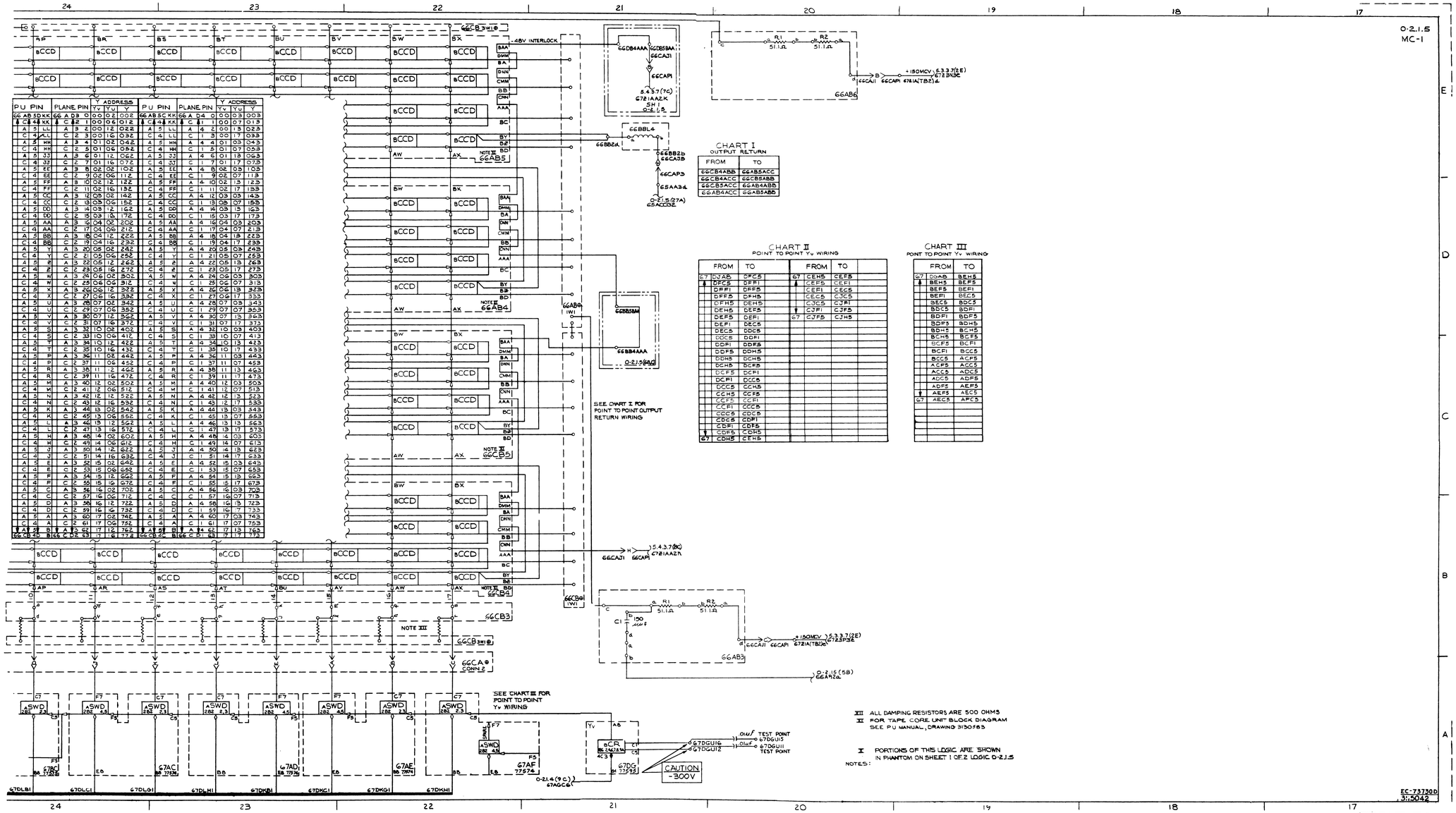
X PORTIONS OF THIS LOGIC ARE SHOWN IN PHANTOM ON LOGIC 0-2.1.6
NOTES:
EC R75685 3115026
CORE MEMORY I-TIMING & GATING

A nd SWD - 660 ma
B nd SWD - 330 ma
990 ma

PU PIN	PLANE PIN	Y ADDRESS Yv	Y ADDRESS Yu	Y ADDRESS Y	PU PIN	PLANE PIN	Y ADDRESS Yv	Y ADDRESS Yu	Y ADDRESS Y
66 AB 4D -KK	66 A D1-0	00	00	000	66 AB 4C KK	66 A D2 0	00	01	001
C 5 -KK	C 4-1	00	04	010	C 5 KK	C 3 1	00	05	011
A 4 -LL	A 1-2	00	10	020	A 4 LL	A 2 2	00	11	021
C 5 -LL	C 4-3	00	14	030	C 5 LL	C 3 3	00	15	031
A 4 -HH	A 1-4	01	00	040	A 4 HH	A 2 4	01	01	041
C 5 -HH	C 4-5	01	04	050	C 5 HH	C 3 5	01	05	051
A 4 -JJ	A 1-6	01	10	060	A 4 JJ	A 2 6	01	11	061
C 5 -JJ	C 4-7	01	14	070	C 5 JJ	C 3 7	01	15	071
A 4 -EE	A 1-8	02	00	100	A 4 EE	A 2 8	02	01	101
C 5 -EE	C 4-9	02	04	110	C 5 EE	C 3 9	02	05	111
A 4 -FF	A 1-10	02	10	120	A 4 FF	A 2 10	02	11	121
C 5 -FF	C 4-11	02	14	130	C 5 FF	C 3 11	02	15	131
A 4 -CC	A 1-12	03	00	140	A 4 CC	A 2 12	03	01	141
C 5 -CC	C 4-13	03	04	150	C 5 CC	C 3 13	03	05	151
A 4 -DD	A 1-14	03	10	160	A 4 DD	A 2 14	03	11	161
C 5 -DD	C 4-15	03	14	170	C 5 DD	C 3 15	03	15	171
A 4 -AA	A 1-16	04	00	200	A 4 AA	A 2 16	04	01	201
C 5 -AA	C 4-17	04	04	210	C 5 AA	C 3 17	04	05	211
A 4 -BB	A 1-18	04	10	220	A 4 BB	A 2 18	04	11	221
C 5 -BB	C 4-19	04	14	230	C 5 BB	C 3 19	04	15	231
A 4 -Y	A 1-20	05	00	240	A 4 Y	A 2 20	05	01	241
C 5 -Y	C 4-21	05	04	250	C 5 Y	C 3 21	05	05	251
A 4 -Z	A 1-22	05	10	260	A 4 Z	A 2 22	05	11	261
C 5 -Z	C 4-23	05	14	270	C 5 Z	C 3 23	05	15	271
A 4 -W	A 1-24	06	00	300	A 4 W	A 2 24	06	01	301
C 5 -W	C 4-25	06	04	310	C 5 W	C 3 25	06	05	311
A 4 -X	A 1-26	06	10	320	A 4 X	A 2 26	06	11	321
C 5 -X	C 4-27	06	14	330	C 5 X	C 3 27	06	15	331
A 4 -U	A 1-28	07	00	340	A 4 U	A 2 28	07	01	341
C 5 -U	C 4-29	07	04	350	C 5 U	C 3 29	07	05	351
A 4 -V	A 1-30	07	10	360	A 4 V	A 2 30	07	11	361
C 5 -V	C 4-31	07	14	370	C 5 V	C 3 31	07	15	371
A 4 -S	A 1-32	10	00	400	A 4 S	A 2 32	10	01	401
C 5 -S	C 4-33	10	04	410	C 5 S	C 3 33	10	05	411
A 4 -T	A 1-34	10	10	420	A 4 T	A 2 34	10	11	421
C 5 -T	C 4-35	10	4	430	C 5 T	C 3 35	10	15	431
A 4 -P	A 1-36	1	00	440	A 4 P	A 2 36	11	01	441
C 5 -P	C 4-37	11	04	450	C 5 P	C 3 37	11	05	451
A 4 -R	A 1-38	11	10	460	A 4 R	A 2 38	11	11	461
C 5 -R	C 4-39	11	14	470	C 5 R	C 3 39	11	15	471
A 4 -M	A 1-40	12	00	500	A 4 M	A 2 40	12	01	501
C 5 -M	C 4-41	12	04	510	C 5 M	C 3 41	12	05	511
A 4 -N	A 1-42	12	10	520	A 4 N	A 2 42	12	11	521
C 5 -N	C 4-43	2	14	530	C 5 N	C 3 43	2	15	531
A 4 -K	A 1-44	13	00	540	A 4 K	A 2 44	13	01	541
C 5 -K	C 4-45	13	04	550	C 5 K	C 3 45	13	05	551
A 4 -L	A 1-46	13	10	560	A 4 L	A 2 46	13	11	561
C 5 -L	C 4-47	13	14	570	C 5 L	C 3 47	13	15	571
A 4 -H	A 1-48	14	00	600	A 4 H	A 2 48	14	01	601
C 5 -H	C 4-49	14	04	610	C 5 H	C 3 49	14	05	611
A 4 -J	A 1-50	14	10	620	A 4 J	A 2 50	14	11	621
C 5 -J	C 4-51	14	14	630	C 5 J	C 3 51	14	15	631
A 4 -E	A 1-52	15	00	640	A 4 E	A 2 52	15	01	641
C 5 -E	C 4-53	15	04	650	C 5 E	C 3 53	15	05	651
A 4 -F	A 1-54	15	10	660	A 4 F	A 2 54	15	11	661
C 5 -F	C 4-55	15	14	670	C 5 F	C 3 55	15	15	671
A 4 -C	A 1-56	16	00	700	A 4 C	A 2 56	16	01	701
C 5 -C	C 4-57	16	04	710	C 5 C	C 3 57	16	05	711
A 4 -D	A 1-58	16	10	720	A 4 D	A 2 58	16	11	721
C 5 -D	C 4-59	16	14	730	C 5 D	C 3 59	16	15	731
A 4 -A	A 1-60	17	00	740	A 4 A	A 2 60	17	01	741
C 5 -A	C 4-61	17	04	750	C 5 A	C 3 61	17	05	751
A 4 -B	A 1-62	17	10	760	A 4 B	A 2 62	17	11	761
66 CB 5D -B	66 C D4-63	17	14	770	66 CB 5C B	66 C D3 63	17	15	771



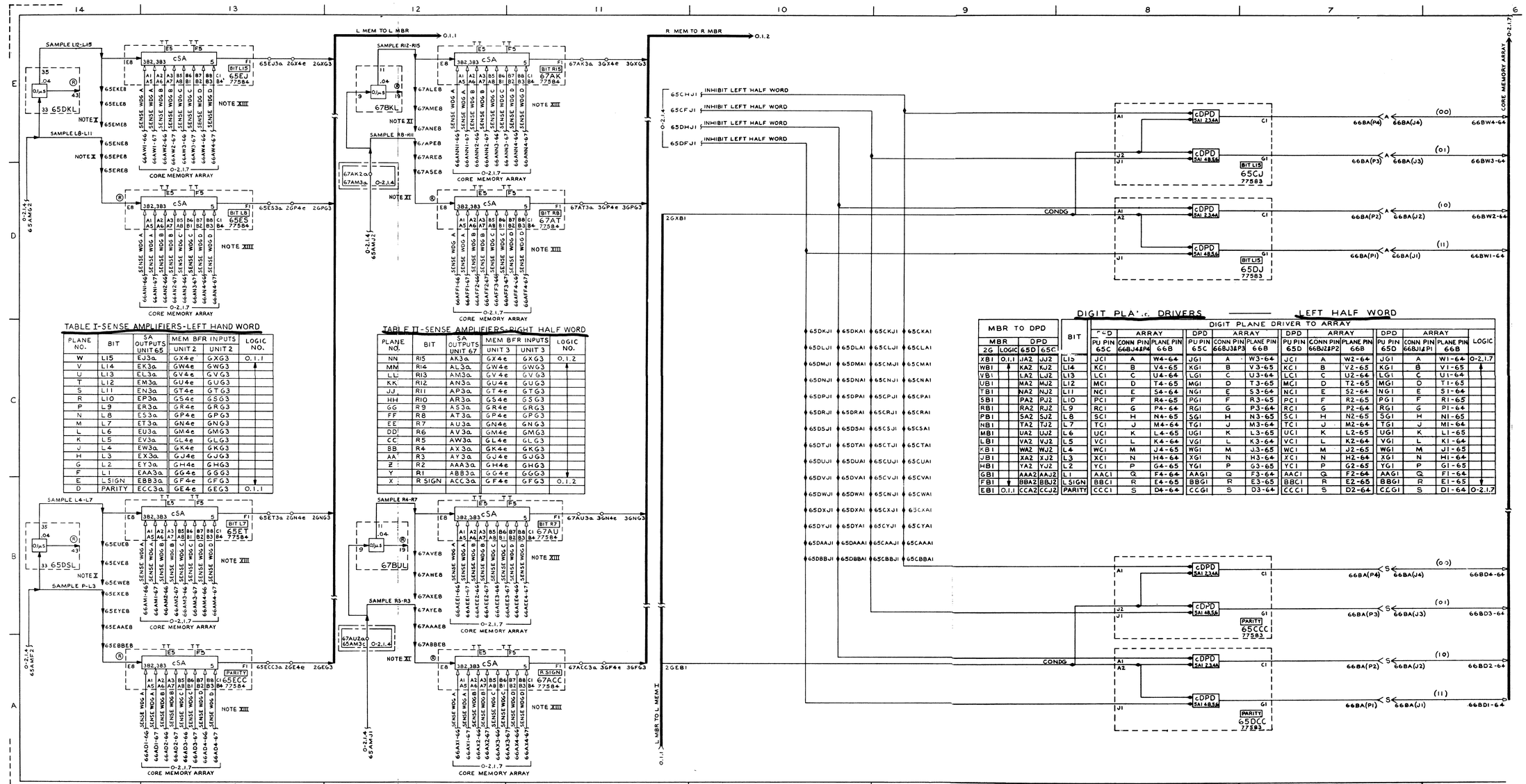
P.U PIN		PLANE PIN		Y ADDRESS		
				Yv	Yu	Y
GG	AB	5D	KK	GG	A	D3	0	00	02	002
C	4	LL		C	2	1	00	06	012
A	5	LL		A	3	2	00	12	022
C	4	LL		C	2	3	00	16	032
A	5	HH		A	3	4	01	02	042
C	4	HH		C	2	5	01	06	052
A	5	JJ		A	3	6	01	12	062
C	4	JJ		C	2	7	01	16	072
A	5	EE		A	3	8	02	02	102
C	4	EE		C	2	9	02	06	112
A	5	FF		A	3	10	02	12	122
C	4	FF		C	2	11	02	16	132
A	5	CC		A	3	12	03	02	142
C	4	CC		C	2	13	03	06	152
A	5	DD		A	3	14	03	12	162
C	4	DD		C	2	15	03	16	172
A	5	AA		A	3	16	04	02	202
C	4	AA		C	2	17	04	06	212
A	5	BB		A	3	18	04	12	222
C	4	BB		C	2	19	04	16	232
A	5	YY		A	3	20	05	02	242
C	4	Y		C	2	21	05	06	252
A	5	Z		A	3	22	05	12	262
C	4	Z		C	2	23	05	16	272
A	5	W		A	3	24	06	02	302
C	4	W		C	2	25	06	06	312
A	5	X		A	3	26	06	12	322
C	4	X		C	2	27	06	16	332
A	5	U		A	3	28	07	02	342
C	4	U		C	2	29	07	06	352
A	5	V		A	3	30	07	12	362
C	4	V		C	2	31	07	16	372
A	5	S		A	3	32	10	02	402
C	4	S		C	2	33	10	06	412
A	5	T		A	3	34	10	12	422
C	4	T		C	2	35	10	16	432
A	5	P		A	3	36	11	02	442
C	4	P		C	2	37	11	06	452
A	5	R		A	3	38	11	12	462
C	4	R		C	2	39	11	16	472
A	5	M		A	3	40	12	02	502
C	4	M		C	2	41	12	06	512
A	5	N		A	3	42	12	12	522
C	4	N		C	2	43	12	16	532
A	5	K		A	3	44	13	02	542
C	4	K		C	2	45	13	06	552
A	5	L		A	3	46	13	12	562
C	4	L		C	2	47	13	16	572
A	5	H		A	3	48	14	02	602
C	4	H		C	2	49	14	06	612
A	5	J		A	3	50	14	12	622
C	4	J		C	2	51	14	16	632
A	5	E		A	3	52	15	02	642
C	4	E		C	2	53	15	06	652
A	5	F		A	3	54	15	12	662
C	4	F		C	2	55	15	16	672
A	5	C		A	3	56	16	02	702
C	4	C		C	2	57	16	06	712
A	5	D		A	3	58	16	12	722
C	4	D		C	2	59	16	16	732
A	5	A		A	3	60	17	02	742
C	4	A		C	2	61	17	06	752
AT	5	B		A	3	62	17	12	762
BEE	4	B		C	2	63	17	16	772

P.U PIN		PLANE PIN		Y ADDRESS		
				Yv	Yu	Y
GG	AB	5C	KK	GG	A	D4	0	00	03	003
C	4	KK		C	1	1	00	07	013
A	5	LL		A	4	2	00	13	023
C	4	LL		C	1	3	00	17	033
A	5	HH		A	4	4	01	03	043
C	4	HH		C	1	5	01	07	053
A	5	JJ		A	4	6	01	13	063
C	4	JJ		C	1	7	01	17	073
A	5	EE		A	4	8	02	03	103
C	4	EE		C	1	9	02	07	113
A	5	FF		A	4	10	02	13	123
C	4	FF		C	1	11	02	17	133
A	5	CC		A	4	12	03	03	143
C	4	CC		C	1	13	03	07	153
A	5	DD		A	4	14	03	13	163
C	4	DD		C	1	15	03	17	173
A	5	AA		A	4	16	04	03	203
C	4	AA		C	1	17	04	07	213
A	5	BB		A	4	18	04	13	223
C	4	BB		C	1	19	04	17	233
A	5	YY		A	4	20	05	03	243
C	4	Y		C	1	21	05	07	253
A	5	Z		A	4	22	05	13	263
C	4	Z		C	1	23	05	17	273
A	5	W		A	4	24	06	03	303
C	4	W		C	1	25	06	07	313
A	5	X		A	4	26	06	13	323
C	4	X		C	1	27	06	17	333
A	5	U		A	4	28	07	03	343
C	4	U		C	1	29	07	07	353
A	5	V		A	4	30	07	13	363
C	4	V		C	1	31	07	17	373
A	5	S		A	4	32	10	03	403
C	4	S		C	1	33	10	07	413
A	5	T		A	4	34	10	13	423
C	4	T		C	1	35	10	17	433
A	5	P		A	4	36	11	03	443
C	4	P		C	1	37	11	07	453
A	5	R		A	4	38	11	13	463
C	4	R		C	1	39	11	17	473
A	5	M		A	4	40	12	03	503
C	4	M		C	1	41	12	07	513
A	5	N		A	4	42	12	13	523
C	4	N		C	1	43	12	17	533
A	5	K		A	4	44	13	03	543
C	4	K		C	1	45	13	07	553
A	5	L		A	4	46	13	13	563
C	4	L		C	1	47	13	17	573
A	5	H		A	4	48	14	03	603
C	4	H		C	1	49	14	07	613
A	5	J		A	4	50	14	13	623
C	4	J		C	1	51	14	17	633
A	5	E		A	4	52	15	03	643
C	4	E		C	1	53	15	07	653
A	5	F		A	4	54	15	13	663
C	4	F		C	1	55	15	17	673
A	5	C		A	4	56	16	03	703
C	4	C		C	1	57	16	07	713
A	5	D		A	4	58	16	13	723
C	4	D		C	1	59	16	17	733
A	5	A		A	4	60	17	03	743
C	4	A		C	1	61	17	07	753
AT	5	B		A	4	62	17	13	763
BEE	4	B		C	1	63	17	17	773

CHART I OUTPUT RETURN	
FROM	TO
66CB4ABB	66AB5ACC
66CB4ACC	66CB5ABB
66CB5ACC	66AB4ABB
66AB4ACC	66AB5ABB

CHART II POINT TO POINT Yv WIRING			
FROM	TO	FROM	TO
67 DJAB	DFC5	67 CEH5	CEF5
DFC5	DFF1	CEF5	CEF1
DFF1	DFF5	CEF1	CEC5
DFF5	DFH5	CEC5	CJC5
DFH5	DEH5	CJC5	CJF1
DEH5	DEF5	CJF1	CJF5
DEF5	DEF1	67 CJF5	CJH5
DEF1	DEC5		
DEC5	DDC5		
DDC5	DDF1		
DDF1	DDF5		
DDF5	DDH5		
DDH5	DCH5		
DCH5	DCF5		
DCF5	DCF1		
DCF1	DCC5		
DCC5	CCH5		
CCH5	CCF5		
CCF5	CCF1		
CCF1	CCC5		
CCC5	CDC5		
CDC5	CDF1		
CDF1	CDF5		
CDF5	CDH5		
67 CDH5	CEH5		

CHART III POINT TO POINT Yv WIRING	
FROM	TO
67 DDAB	BEH5
BEH5	BEF5
BEF5	BEF1
BEF1	BEC5
BEC5	BDC5
BDC5	BDF1
BDF1	BDF5
BDF5	BDH5
BDH5	BCH5
BCH5	BCF5
BCF5	BCF1
BCF1	BCC5
BCC5	ACF5
ACF5	ACC5
ACC5	ADC5
ADC5	ADF5
ADF5	AEF5
AEF5	AEC5
67 AEC5	APC5



PLANE NO.	BIT	SA OUTPUTS UNIT 65	MEM BFR INPUTS UNIT 2	MEM BFR INPUTS UNIT 2	LOGIC NO.
W	LI5	EJ3a	GX4e	GXG3	0.1.1
V	LI4	EK3a	GW4e	GWG3	
U	LI3	EL3a	GV4e	GVG3	
T	LI2	EM3a	GU4e	GUG3	
S	LI1	EN3a	GT4e	GTG3	
R	LI0	EP3a	GS4e	GSG3	
P	L9	ER3a	GR4e	GRG3	
N	L8	ES3a	GP4e	GPG3	
M	L7	ET3a	GN4e	GNG3	
L	L6	EU3a	GM4e	GMG3	
K	L5	EV3a	GL4e	GLG3	
J	L4	EW3a	GK4e	GKG3	
H	L3	EX3a	GJ4e	GJG3	
G	L2	EY3a	GH4e	GHG3	
F	LI	EAA3a	GG4e	GGG3	
E	L SIGN	EBB3a	GF4e	GFG3	0.1.2
D	PARITY	ECC3a	GE4e	GEG3	0.1.1

PLANE NO.	BIT	SA OUTPUTS UNIT 67	MEM BFR INPUTS UNIT 3	MEM BFR INPUTS UNIT 3	LOGIC NO.
NN	RI5	AK3a	GX4e	GXG3	0.1.2
MM	RI4	AL3a	GW4e	GWG3	
LL	RI3	AM3a	GV4e	GVG3	
KK	RI2	AN3a	GU4e	GUG3	
JJ	RI1	AP3a	GT4e	GTG3	
HH	RI0	AR3a	GS4e	GSG3	
GG	R9	AS3a	GR4e	GRG3	
FF	R8	AT3a	GP4e	GPG3	
EE	R7	AU3a	GN4e	GNG3	
DD	R6	AV3a	GM4e	GMG3	
CC	R5	AW3a	GL4e	GLG3	
BB	R4	AX3a	GK4e	GKG3	
AA	R3	AY3a	GJ4e	GJG3	
Z	R2	AAA3a	GH4e	GHG3	
Y	RI	ABB3a	GG4e	GGG3	
X	R SIGN	ACC3a	GF4e	GFG3	0.1.2

MBR 2G	MBR LOGIC	DPD 65D	DPD 65C
XBI	0.1.1	JAZ	JJZ
WBI		KAZ	KJZ
VBI		LAZ	LJZ
UBI		MAZ	MJZ
TBI		NAZ	NJZ
SBI		PAZ	PJZ
RBI		RAZ	RJZ
PBI		SAZ	SJZ
NBI		TAZ	TJZ
MBI		UAZ	UJZ
LBI		VAZ	VJZ
KBI		WAZ	WJZ
JBI		XAZ	XJZ
HBI		YAZ	YJZ
GBI		AAA2	AAJ2
FBI		BBA2	BBJ2
EBI	0.1.1	CCA2	CCJ2

BIT	DPD 65C PU PIN	ARRAY 66BJ4&P4 CONN PIN	ARRAY 66B PLANE PIN	DPD 65C PU PIN	ARRAY 66BJ3&P3 CONN PIN	ARRAY 66B PLANE PIN	DPD 65D PU PIN	ARRAY 66BJ2&P2 CONN PIN	ARRAY 66B PLANE PIN	DPD 65D PU PIN	ARRAY 66BJ1&P1 CONN PIN	ARRAY 66B PLANE PIN	LOGIC
LI5	JC1	A	W4-64	JG1	A	W3-64	JC1	A	W2-64	JG1	A	W1-64	0.2.1.7
LI4	KC1	B	V4-65	KG1	B	V3-65	KC1	B	V2-65	KG1	B	V1-65	
LI3	LC1	C	U4-64	LG1	C	U3-64	LC1	C	U2-64	LG1	C	U1-64	
LI2	MC1	D	T4-65	MG1	D	T3-65	MC1	D	T2-65	MG1	D	T1-65	
LI1	NC1	E	S4-64	NG1	E	S3-64	NC1	E	S2-64	NG1	E	S1-64	
LI0	PC1	F	R4-65	PG1	F	R3-65	PC1	F	R2-65	PG1	F	R1-65	
L9	RC1	G	P4-64	RG1	G	P3-64	RC1	G	P2-64	RG1	G	P1-64	
L8	SC1	H	N4-65	SG1	H	N3-65	SC1	H	N2-65	SG1	H	N1-65	
L7	TC1	J	M4-64	TG1	J	M3-64	TC1	J	M2-64	TG1	J	M1-64	
L6	UC1	K	L4-65	UG1	K	L3-65	UC1	K	L2-65	UG1	K	L1-65	
L5	VC1	L	K4-64	VG1	L	K3-64	VC1	L	K2-64	VG1	L	K1-64	
L4	WC1	M	J4-65	WG1	M	J3-65	WC1	M	J2-65	WG1	M	J1-65	
L3	XC1	N	H4-64	XG1	N	H3-64	XC1	N	H2-64	XG1	N	H1-64	
L2	YC1	P	G4-65	YG1	P	G3-65	YC1	P	G2-65	YG1	P	G1-65	
LI	AAC1	Q	F4-64	AAG1	Q	F3-64	AAC1	Q	F2-64	AAG1	Q	F1-64	
L SIGN	BBC1	R	E4-65	BBG1	R	E3-65	BBC1	R	E2-65	BBG1	R	E1-65	
PARITY	CCC1	S	D4-64	CCG1	S	D3-64	CCC1	S	D2-64	CCG1	S	D1-64	0.2.1.7

0-2.1.6 MC-1

0-2.1.4

67BHJ1 INHIBIT - RIGHT HALF WORD
67BFJ1 INHIBIT - RIGHT HALF WORD
67CHJ1 INHIBIT - RIGHT HALF WORD
67CFJ1 INHIBIT - RIGHT HALF WORD

3GXB1

CONDG

67CLJ1 67CLA1 67BLJ1 67BLA1
67CMJ1 67CMA1 67BMJ1 67BMA1
67CNJ1 67CNA1 67BNJ1 67BNA1
67CPJ1 67CPA1 67BPJ1 67BPA1
67CRJ1 67CRA1 67BRJ1 67BRA1
67CSJ1 67CSA1 67BSJ1 67BSA1
67CTJ1 67CTA1 67BTJ1 67BTA1
67CUJ1 67CUA1 67BUJ1 67BUA1
67CVJ1 67CVA1 67BVJ1 67BVA1
67CWJ1 67CWA1 67BWJ1 67BWA1
67CXJ1 67CXA1 67BXJ1 67BXA1
67CYJ1 67CYA1 67BYJ1 67BYA1
67CAAJ1 67CAAA1 67BAAJ1 67BAAA1
67CBBJ1 67CBBA1 67BBBJ1 67BBBA1

cDPD 5A1 2,3,4A — A1, A2, C1
cDPD 5A1 4B,5,6 — J1, J2, G1
BIT R15
67BK 77583
67CK 77583

66DA(P4) 66DA(J4) 66DNN4-65 (11)
66DA(P3) 66DA(J3) 66DNN3-65 (10)
66DA(P2) 66DA(J2) 66DNN2-65 (01)
66DA(P1) 66DA(J1) 66DNN1-65 (00)

0-2.1.7 CORE MEMORY ARRAY

DIGIT PLANE DRIVERS — RIGHT HALF WORD

MBR TO DPD				BIT	DIGIT PLANE DRIVER TO ARRAY											
MBR		DPD			DPD	ARRAY		DPD	ARRAY		LOGIC	DPD	ARRAY		DPD	ARRAY	
3G	LOGIC	67B	67C		67B	CONN PIN 66DAJ4&P4	PLANE PIN 66D	67B	CONN PIN 66DAJ3&P3	PLANE PIN 66D		67C	CONN PIN 66DAJ2&P2	PLANE PIN 66D	67C	CONN PIN 66DAJ1&P1	PLANE PIN 66D
XB1	0.1.2	KJ2	KA2	R15	KC1	A	NN4-65	KG1	A	NN3-65	0-2.1.7	KC1	A	NN2-65	KG1	A	NN1-65
WB1		LJ2	LA2	R14	LC1	B	MM4-64	LG1	B	MM3-64		LC1	B	MM2-64	LG1	B	MM1-64
VB1		MJ2	MA2	R13	MC1	C	LL4-65	MG1	C	LL3-65		MC1	C	LL2-65	MG1	C	LL1-65
UB1		NJ2	NA2	R12	NC1	D	KK4-64	NG1	D	KK3-64		NC1	D	KK2-64	NG1	D	KK1-64
TB1		PJ2	PA2	R11	PC1	E	JJ4-65	PG1	E	JJ3-65		PC1	E	JJ2-65	PG1	E	JJ1-65
SB1		RJ2	RA2	R10	RC1	F	HH4-64	RG1	F	HH3-64		RC1	F	HH2-64	RG1	F	HH1-64
RB1		SJ2	SA2	R9	SC1	G	GG4-65	SG1	G	GG3-65		SC1	G	GG2-65	SG1	G	GG1-65
PB1		TJ2	TA2	R8	TC1	H	FF4-64	TG1	H	FF3-64		TC1	H	FF2-64	TG1	H	FF1-64
NB1		UJ2	UA2	R7	UC1	J	EE4-65	UG1	J	EE3-65		UC1	J	EE2-65	UG1	J	EE1-65
MB1		VJ2	VA2	R6	VC1	K	DD4-64	VG1	K	DD3-64		VC1	K	DD2-64	VG1	K	DD1-64
LB1		WJ2	WA2	R5	WC1	L	CC4-65	WG1	L	CC3-65		WC1	L	CC2-65	WG1	L	CC1-65
KB1		XJ2	XA2	R4	XC1	M	BB4-64	XG1	M	BB3-64		XC1	M	BB2-64	XG1	M	BB1-64
JB1		YJ2	YA2	R3	YC1	N	AA4-65	YG1	N	AA3-65		YC1	N	AA2-65	YG1	N	AA1-65
HB1		AAJ2	AAA2	R2	AAC1	P	Ƶ4-64	AAG1	P	Ƶ3-64		AAC1	P	Ƶ2-64	AAG1	P	Ƶ1-64
GB1		BBJ2	BBA2	R1	BBC1	Q	Y4-65	BBG1	Q	Y3-65		BBC1	Q	Y2-65	BBG1	R	Y1-65
FB1	0.1.2	CCJ2	CCA2	RSIGN	CCC1	R	X4-64	CCG1	R	X3-64	0-2.1.7	CCC1	R	X2-64	CCG1	S	X1-64

3GFB1

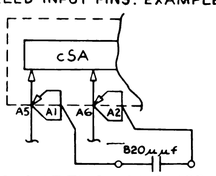
CONDG

cDPD 5A1 2,3,4A — A1, A2, C1
cDPD 5A1 4B5,6 — J1, J2, G1
RSIGN
67BCC 77583
67CCC 77583

66DA(P4) 66DA(J4) 66DX4-64 (11)
66DA(P3) 66DA(J3) 66DX3-64 (10)
66DA(P2) 66DA(J2) 66DX2-64 (01)
66DA(P1) 66DA(J1) 66DX1-64 (00)

0.1.2 R MBR TO R MEM I

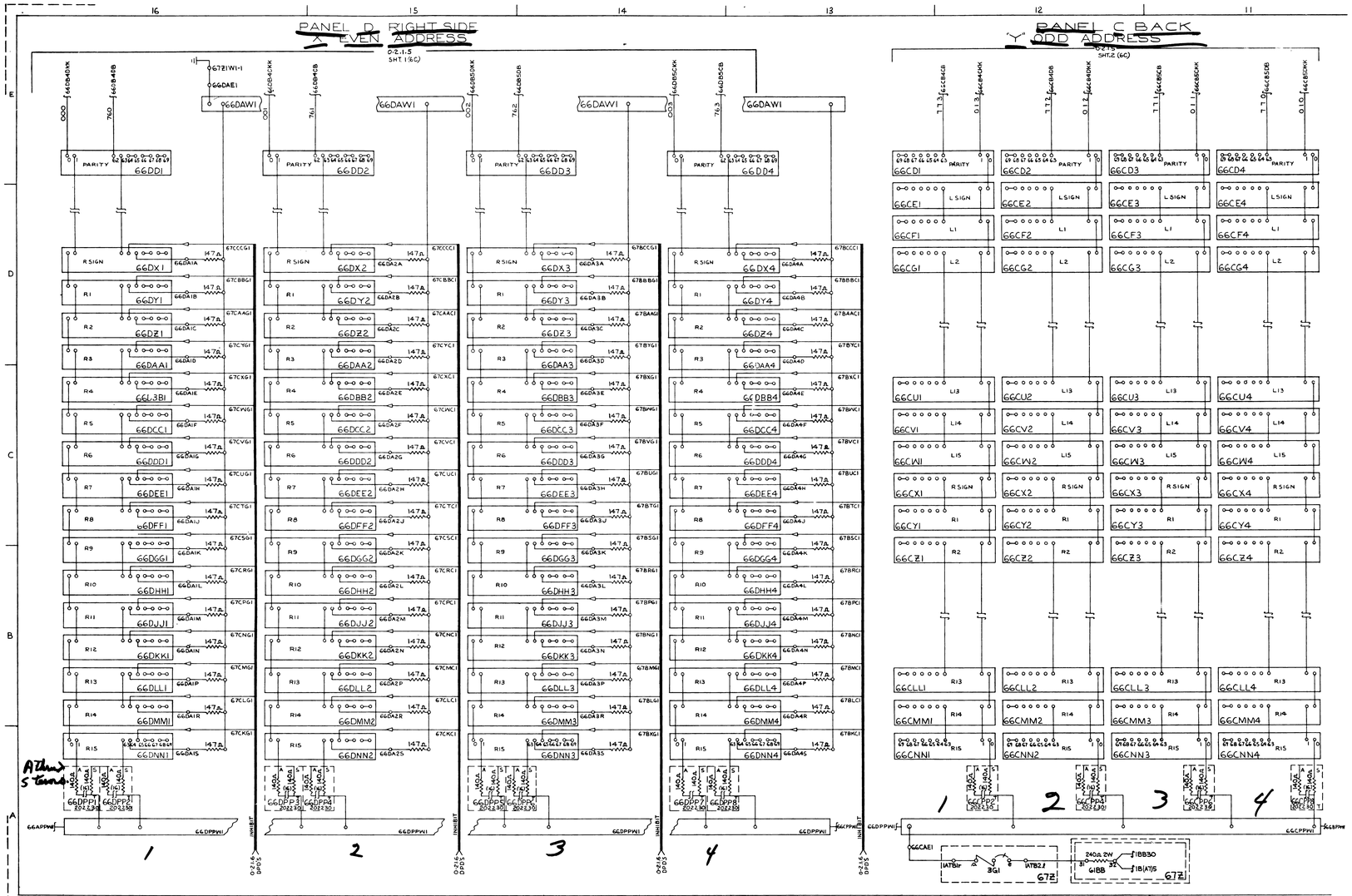
XIII EACH SA INPUT HAS PARALLED INPUT CONNECTIONS AND EACH PAIR OF SA INPUTS HAS A COMPENSATING CAPACITOR, LOCATED ON RESPECTIVE RESISTOR BOARD, CONNECTED ACROSS PARALLED INPUT PINS. EXAMPLE:

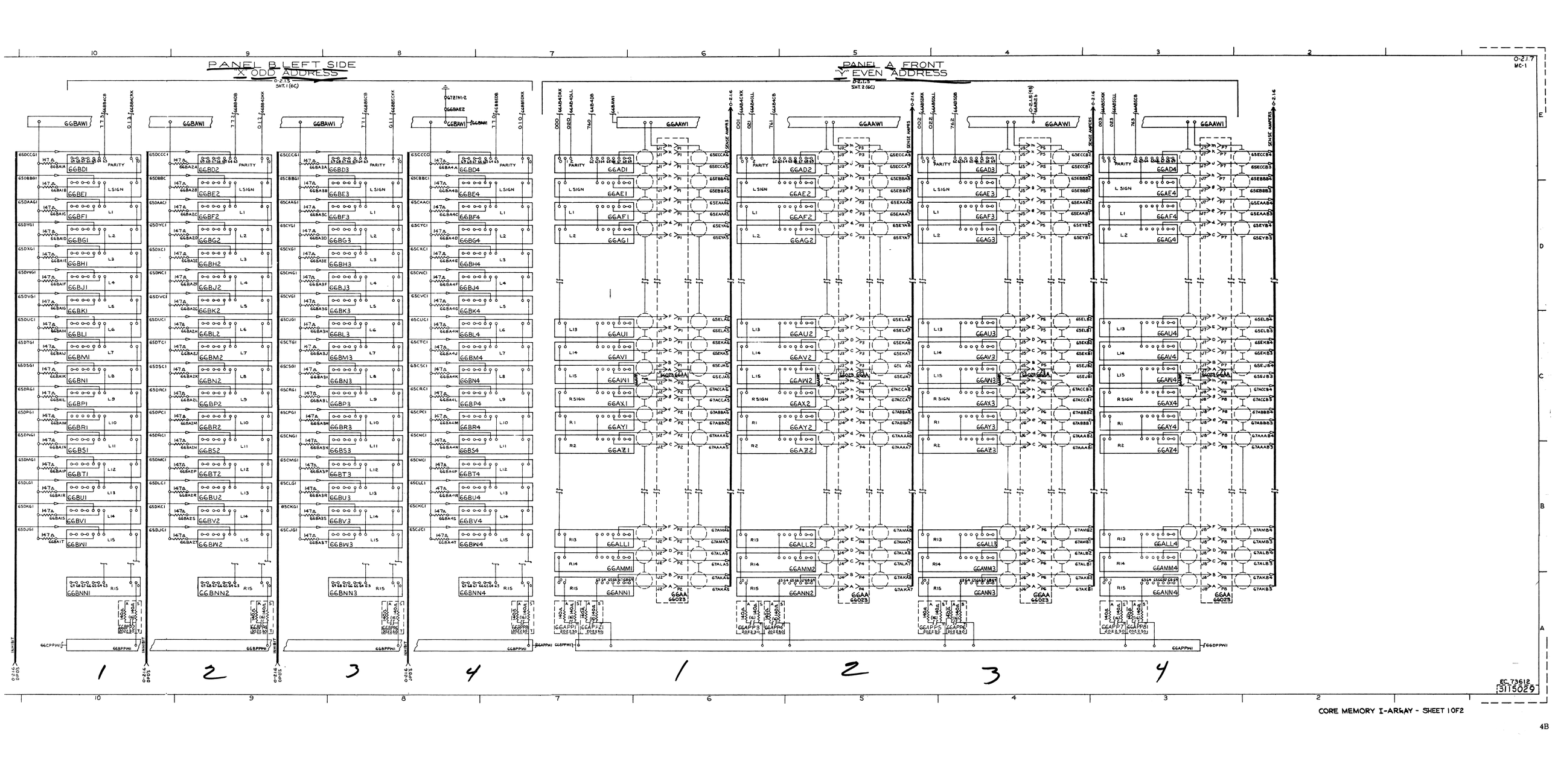


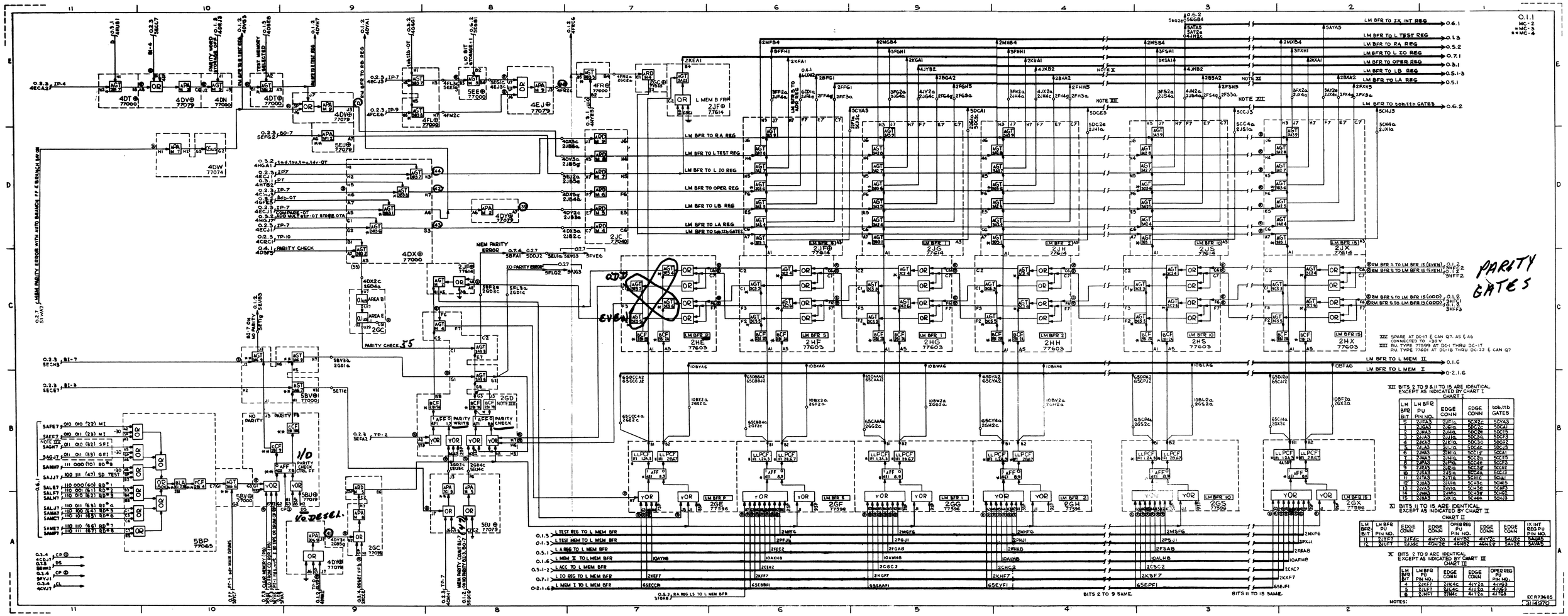
XII PORTIONS OF THIS LOGIC ARE SHOWN IN PHANTOM ON LOGIC 0.2.1.4
XI SEE TABLE II FOR BITS R SIGN - R15
X SEE TABLE I FOR BITS PARITY - L15
NOTES:

EC-737300 3115028

CORE MEMORY I-SENSE AMPLIFIERS & DIGIT PLANE DRIVERS


PANEL D RIGHT SIDE
X EVEN ADDRESS
0-2.1.5
SHT 1 (C)
PANEL C BACK
Y ODD ADDRESS
0-2.1.5
SHT 2 (C)
66DAW1
66DAE1
66DD1
66DD2
66DD3
66DD4
66DX1
66DY1
66DZ1
66DAA1
66GL3B1
66DCC1
66DDD1
66DEE1
66DFF1
66DGG1
66DHH1
66DJJ1
66DKK1
66DLL1
66DMM1
66DNN1
66DX2
66DY2
66DZ2
66DAA2
66DBB2
66DCC2
66DDD2
66DEE2
66DFF2
66DGG2
66DHH2
66DJJ2
66DKK2
66DLL2
66DMM2
66DNN2
66DX3
66DY3
66DZ3
66DAA3
66DBB3
66DCC3
66DDD3
66DEE3
66DFF3
66DGG3
66DHH3
66DJJ3
66DKK3
66DLL3
66DMM3
66DNN3
66DX4
66DY4
66DZ4
66DAA4
66DBB4
66DCC4
66DDD4
66DEE4
66DFF4
66DGG4
66DHH4
66DJJ4
66DKK4
66DLL4
66DMM4
66DNN4
66CD1
66CD2
66CD3
66CD4
66CE1
66CE2
66CE3
66CE4
66CF1
66CF2
66CF3
66CF4
66CG1
66CG2
66CG3
66CG4
66CU1
66CU2
66CU3
66CU4
66CV1
66CV2
66CV3
66CV4
66CW1
66CW2
66CW3
66CW4
66CX1
66CX2
66CX3
66CX4
66CY1
66CY2
66CY3
66CY4
66CZ1
66CZ2
66CZ3
66CZ4
66CLL1
66CLL2
66CLL3
66CLL4
66CMM1
66CMM2
66CMM3
66CMM4
66CNN1
66CNN2
66CNN3
66CNN4
66DPP1
66DPP2
66DPP3
66DPP4
66DPP5
66DPP6
66DPP7
66DPP8
66APPW1
66DPPW1
66CPPW1
66CAE1
R SIGN
L SIGN
PARITY
1
2
3
4


PANEL B LEFT SIDE
"X" ODD ADDRESS
PANEL A FRONT
"Y" EVEN ADDRESS
0-2.17
MC-1
EC 73612
[3150029
CORE MEMORY I-ARRAY - SHEET 1 OF 2
4B



XII BITS 2 TO 9 & 11 TO 15 ARE IDENTICAL EXCEPT AS INDICATED BY CHART I

CHART I

LM BFR BIT	LM BFR PU PIN NO.	EDGE CONN	EDGE CONN	tobtib GATES
S	2JFA3	2JF1a	5CX2c	5CYA3
1	2JGA3	2JG1a	5DC2c	5DCA1
2	2JHA3	2JH1a	5DC4c	5DCE5
3	2JJA3	2JJ1a	5CC4c	5CCJ3
4	2JKA3	2JK1a	5DC3c	5DCG2
5	2JLA3	2JL1a	5DC4c	5DC13
6	2JMA3	2JM1a	5CC1c	5CCA1
7	2JNA3	2JN1a	5CC2c	5CCE5
8	2JPA3	2JP1a	5CC3c	5CCG2
9	2JRA3	2JR1a	5CC3c	5CC13
10	2JSA3	2JS1a	5DC4a	5DC13
11	2JTA3	2JT1a	5CH1c	5CH61
12	2JUA3	2JU1a	5CH3c	5CH65
13	2JVA3	2JV1a	5CH5c	5CHF3
14	2JWA3	2JW1a	5CH6c	5CHG2
15	2JXA3	2JX1a	5CH4a	5CHJ3

XI BITS 11 TO 15 ARE IDENTICAL EXCEPT AS INDICATED BY CHART II

CHART II

LM BFR BIT	LM BFR PU PIN NO.	EDGE CONN	EDGE CONN	EDGE CONN	EDGE CONN	EDGE CONN	IX INT REG PU PIN NO.
11	2JTF7	2JF4G	4HV2G	4HV2c	4HV2c	5AV2c	5AVA5
12	2JUF7	2JJ4G	4GH2G	46NB2	46N2G	5AV2c	5AVA5

X BITS 2 TO 9 ARE IDENTICAL EXCEPT AS INDICATED BY CHART III

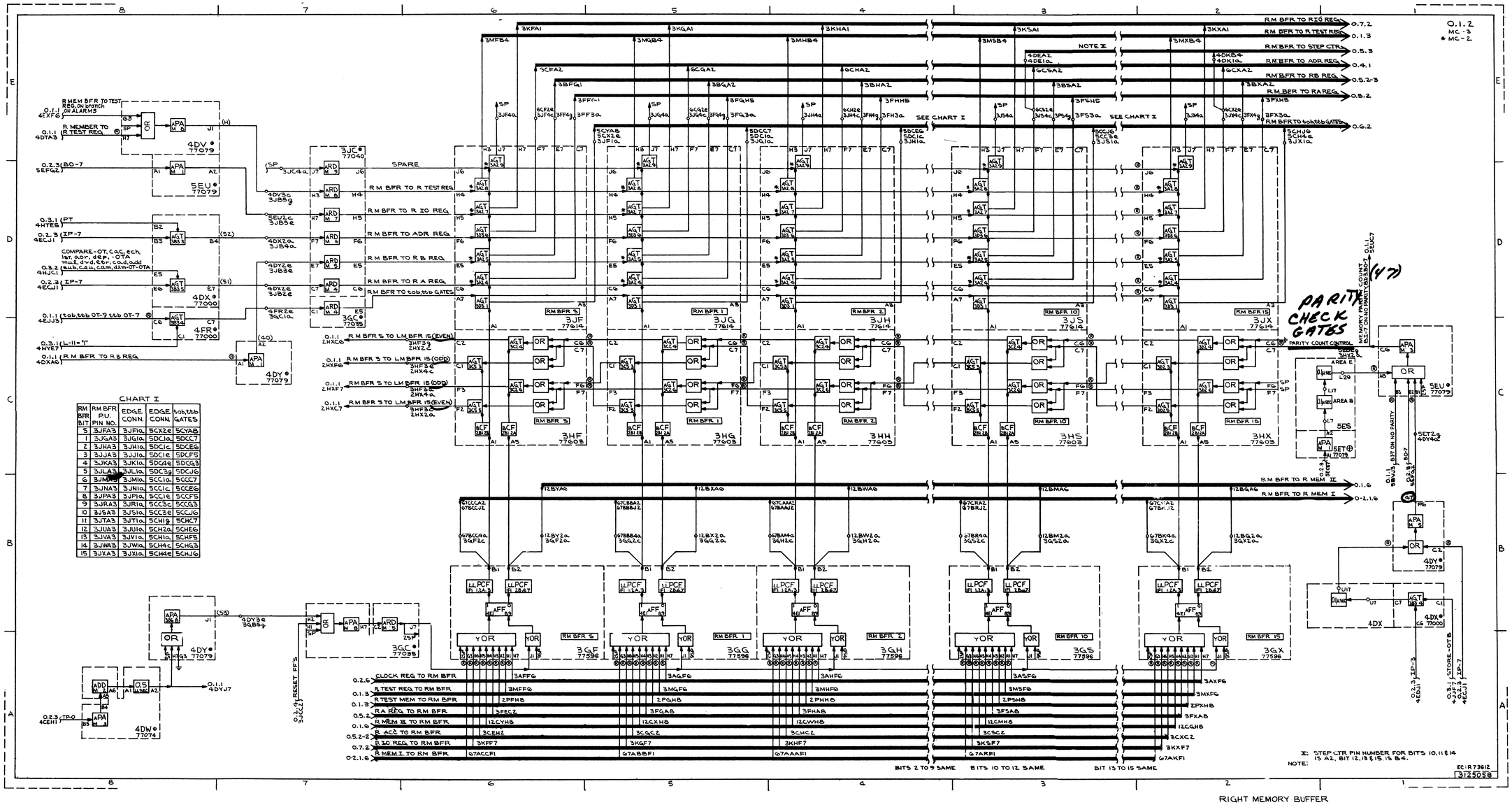
CHART III

LM BFR BIT	LM BFR PU PIN NO.	EDGE CONN	EDGE CONN	OPER REG PU PIN NO.
4	2JKF7	2JK4C	4UV2G	4UVB3
5	2JLF7	2JL4C	4UJ2G	4UJE3
6	2JMF7	2JM4C	4UT2G	4UTG3

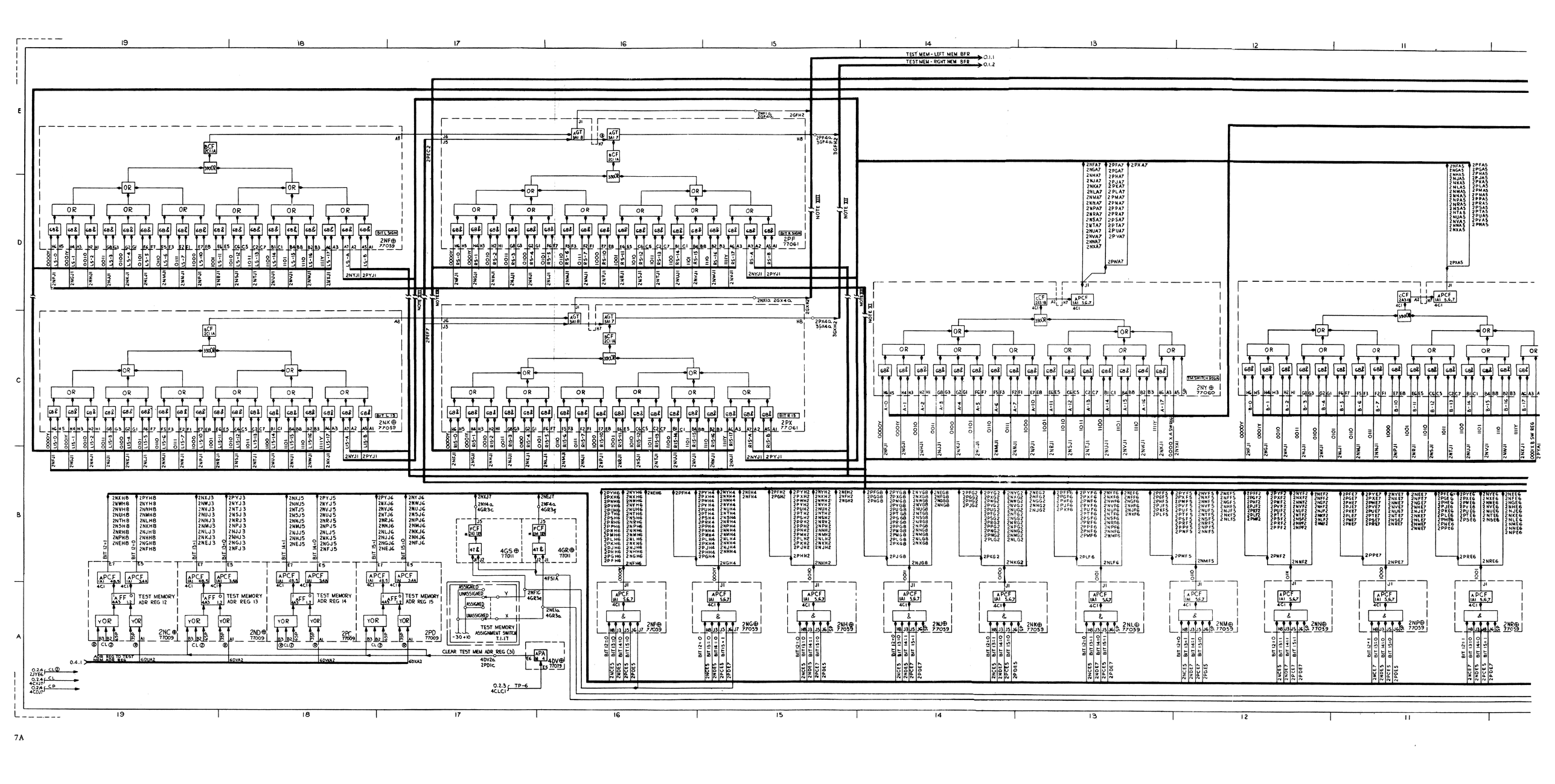
NOTES:

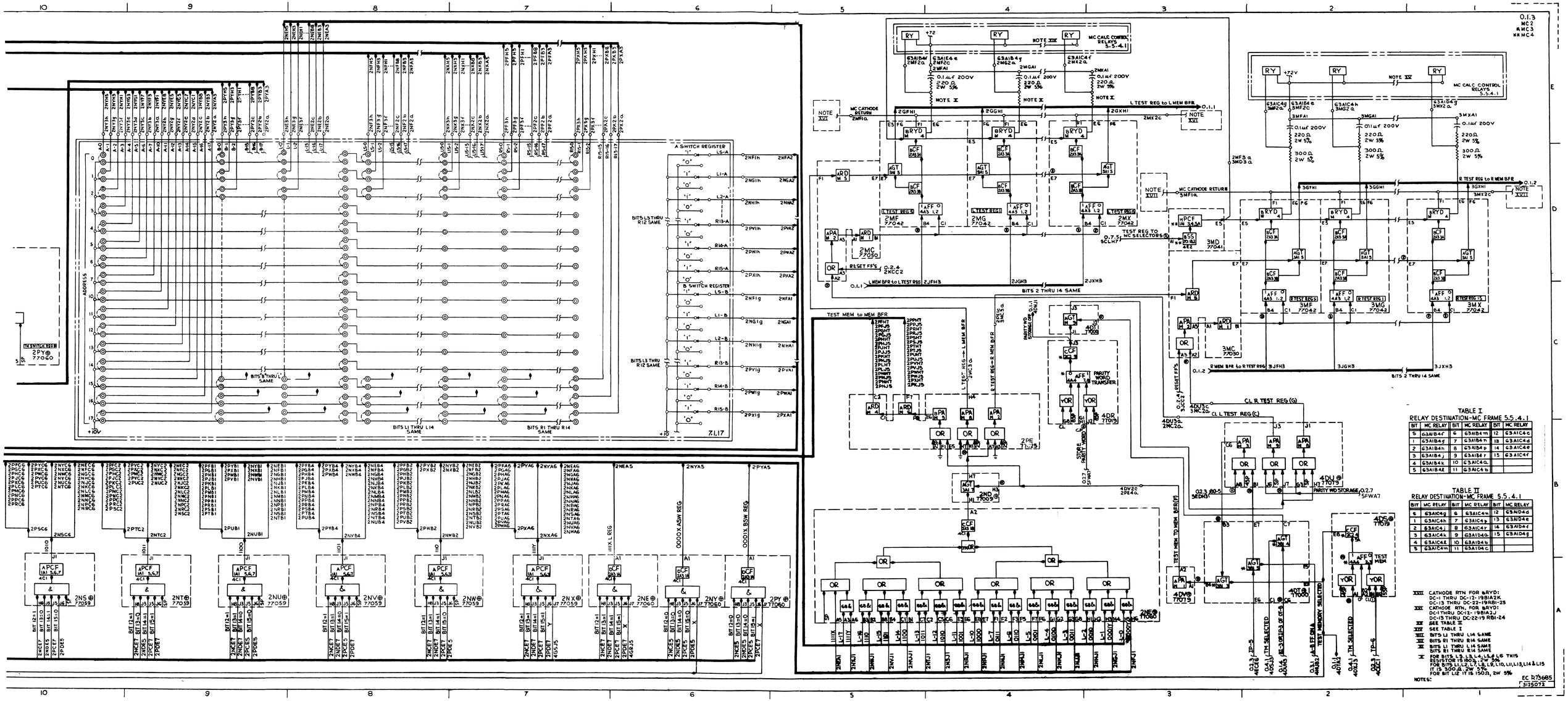
EC R73605
3114970

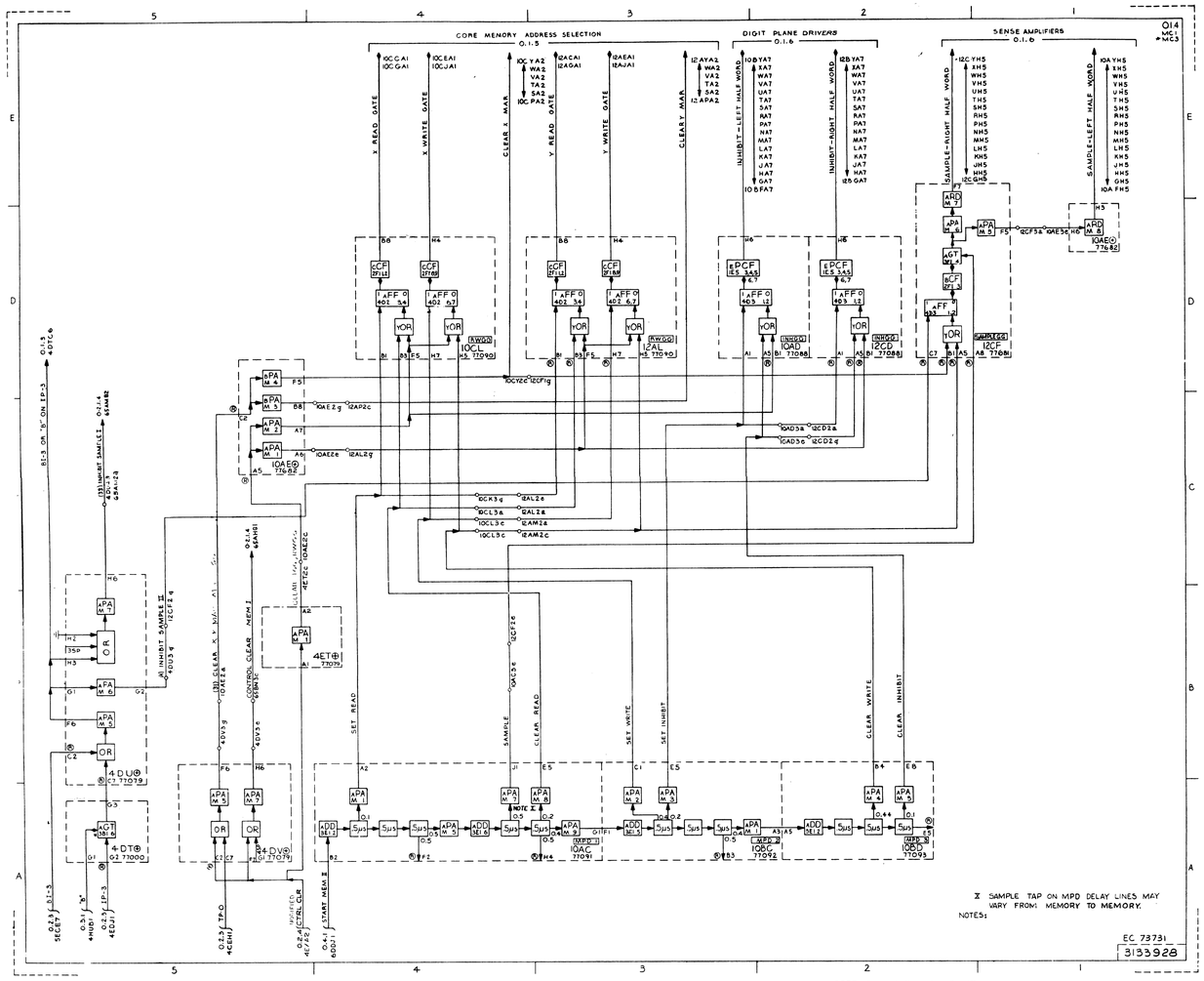
LEFT MEMORY BUFFER



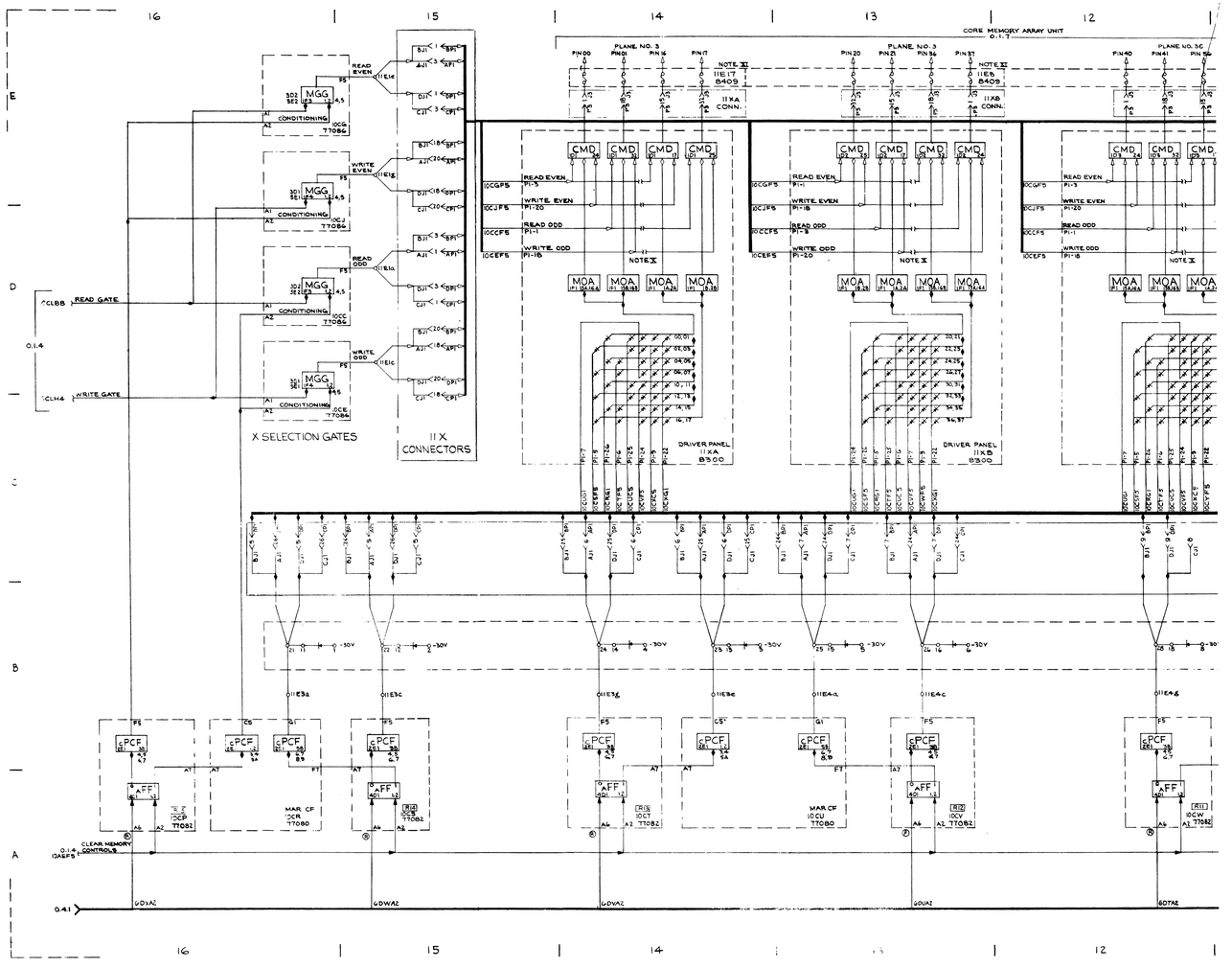
RM BFR BIT	RM BFR PU. PIN NO.	EDGE CONN.	EDGE CONN.	tob,ttb GATES
S	3JFA3	3JF1a	5CX2e	5CYA8
1	3JGA3	3JG1a	5DC1a	5DCC7
2	3JHA3	3JH1a	5DC1c	5DCE6
3	3JJA3	3JJ1a	5DC1e	5DCF5
4	3JKA3	3JK1a	5DCG6	5DCG3
5	3JLA3	3JL1a	5DC3d	5DCJ6
6	3JMA3	3JM1a	5CC1a	5CCC7
7	3JNA3	3JN1a	5CC1c	5CCE6
8	3JPA3	3JP1a	5CC1e	5CCF5
9	3JRA3	3JR1a	5CC3c	5CCG3
10	3JSA3	3JS1a	5CC3e	5CCJ6
11	3JTA3	3JT1a	5CH1g	5CHC7
12	3JUA3	3JU1a	5CH2a	5CHE6
13	3JVA3	3JV1a	5CH1c	5CHF5
14	3JWA3	3JW1a	5CH4c	5CHG3
15	3JXA3	3JX1a	5CH4e	5CHJ6

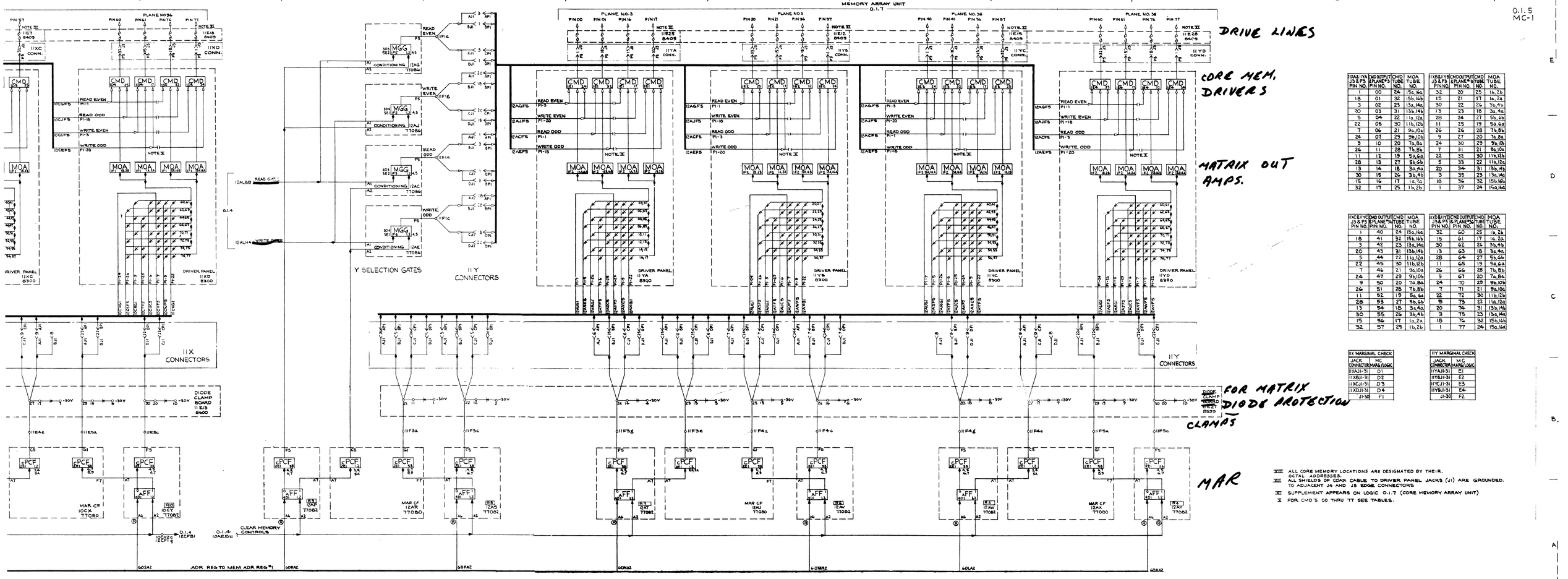

TEST MEM - LEFT MEM BFR
TEST MEM - RIGHT MEM BFR
NOTE III
TEST MEMORY ADR REG 12
TEST MEMORY ADR REG 13
TEST MEMORY ADR REG 14
TEST MEMORY ADR REG 15
TEST MEMORY ASSIGNMENT SWITCH
CLEAR TEST MEM ADR REG (3)
ADR REG TO TEST MEM ADR REG
TP-6
7A


TEST MEMORY
TABLE I
RELAY DESTINATION-MC FRAME 5.5.4.1
TABLE II
RELAY DESTINATION-MC FRAME 5.5.4.1
NOTES:
EC R73685
3125072



CORE MEMORY II TIMING AND GATING





10XA & 11YA J3 & P3 PIN NO.	CMD OUTPUT PLANE #3 PIN NO.	CMD TUBE NO.	MOA TUBE NO.
1	00	24	15a,16a
18	01	32	15b,16b
3	02	23	13a,14a
20	03	31	13b,14b
5	04	22	11a,12a
22	05	30	11b,12b
7	06	21	9a,10a
24	07	29	9b,10b
9	10	20	7a,8a
26	11	28	7b,8b
11	12	19	5a,6a
28	13	27	5b,6b
13	14	18	3a,4a
30	15	26	3b,4b
15	16	17	1a,2a
32	17	25	1b,2b

10XB & 11YB CMD J3 & P3 PIN NO.	CMD OUTPUT PLANE #3 PIN NO.	CMD TUBE NO.	MOA TUBE NO.
32	20	25	1b,2b
15	21	17	1a,2a
30	22	24	3b,4b
13	23	18	3a,4a
28	24	27	5b,6b
11	25	19	5a,6a
26	26	28	7b,8b
9	27	20	7a,8a
24	30	29	9b,10b
7	31	21	9a,10a
22	32	30	11b,12b
5	33	22	11a,12a
20	34	31	13b,14b
3	35	23	13a,14a
18	36	32	15b,16b
1	37	24	15a,16a

11XC & 11YC J3 & P3 PIN NO.	CMD OUTPUT PLANE #3 PIN NO.	CMD TUBE NO.	MOA TUBE NO.
1	40	24	15a,16a
18	41	32	15b,16b
3	42	23	13a,14a
20	43	31	13b,14b
5	44	22	11a,12a
22	45	30	11b,12b
7	46	21	9a,10a
24	47	29	9b,10b
9	50	20	7a,8a
26	51	28	7b,8b
11	52	19	5a,6a
28	53	27	5b,6b
13	54	18	3a,4a
30	55	26	3b,4b
15	56	17	1a,2a
32	57	25	1b,2b

11YD & 11YD J3 & P3 PIN NO.	CMD OUTPUT PLANE #3 PIN NO.	CMD TUBE NO.	MOA TUBE NO.
32	60	25	1b,2b
15	61	17	1a,2a
30	62	24	3b,4b
13	63	18	3a,4a
28	64	27	5b,6b
11	65	19	5a,6a
26	66	28	7b,8b
9	67	20	7a,8a
24	70	29	9b,10b
7	71	21	9a,10a
22	72	30	11b,12b
5	73	22	11a,12a
20	74	31	13b,14b
3	75	23	13a,14a
18	76	32	15b,16b
1	77	24	15a,16a

11X MARGINAL CHECK	
JACK CONNECTOR	MC MARG/LOGIC
11XJ1-31	D1
11XBJ1-31	D2
11XCJ1-31	D3
11XDJ1-31	D4
J1-30	F1

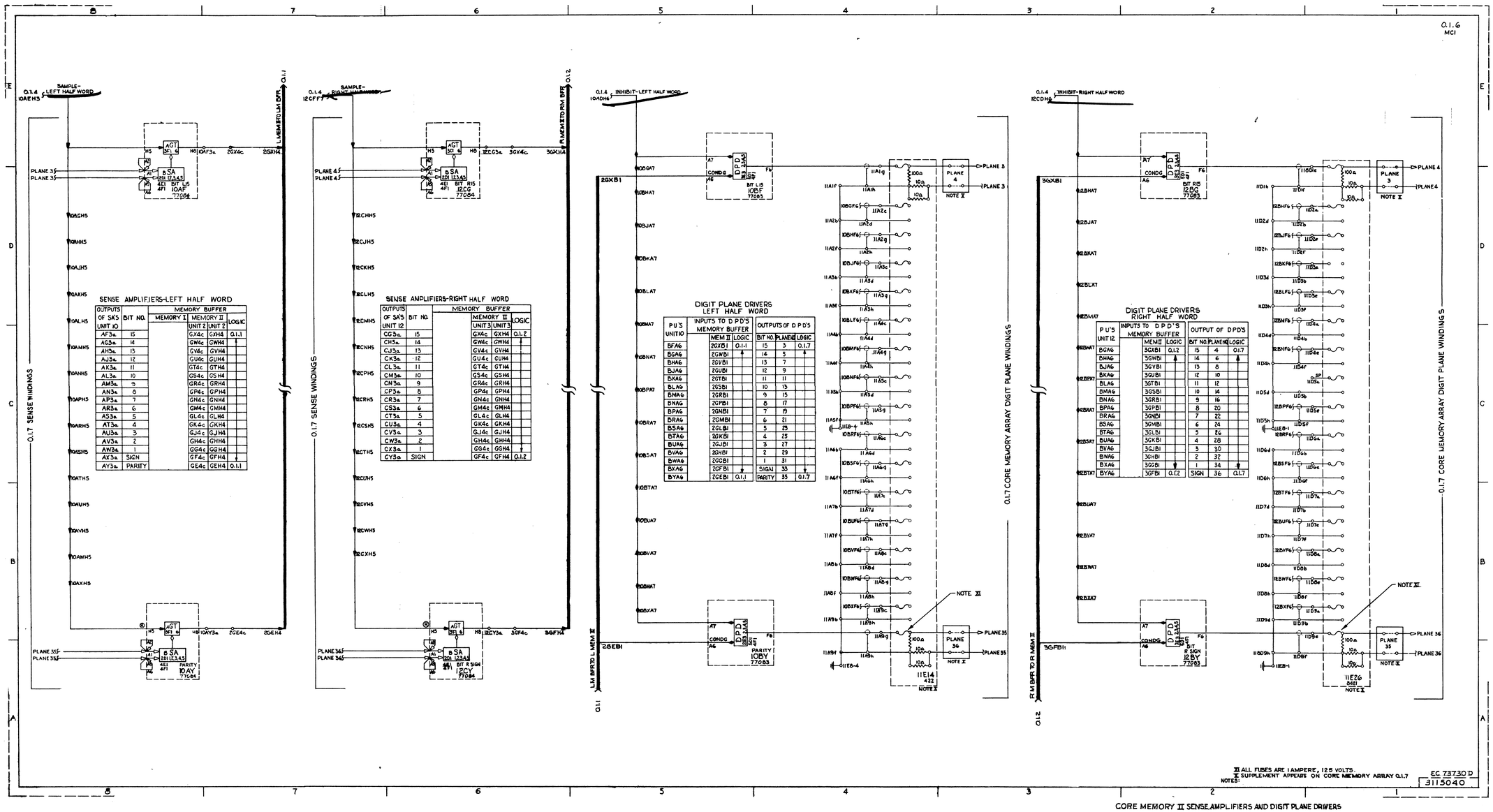
11Y MARGINAL CHECK	
JACK CONNECTOR	MC MARG/LOGIC
11YAJ1-31	E1
11YBJ1-31	E2
11YCJ1-31	E3
11YDJ1-31	E4
J1-30	F2

XIII ALL CORE MEMORY LOCATIONS ARE DESIGNATED BY THEIR OCTAL ADDRESSES.
XII ALL SHIELDS OF COAX CABLE TO DRIVER PANEL JACKS (J1) ARE GROUNDED TO ADJACENT J4 AND J5 EDGE CONNECTORS
XI SUPPLEMENT APPEARS ON LOGIC 0.1.7 (CORE MEMORY ARRAY UNIT)
X FOR CMD'S 00 THRU 77 SEE TABLES.

EC 73731
9115039

CORE MEMORY II ADDRESS SELECTION

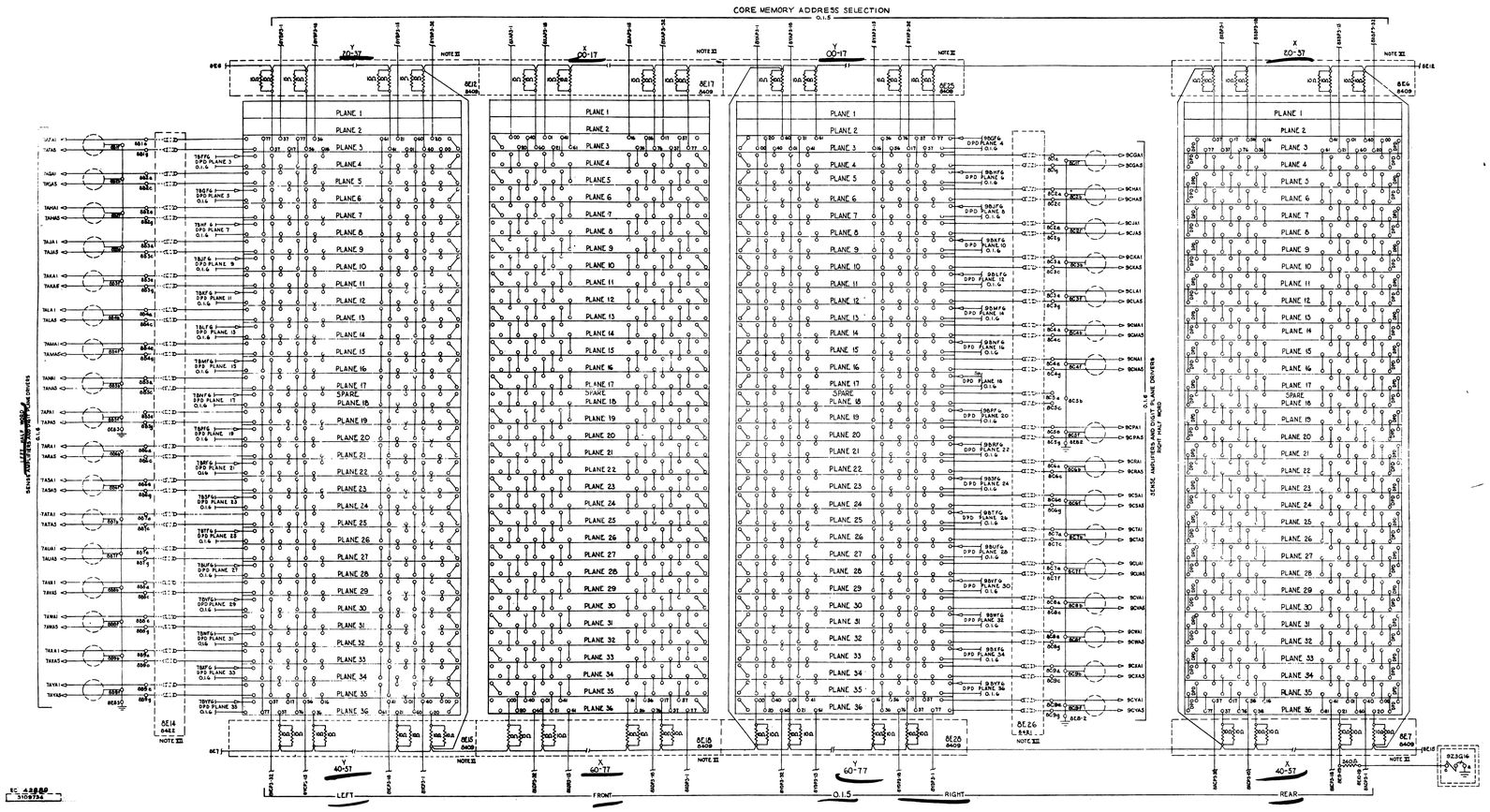
8B

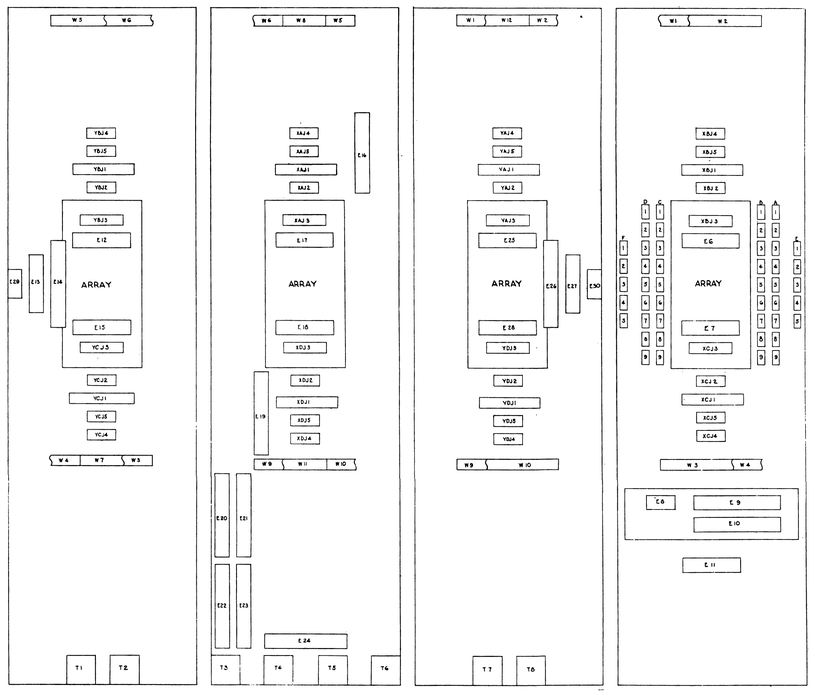


CORE MEMORY II SENSE AMPLIFIERS AND DIGIT PLANE DRIVERS

NOTES: I ALL FUSES ARE 1 AMPERE, 125 VOLTS.
X SUPPLEMENT APPEARS ON CORE MEMORY ARRAY 0.1.7

EC 737300
3115040

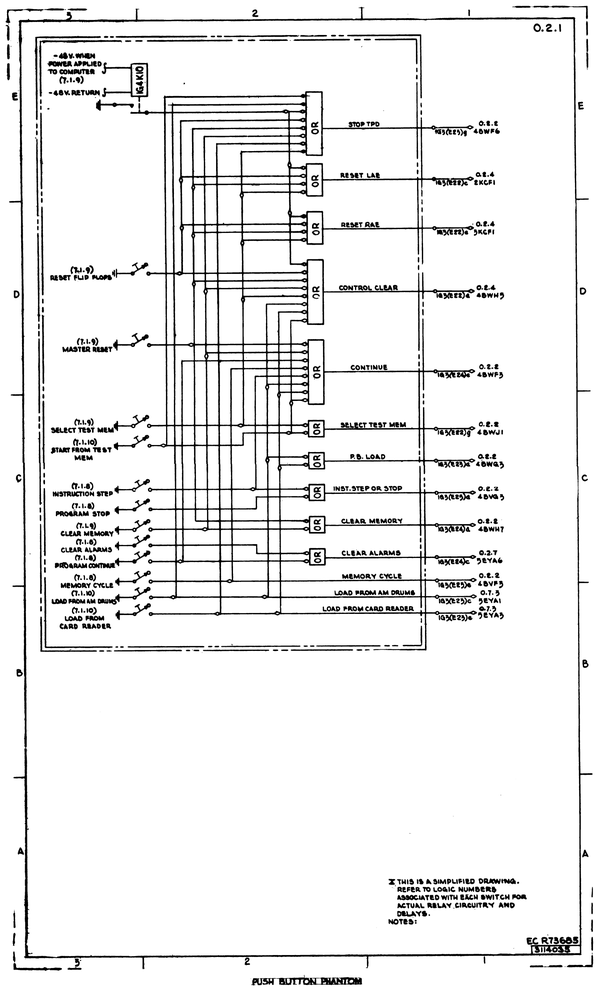




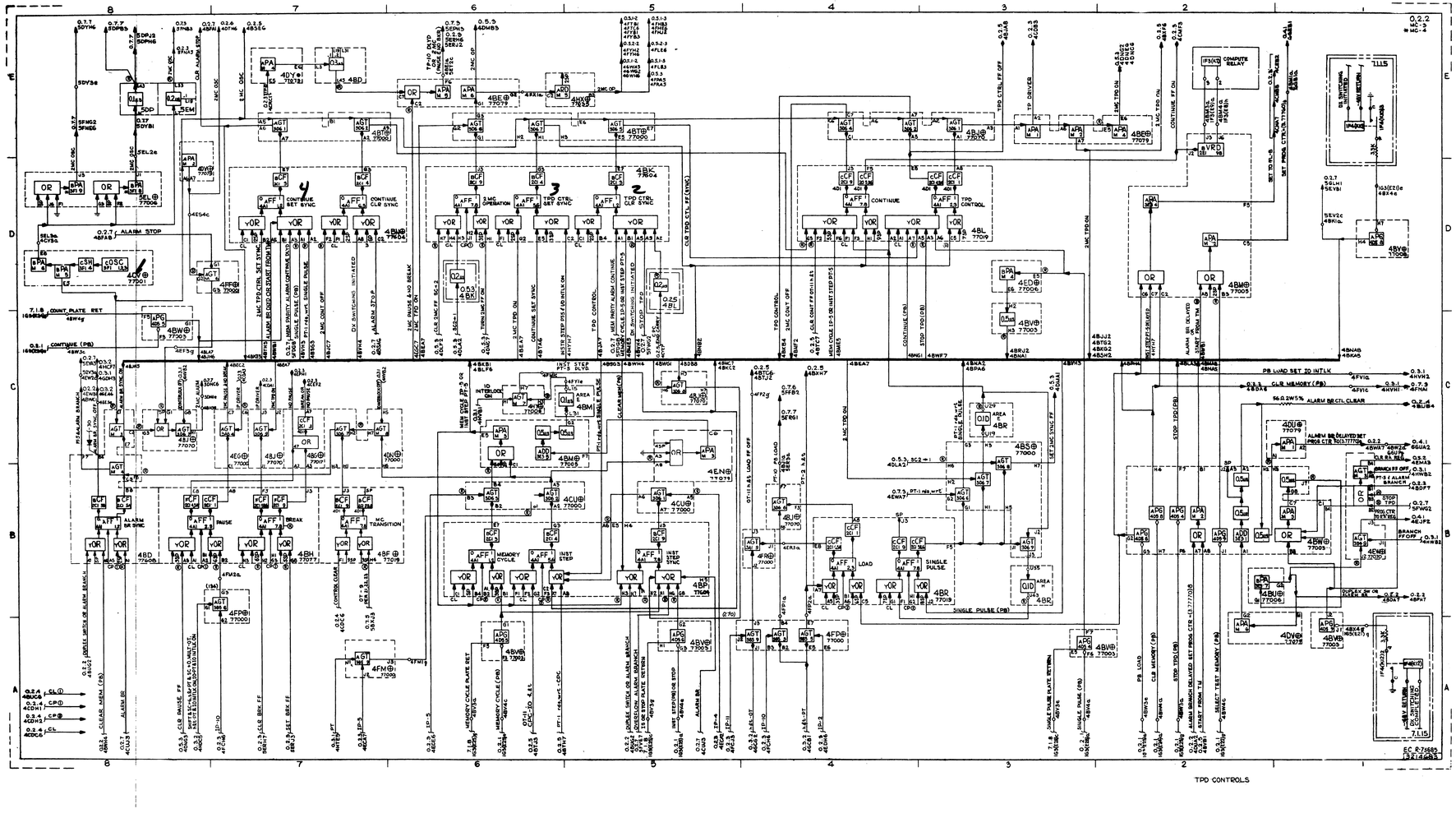
ARRAY UNIT LAYOUT

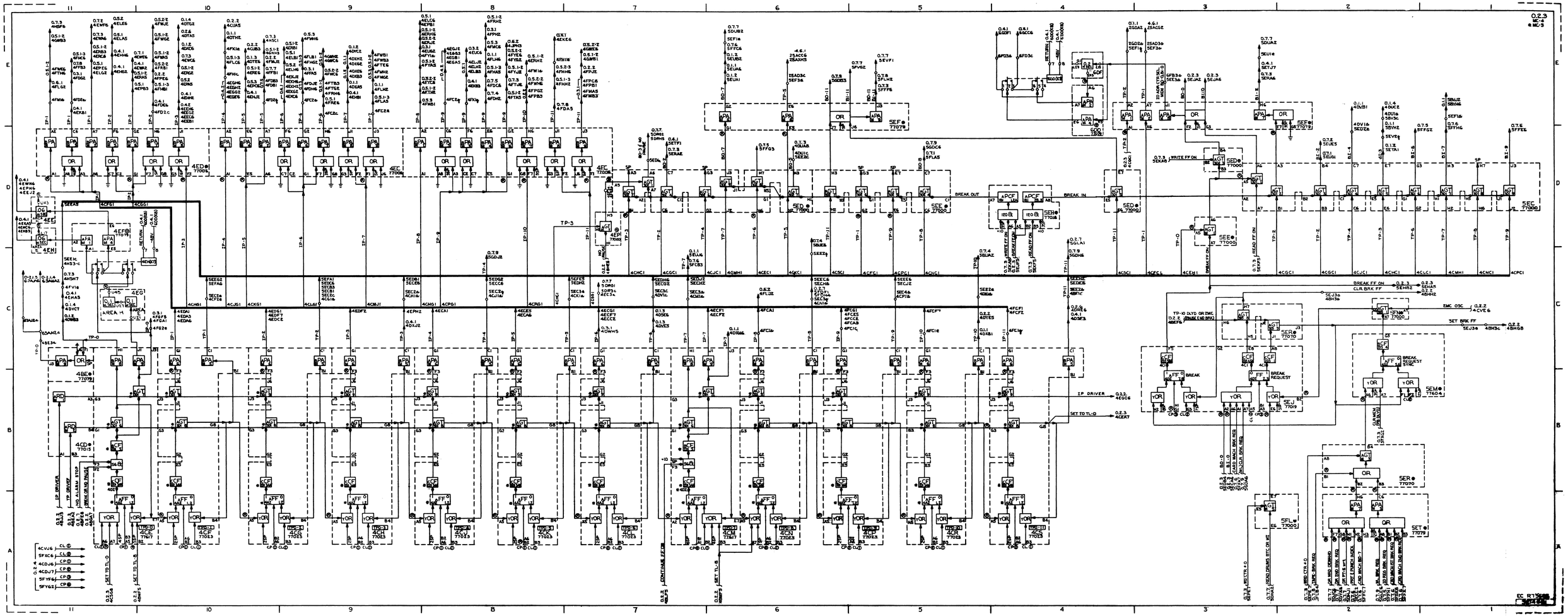
CORE MEMORY ARRAY

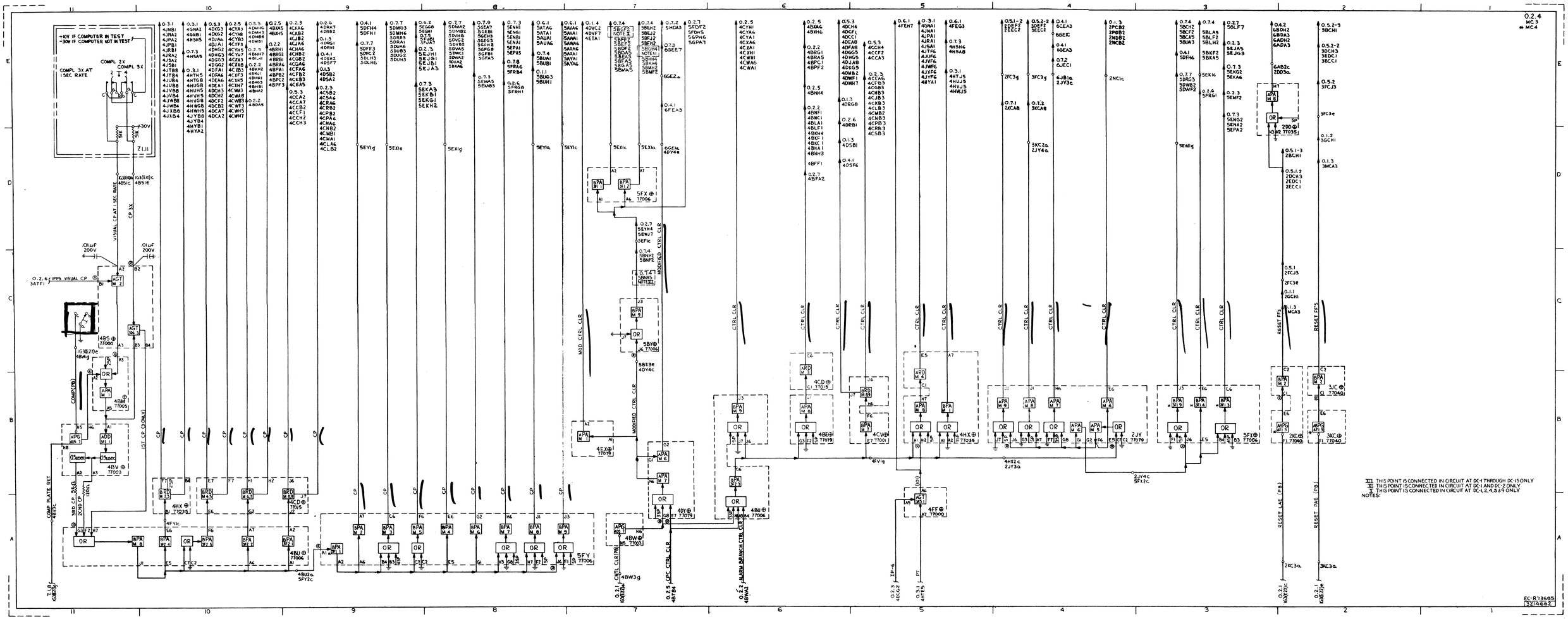
NOTES:
III ALL CORE MEMORY LOCATIONS ARE DESIGNATED BY THEIR OCTAL ADDRESSES.
II SUPPLEMENT APPEARS ON 0.1.6
II SUPPLEMENT APPEARS ON 0.1.5
I LOGIC FOR MEMORY II IS IDENTICAL TO MEMORY I EXCEPT UNITS 7,8,9 ARE REPLACED BY UNITS 0,1,2 RESPECTIVELY



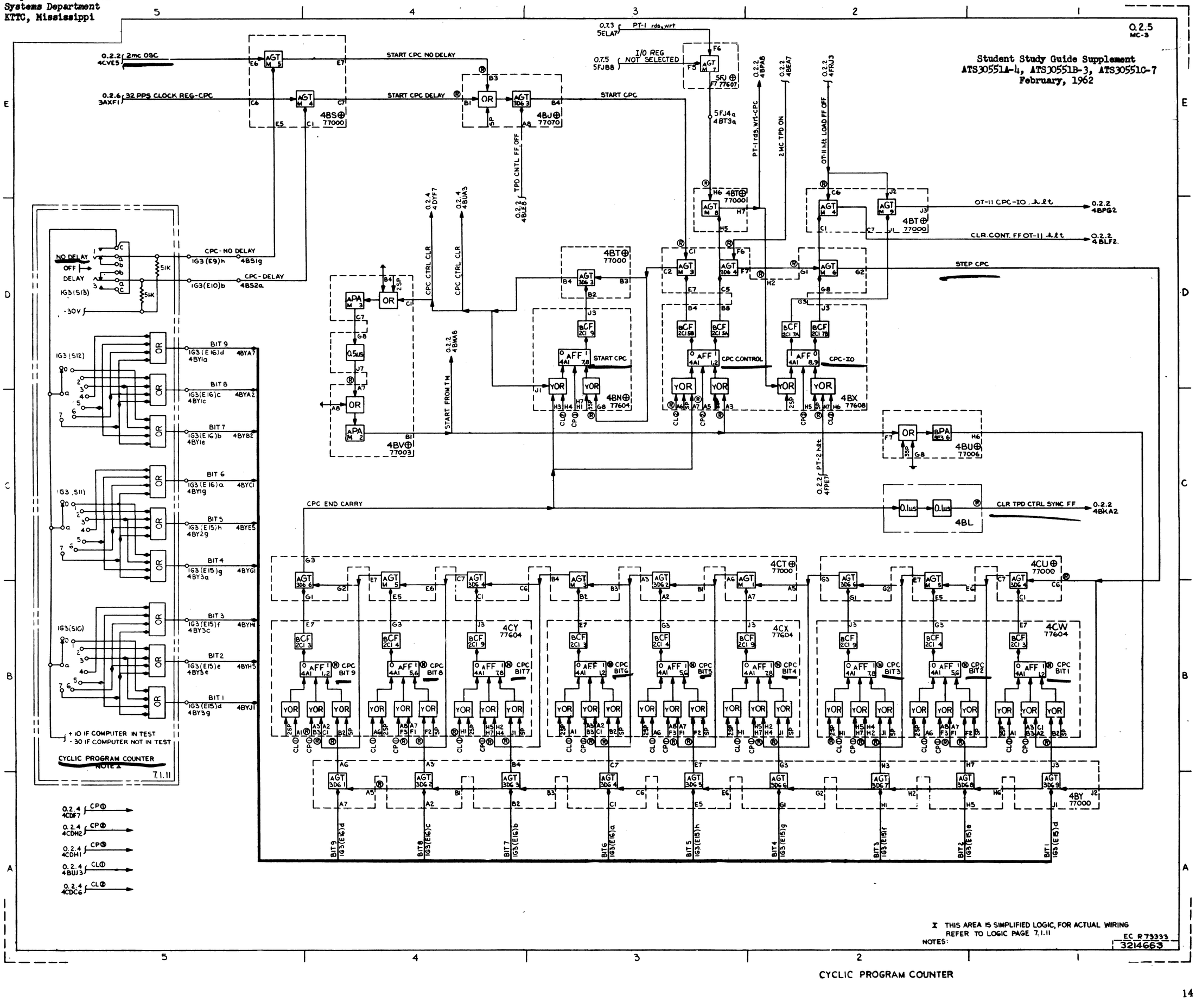
PUSH BUTTON PHANTOM




TIME PULSE DISTRIBUTOR


+30V IF COMPUTER IN TEST
-30V IF COMPUTER NOT IN TEST
COMPL 3X AT 1SEC RATE
COMPL 2X
COMPL 3X
VISUAL CP AT 1 SEC RATE
CP 3X
.01µf 200V
IPPS VISUAL CP
MOD CTRL CLR
CTRL CLR
COMP(TB)
1ST CP (3 ONLY)
2ND CP
3RD CP
COMP PLATE RET
RESET FF'S
RESET LAE (FB)
RESET PAE (FB)
COMPLIMENT AND CLEAR
THIS POINT IS CONNECTED IN CIRCUIT AT DC-1 THROUGH DC-15 ONLY
THIS POINT IS CONNECTED IN CIRCUIT AT DC-1 AND DC-2 ONLY
THIS POINT IS CONNECTED IN CIRCUIT AT DC-1,2,4,5 & 9 ONLY
NOTES:
EC-R73685
32146662
0.2.4
MC.3
* MC4

Student Study Guide Supplement
ATS30551A-4, ATS30551B-3, ATS30551C-7
February, 1962



X THIS AREA IS SIMPLIFIED LOGIC, FOR ACTUAL WIRING REFER TO LOGIC PAGE 7.1.11

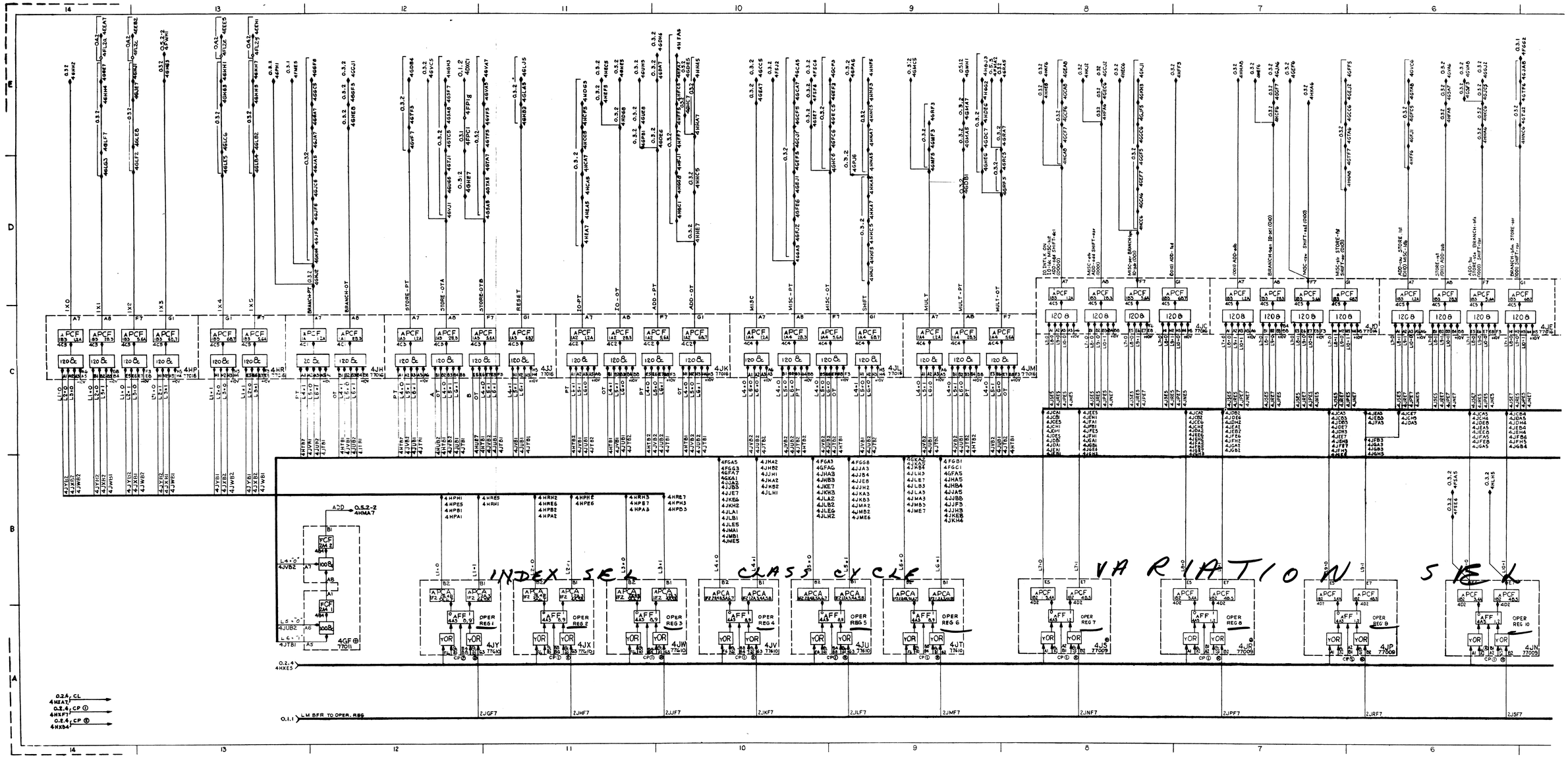
NOTES:

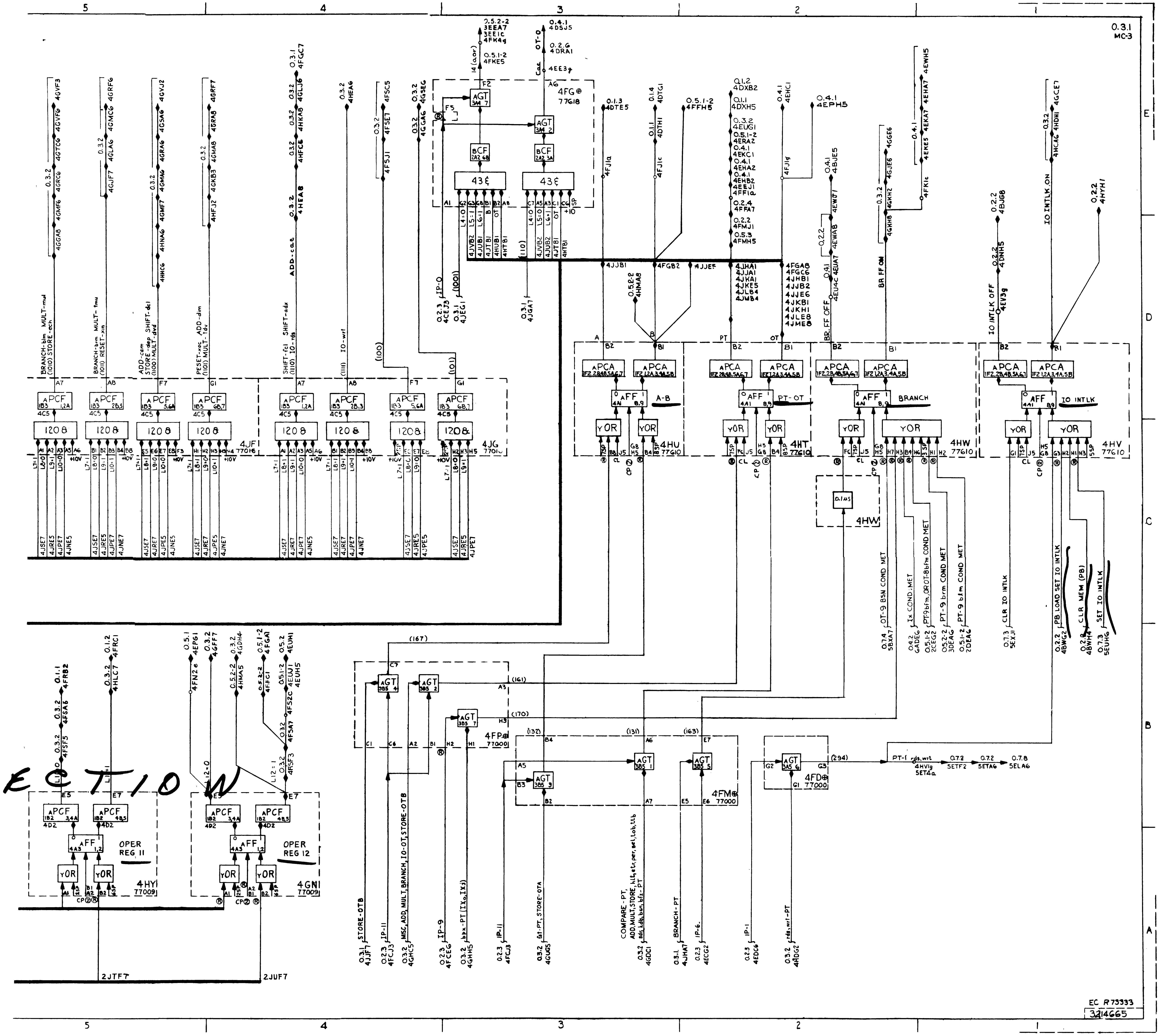
EC R 73333
3214663

CYCLIC PROGRAM COUNTER

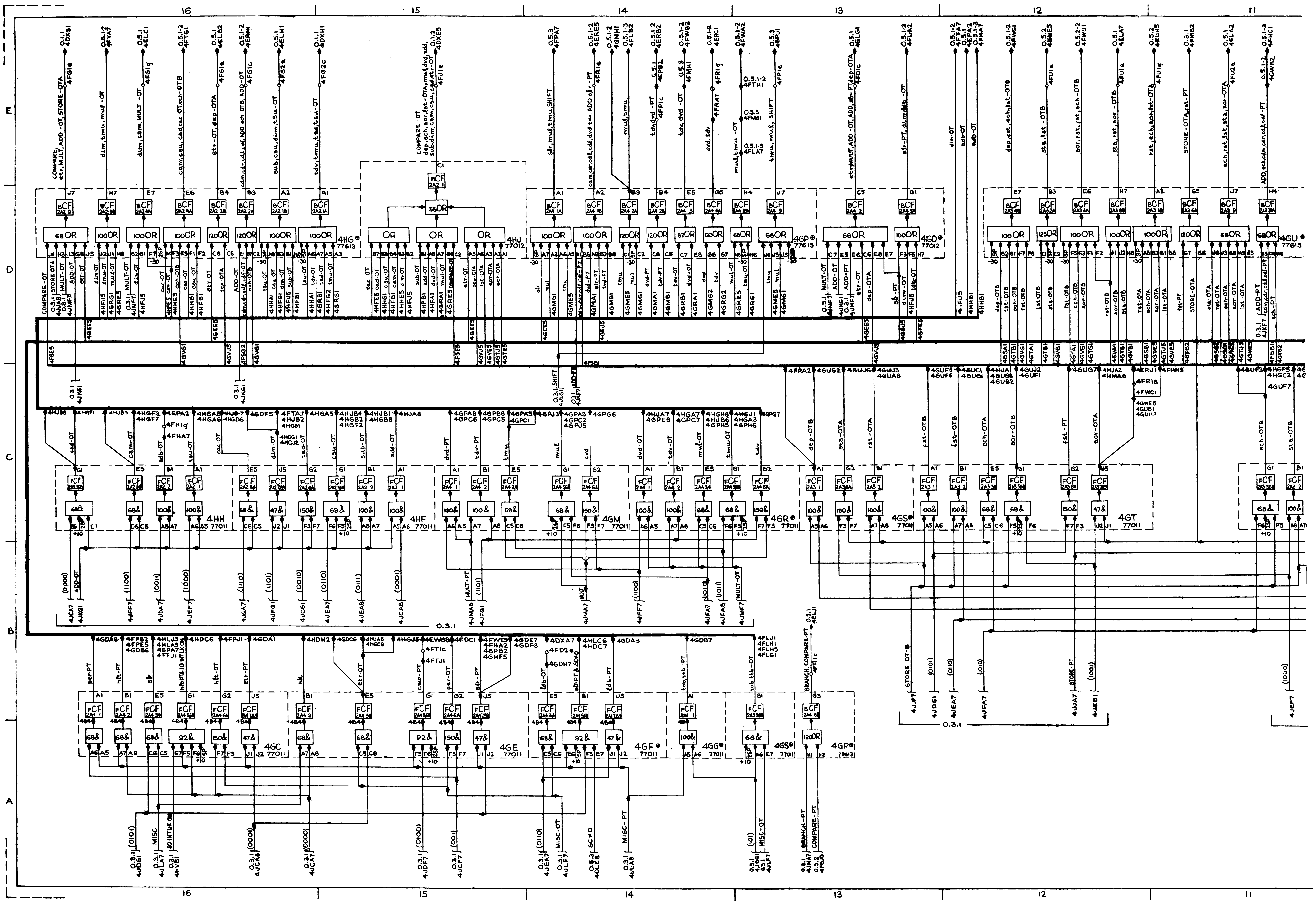
CLOCK REGISTER


O.2.7
MC 4
*MC 3
COMPUTER ALARM
CLEAR ALARMS
MODIFIED CONTROL CLEAR
OUTPUT ALARM
TAPES OPERATE
IO PARITY ERROR (B1-7)
DRUMS OPERATE
STATUS MODE
ADDRESS MODE
MEMORY PARITY ERROR
TAPE PARITY ERROR
STATUS DRUM PARITY ERROR
ADD DRUM PARITY ERROR
RIGHT OVERFLOW ALARM
LEFT OVERFLOW ALARM
TPD INACTIVITY
OTHER INACTIVITY
CONTINUE SET SYNC
CONTROL CLEAR
SET ALARM 2
SET ALARM 1
ALARM STOP
COMPUTER ACTIVE
4 SEC CLOCK
COMPUTER TEST
MODIFIED CONTROL CLEAR
ALARM 1 CONTROL
INACTIVITY TPD
INACTIVITY CTR A
INACTIVITY CTR B
MEMORY PARITY DELAY
MEMORY PARITY DELAY SYNC
STOP
BRANCH
7.1.12
5EX
5EY
E.C. 73730
3133979


INDEX SEL
CLASS CYCLE
VARIATION SEL

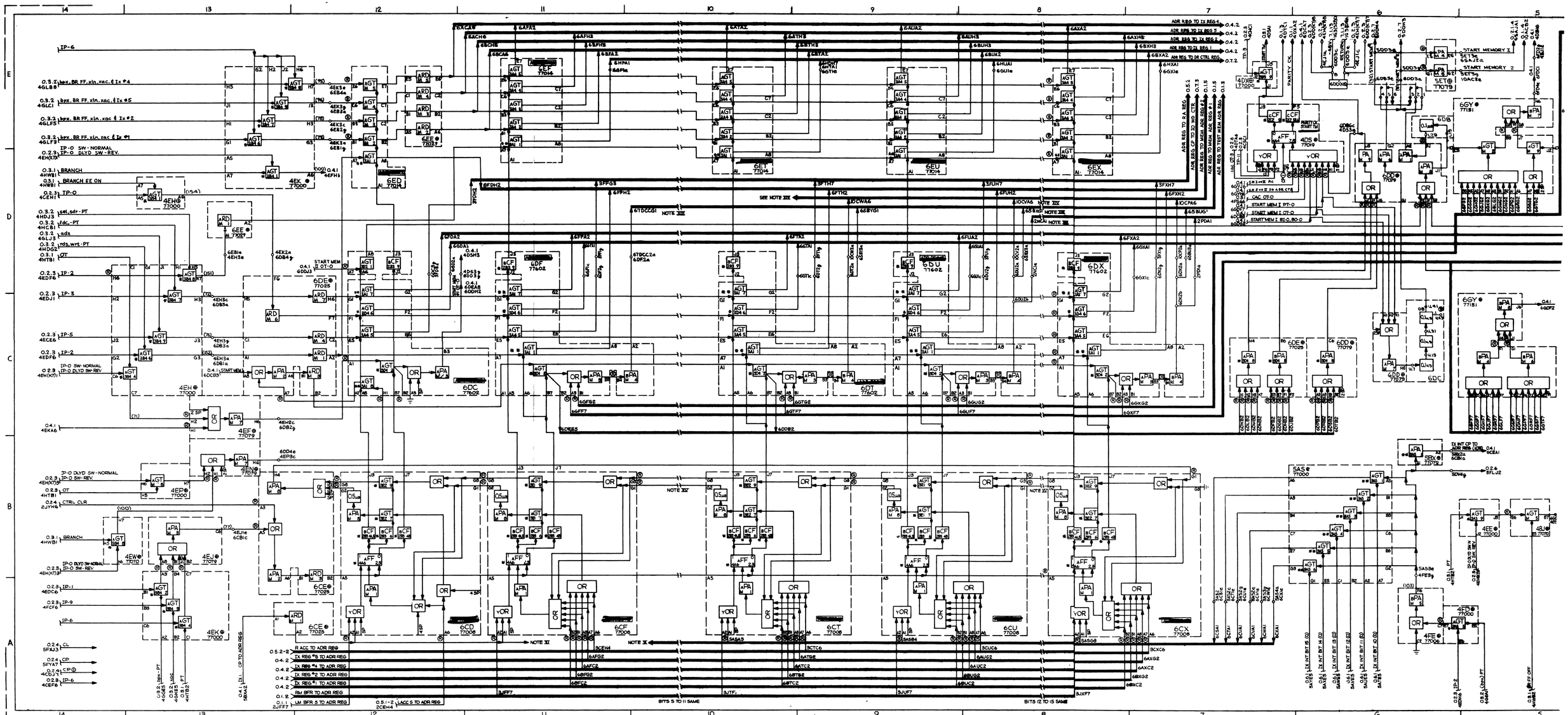


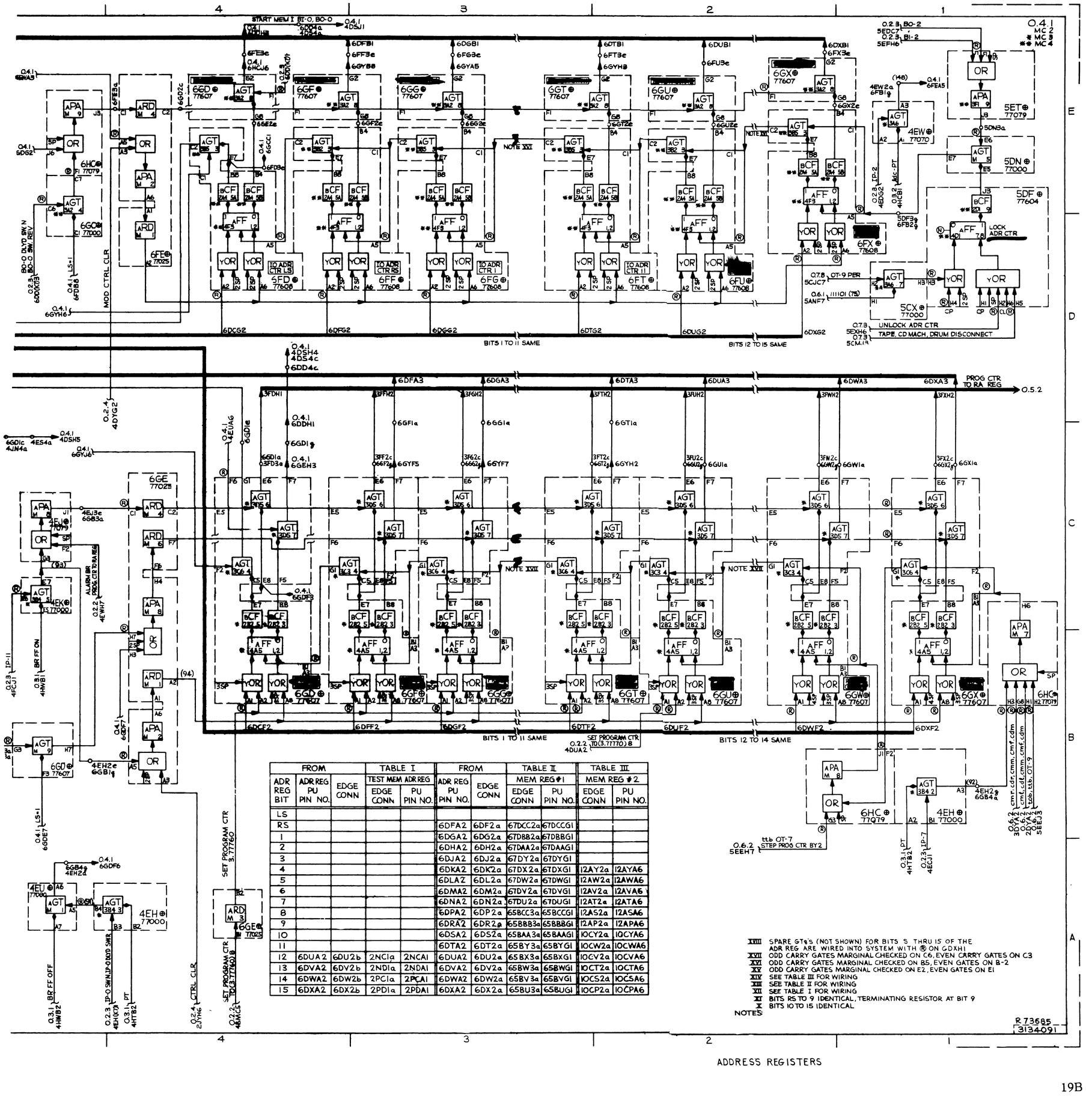
OPERATIONS REGISTER



16
15
14
13
12
11
E
D
C
B
A
4HG 77613
4HJ 77012
4GP 77613
4GD 77012
4GU 77613
4HH 77011
4HF 77011
4GM 77011
4GR 77011
4GS 77011
4GT 77011
4GC 77011
4GE 77011
4GF 77011
4GG 77011
4GS 77011
4GP 77613
COMPARE, etr, MULT, ADD -OT, STORE-OTA
dim, tmu, mul -OT
dim, cam, MULT -OT
cam, csu, cad, cac-OT, ech-OTB
etr-OT, dep-OTA
cdm, cdr, cdl, cdf, ADD ech-OTB, ADD-OT
sub, csu, dim, tsu-OT
tdv, tmu, tad, tsu-OT
COMPARE -OT dep, ech, aor, fst-OTA, mul, dvd, add, sub, dim, cam, csu, cad, etr-OT
slr, mul, tmu, SHIFT
cdm, cdr, cdl, cdf, dvd, tdv, ADD slr-PT
mul, tmu
tdv, dvd -PT
tdv, dvd -OT
dvd, tdv
mul, tmu -OT
tmu, mul, SHIFT
etr, MULT, ADD -OT, ADD, slr-PT, dep-OTA
slr-PT, dim, ldb -OT
dim-OT
adb-OT
dep, rst, ech, lst-OTB
sta, lst -OTB
aor, rst, fst, ech -OTB
sta, rst, aor -OTB
rst, ech, aor, fst-OTA
STORE-OTA, fst-PT
ech, rst, lst, sta, aor-OTA
ADD, ech, cdm, cdr, cdl, cdf-PT
cad-OT
cam-OT
adb-OT
tsu-OT
cac-OT
dim-OT
tad-OT
csu-OT
sub-OT
add-OT
dvd-PT
tdv-PT
tmu
mul
dvd
dvd-OT
tdv-OT
mul-OT
tmu-OT
tdv
dep-OTB
sta-OTA
rst-OTA
fst-OTB
lst-OTB
ech-OTA
aor-OTB
fst-PT
aor-OTA
ech-OTB
sta-OTB
0.3.1
STORE OT-B
STORE-PT
per-PT
hlt-PT
slr
hlt-OT
etr-PT
etr-OT
csw-PT
per-OT
slr-PT
ldb-OT
slr-PT & SC≠0
ldb-PT
tob, ttb-PT
tob, ttb-OT
BRANCH, COMPARE-PT
MISC
30 INTLK ON
MISC-OT
SC≠0
MISC-PT
BRANCH-PT
COMPARE-PT

INSTRUCTION MATRIX



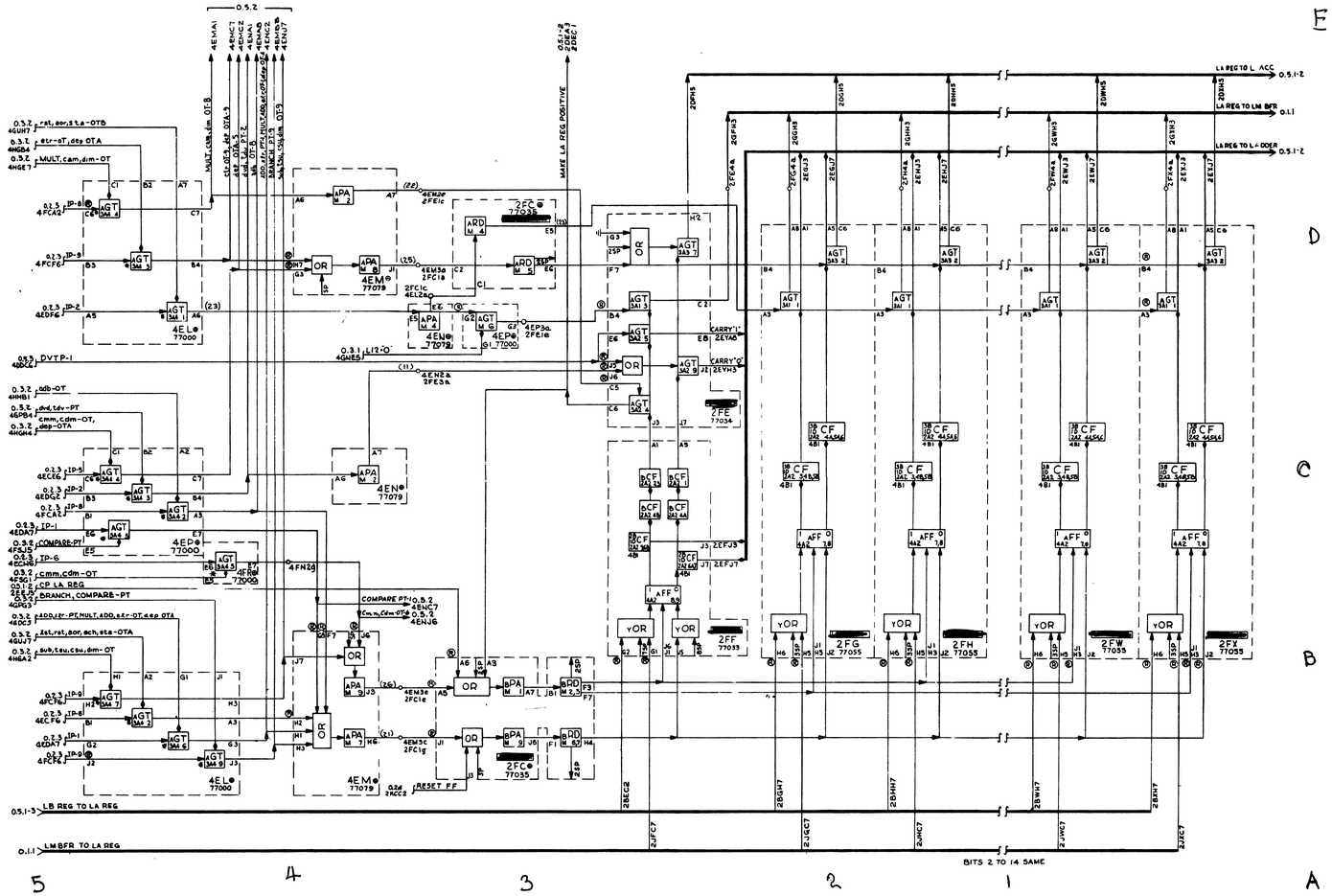


FROM			TABLE I		FROM		TABLE II		TABLE III	
			TEST MEM ADR REG				MEM REG #1		MEM REG #2	
ADR REG BIT	ADR REG PU PIN NO.	EDGE CONN	EDGE CONN	PU PIN NO.	ADR REG PU PIN NO.	EDGE CONN	EDGE CONN	PU PIN NO.	EDGE CONN	PU PIN NO.
LS										
RS					6DFA2	6DF2a	67DCC2a	67DCCG1		
1					6DGA2	6DG2a	67DBB2a	67DBBG1		
2					6DHA2	6DH2a	67DAA2a	67DAAG1		
3					6DJA2	6DJ2a	67DY2a	67DYG1		
4					6DKA2	6DK2a	67DX2a	67DXG1	12AY2a	12AYA6
5					6DLA2	6DL2a	67DW2a	67DWG1	12AW2a	12AWA6
6					6DMA2	6DM2a	67DV2a	67DVG1	12AV2a	12AVA6
7					6DNA2	6DN2a	67DU2a	67DUG1	12AT2a	12ATA6
8					6DPA2	6DP2a	65BCC3a	65BCCG1	12AS2a	12ASA6
9					6DRA2	6DR2a	65BBB3a	65BBBG1	12AP2a	12APA6
10					6DSA2	6DS2a	65BAA3a	65BAAG1	10CY2a	10CYA6
11					6DTA2	6DT2a	65BY3a	65BYG1	10CW2a	10CWA6
12	6DUA2	6DU2b	2NC1a	2NCA1	6DUA2	6DU2a	65BX3a	65BXG1	10CV2a	10CVA6
13	6DVA2	6DV2b	2ND1a	2NDA1	6DVA2	6DV2a	65BW3a	65BWG1	10CT2a	10CTA6
14	6DWA2	6DW2b	2PC1a	2PCA1	6DWA2	6DW2a	65BV3a	65BVG1	10CS2a	10CSA6
15	6DXA2	6DX2b	2PD1a	2PDA1	6DXA2	6DX2a	65BU3a	65BUG1	10CP2a	10CPA6

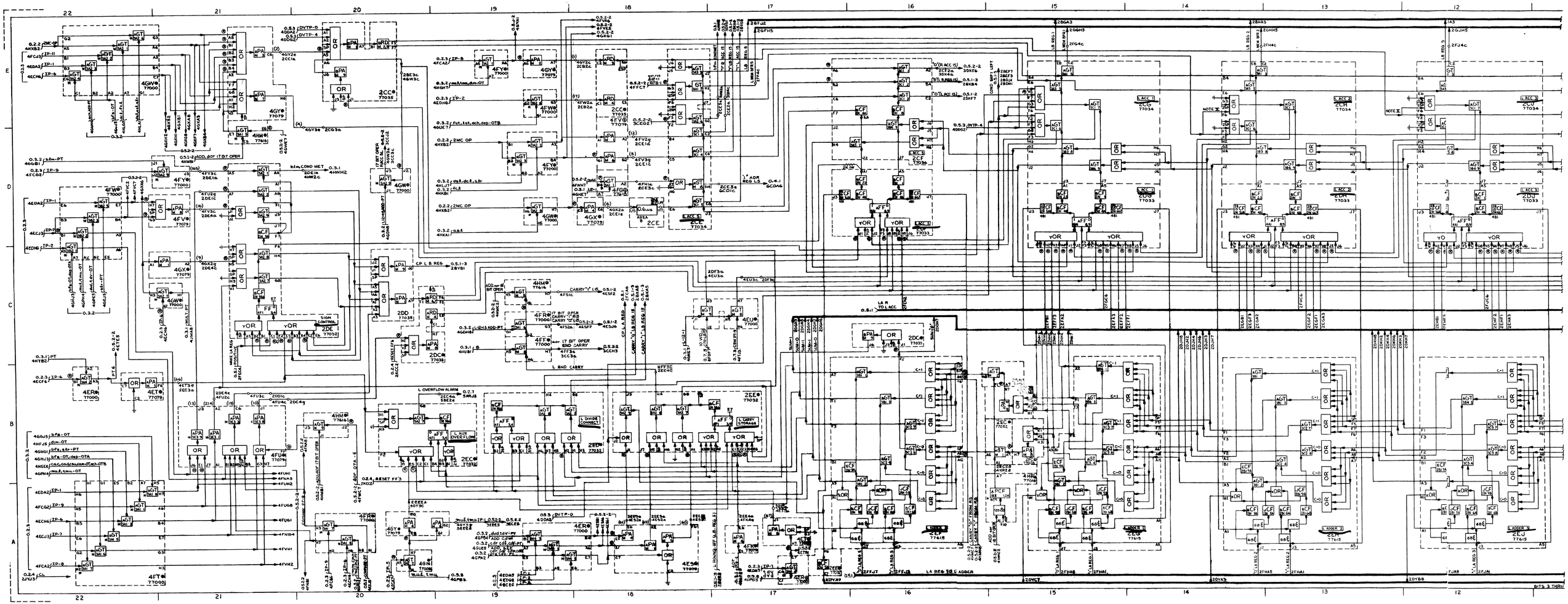
XVIII SPARE GTs's (NOT SHOWN) FOR BITS 5 THRU 15 OF THE ADR REG ARE WIRED INTO SYSTEM WITH ® ON GDXH1
XVII ODD CARRY GATES MARGINAL CHECKED ON C6, EVEN CARRY GATES ON C3
XVI ODD CARRY GATES MARGINAL CHECKED ON B5, EVEN GATES ON B-2
XV ODD CARRY GATES MARGINAL CHECKED ON E2, EVEN GATES ON E1
XIV SEE TABLE III FOR WIRING
XIII SEE TABLE II FOR WIRING
XII SEE TABLE I FOR WIRING
XI BITS RS TO 9 IDENTICAL, TERMINATING RESISTOR AT BIT 9
X BITS 10 TO 15 IDENTICAL
NOTES

R 73685
3134091

IX REG *1 TO ADR REG
0.4.1
IX REG *2 TO ADR REG
IX REG *4 TO ADR REG
IX REG *5 TO ADR REG
IX COND MET
0.3.1 4HWB4
6AB3e 4HW2g
ADR REG TO IX REG *1
ADR REG TO IX REG *2
ADR REG TO IX REG *4
ADR REG TO IX REG *5
TEST IX REG FOR ZERO
RESET FF's(PB)
0.2.4 2DDH7
INDEXING & IX1
INDEXING & IX2
INDEXING & IX4
INDEXING & IX5
bpx-PT & BRANCH FF ON & IX1
bpx-PT & IX1
bpx-PT & BRANCH FF ON & IX2
bpx-PT & IX2
bpx-PT & BRANCH FF ON & IX4
bpx-PT & IX4
bpx-PT & BRANCH FF ON & IX5
bpx-PT & IX5
IP-3
IP-8 DLYD
IP-9
IP-4
4EE● 77000
4EF● 77079
4EG● 77000
6BD● 77025
6BC● 77608
6BF● 77608
6BG● 77608
6BX● 77608
6AD● 77025
6AC● 77608
6AF● 77608
6AG● 77608
6AX● 77608
BITS 1-15 SAME
INDEX REGISTERS



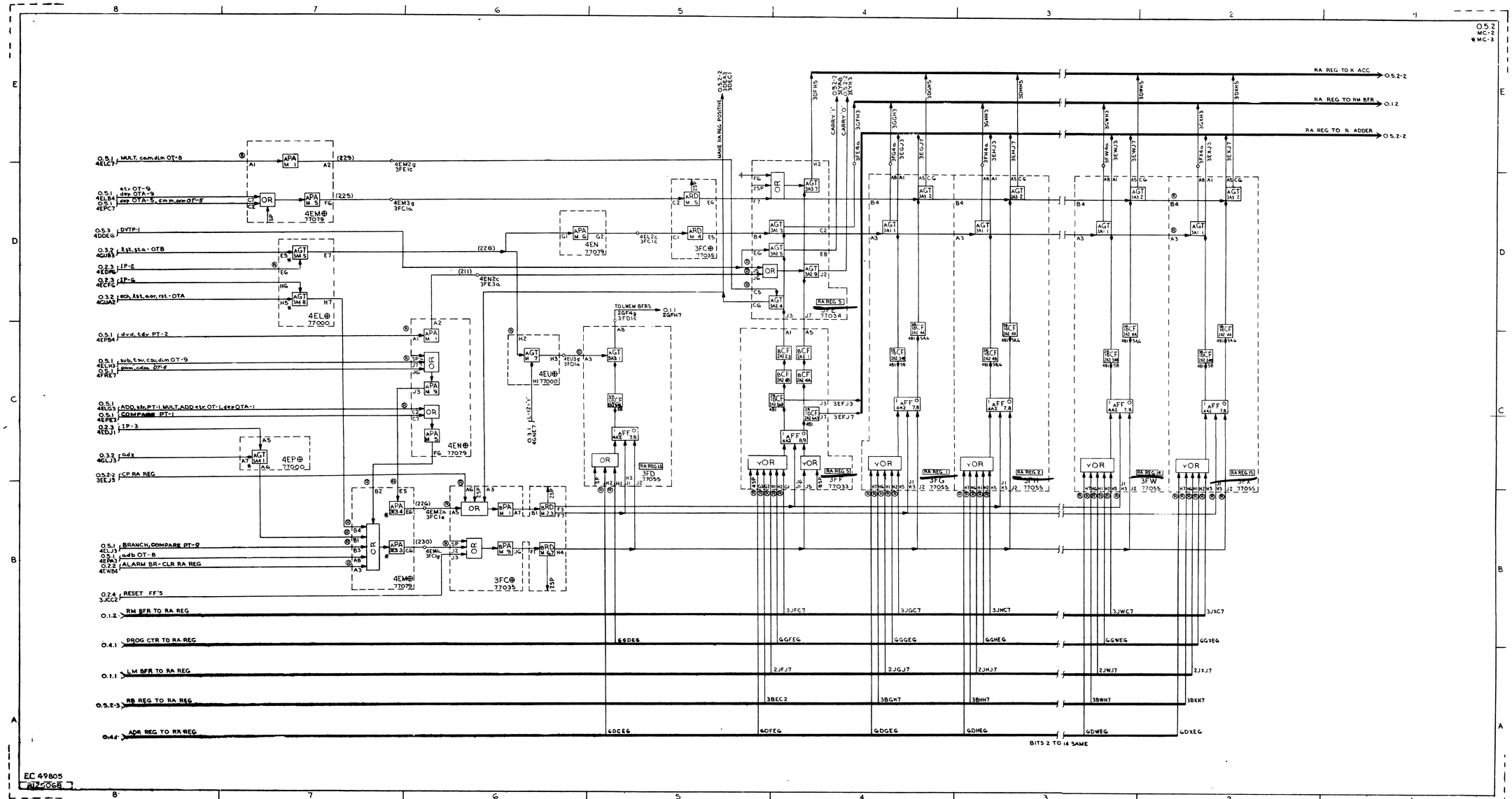
LEFT A REGISTER

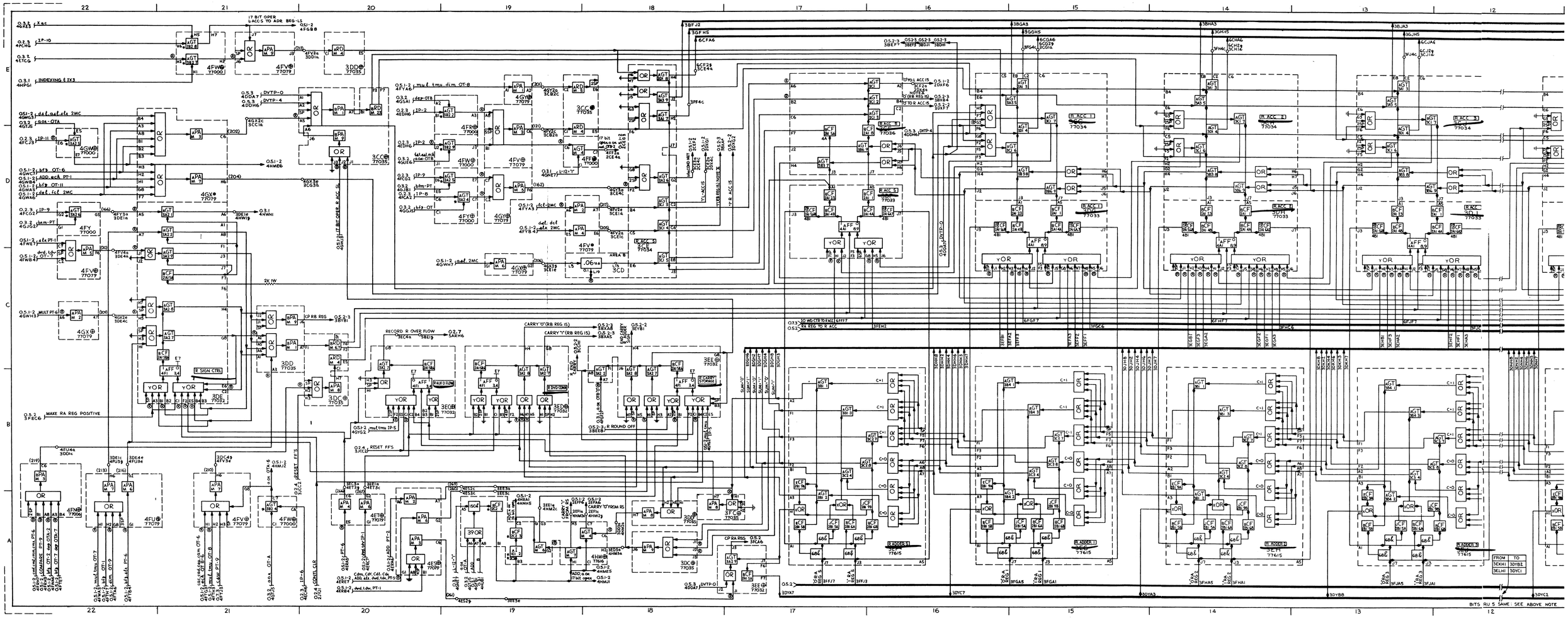


22A


LACC TO LB REG
LACC TO LM BFR
0.5.1-2
BITS 9 THRU 12 SAME: SEE ABOVE NOTE
L ADDER TO L COMPARE

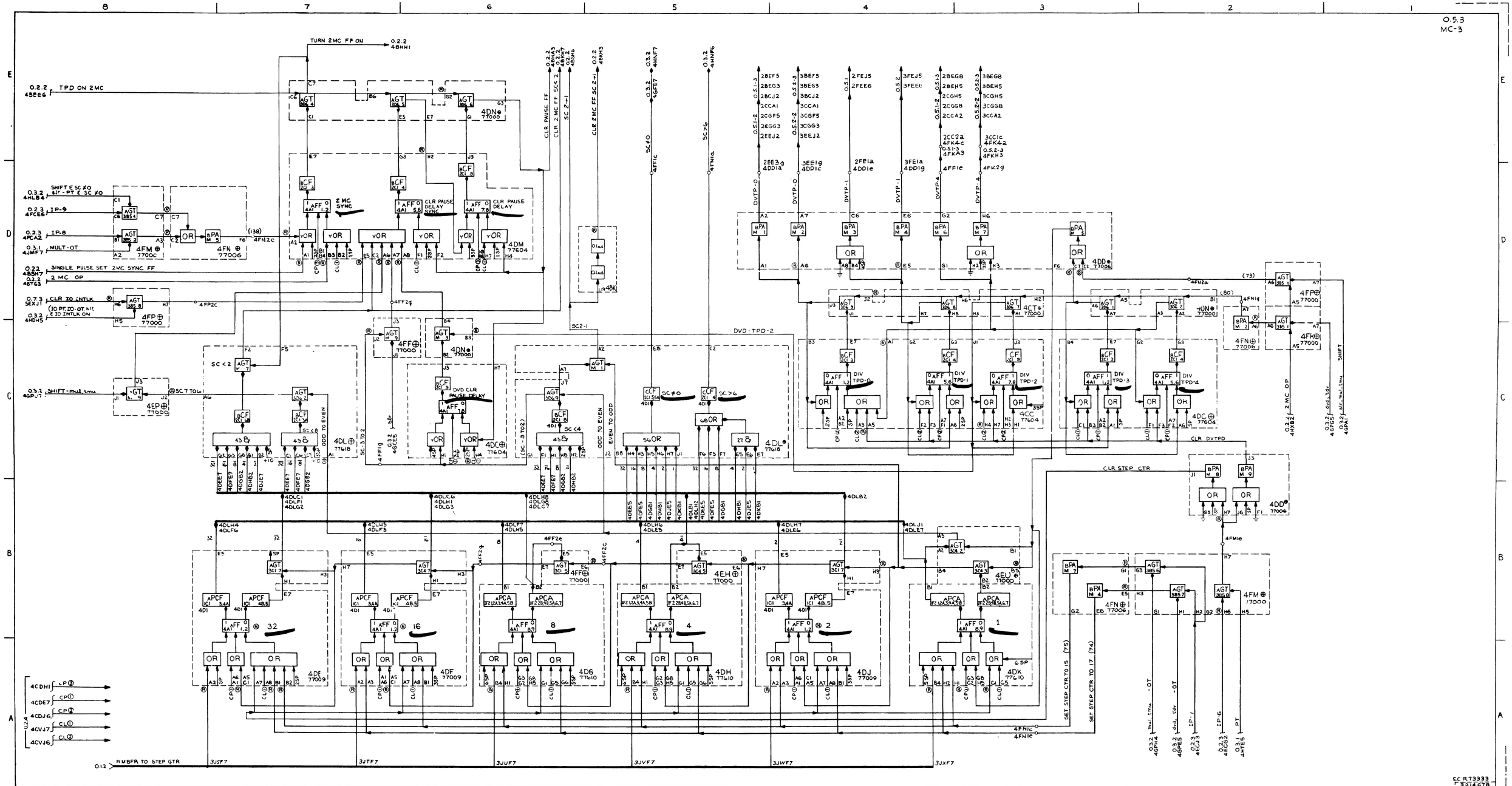
LEFT B REGISTER

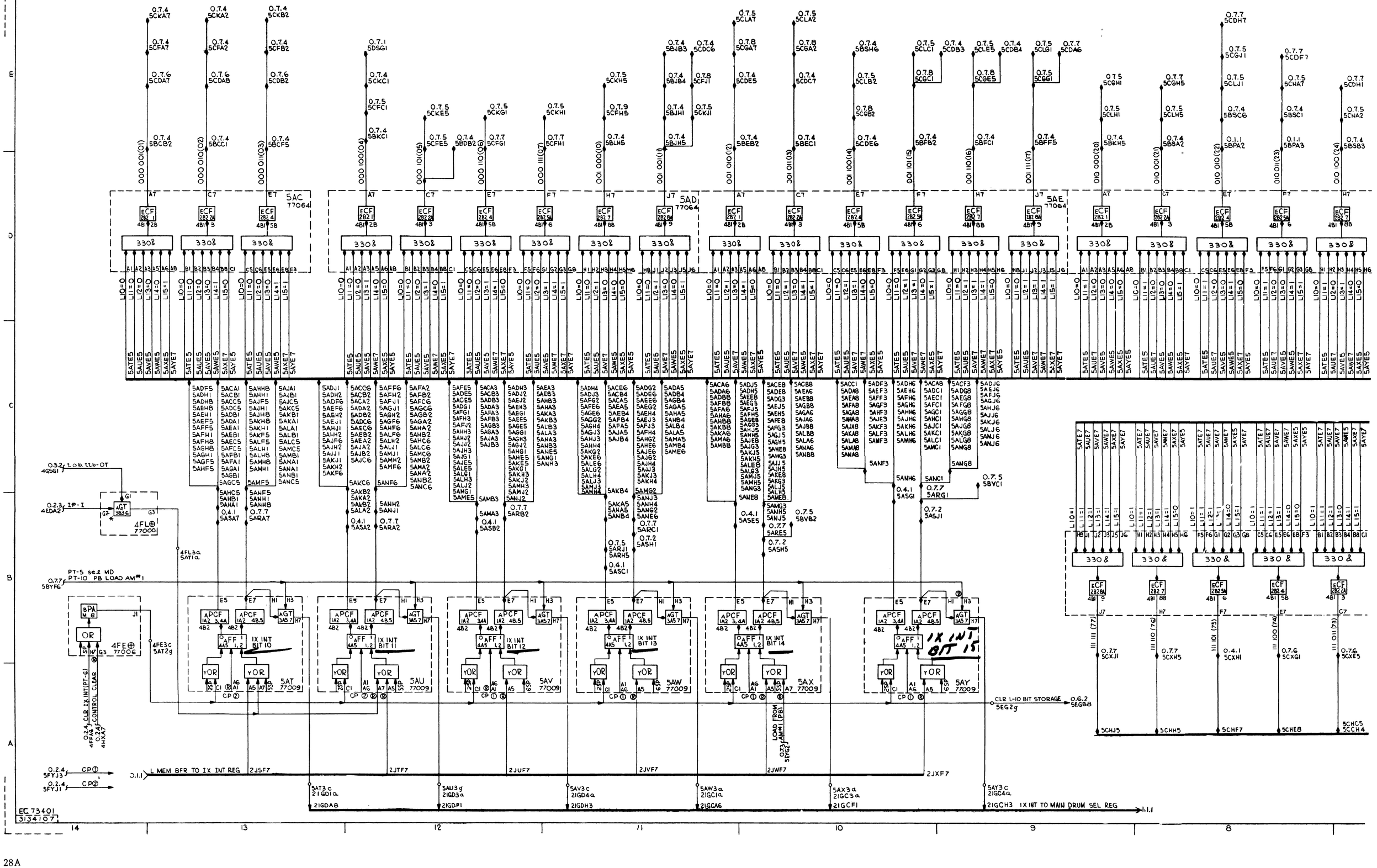

0.5.2
MC-2
& MC-3
MULT, com,dim OT-8
str OT-9
dep OTA-9
dep OTA-5, cmm,com OT-5
DVTP-1
tst, st.a - OTB
IP-2
IP-6
ech, tst, aor, rst - OTA
dvd, tdv PT-2
sub, tsu, csu, dim OT-9
qmm, cdm OT-6
ADD, stb, PT-1, MULT, ADD str, OT-1, dep OTA-1
COMPARE PT-1
IP-3
adx
CP RA REG
BRANCH, COMPARE PT-9
adb OT-8
ALARM BR-CLR RA REG
RESET FF'S
RM BFR TO RA REG
PROG CTR TO RA REG
LM BFR TO RA REG
RB REG TO RA REG
ADR REG TO RR REG
RA REG TO R ACC
RA REG TO RM BFR
RA REG TO R ADDER
MAKE RA REG. POSITIVE
CARRY '1'
CARRY '0'
TO LMEM BFRS
BITS 2 TO 14 SAME
RIGHT A REGISTER
EC 49805
AIZ-5068

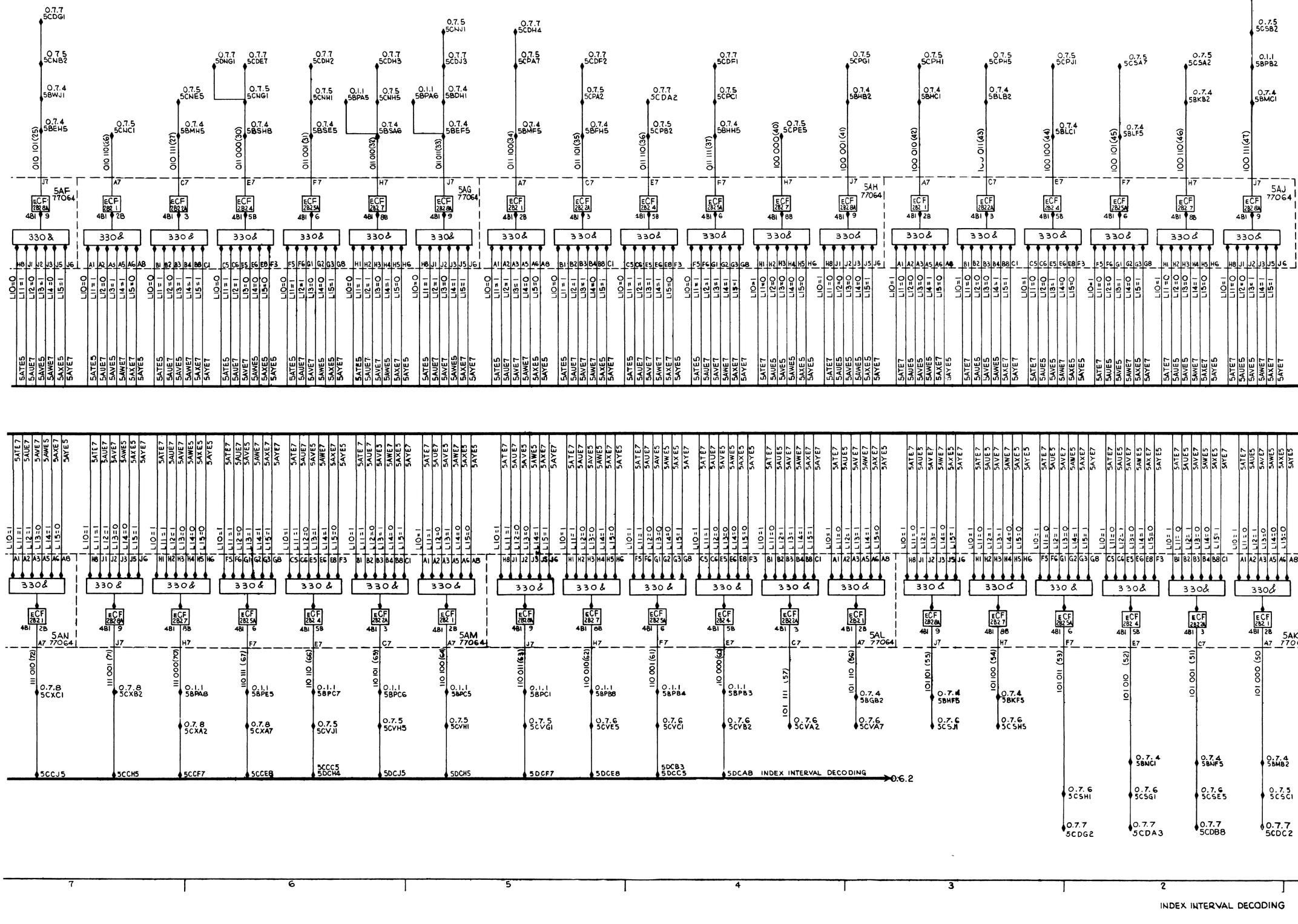

17 BIT OPER L-ACC'S TO ADR REG-LS
R SIGN CTRL
MAKE RA REG POSITIVE
RECORD R OVER FLOW
CARRY "0" (RB REG 15)
CARRY "1" (RB REG 15)
RESET FF'S
CP RB REG
CP RA REG
R ROUND OFF
R CARRY STORAGE
R ACC 1
R ACC 2
R ACC 3
R ACC 4
R ACC 5
R ADDER 1
R ADDER 2
R ADDER 3
R ADDER 4
BITS RU 5 SAME: SEE ABOVE NOTE
FROM TO
3EKHI 3DYB2
3ELHI 3DYC1

RIGHT ADDER & ACCUMULATOR

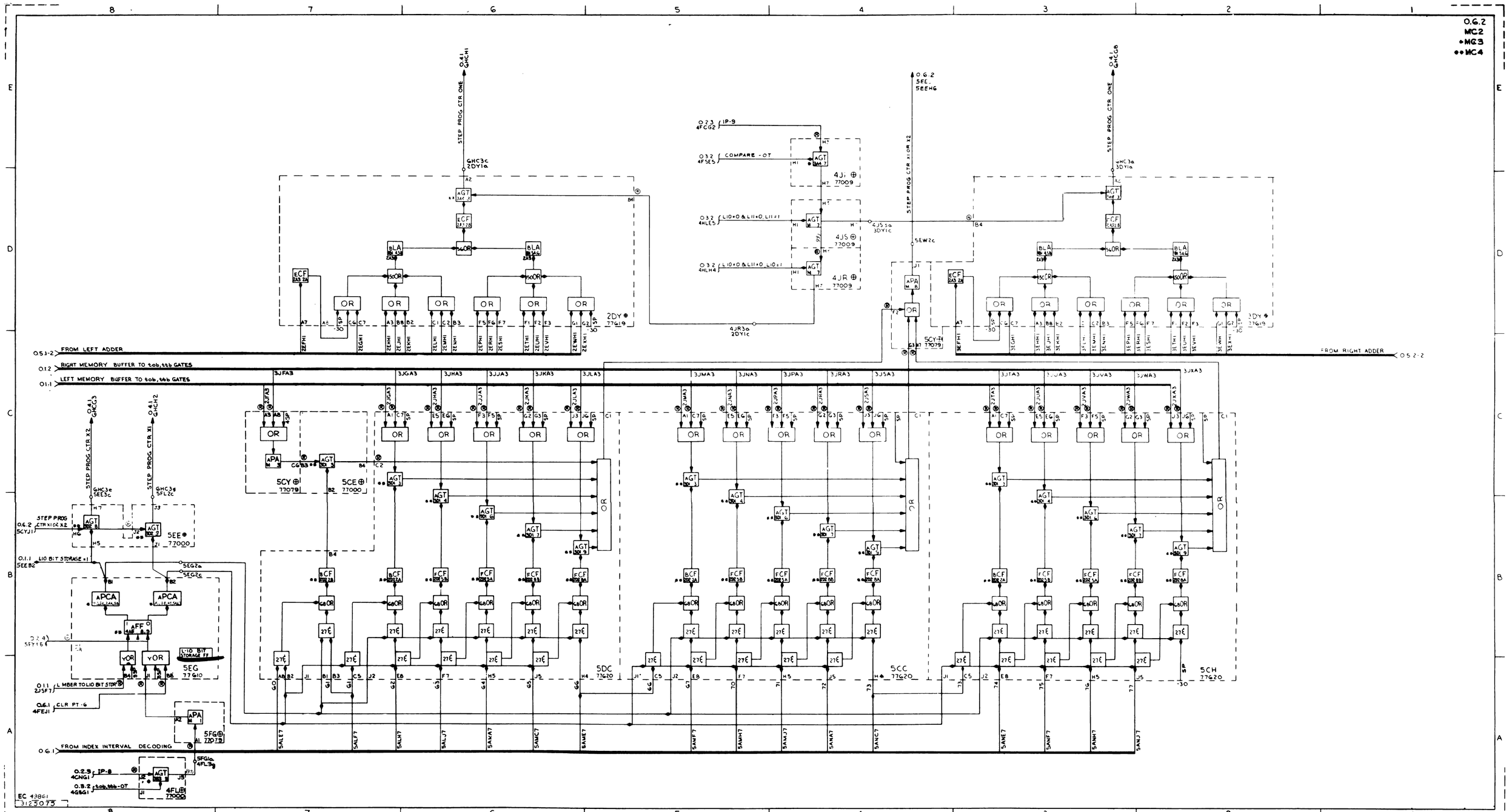
RIGHT B REGISTER


0.5.3
MC-3
TURN 2MC FF ON
0.2.2 4BKH1
0.2.2 4BEE6 TPD ON 2MC
SHIFT ε SC ≠0 & I - PT ε SC ≠0
0.2.3 4FCE6 IP-9
0.2.3 4FCA2 IP-8
0.3.1 4JMF7 MULT-OT
0.2.2 4BSH7 SINGLE PULSE SET 2MC SYNC FF
0.2.2 4BTG3 2 MC OP
0.7.3 5EXJ1 CLR IO INTLK
(IO PT, IO-OT, I/T, ε IO INTLK ON)
0.3.2 4HDH5
0.3.2 4GPJ7 SHIFT - mul, tmu
4FM⊕ 77000c
4FN⊕ 77006
4FP⊕ 77000
4EP⊕ 77000
4DN⊕ 77000
4DM 77604
4FF⊕ 77000
4DC⊕ 77604
4DL⊕ 77618
4DD⊕ 77006
4CT⊕ 77000
4CC 77604
4FK⊕ 77000
4EH⊕ 77000
4EU⊕ 77000
4DF 77009
4DE 77609
4DG 77610
4DH 77610
4DJ 77009
4DK 77610
4FM⊕ 77000
SC<2
SC<8
SC<4
SC≠0
SC>6
SC-3102
DVD-TPD-2
DVD CLR PULSE DELAY
CLR PAUSE DELAY
2 MC SYNC
CLR PAUSE FF
CLR 2 MC FF SC≠2→1
SC 2→1
SC2-1
ODD TO EVEN
EVEN TO ODD
DIV TPD-0
DIV TPD-1
DIV TPD-2
DIV TPD-3
DIV TPD-4
DVTP-0
DVTP-1
DVTP-4
CLR DVTPD
CLR STEP CTR
SET STEP CTR TO 15 (75)
SET STEP CTR TO 17 (74)
RMBR TO STEP CTR
4CDH1 LP
4CDE7 CP1
4CDJ6 CP2
4CVJ7 CL1
4CVJ6 CL2
STEP COUNTER & DVTPD
EC R73333
3214678

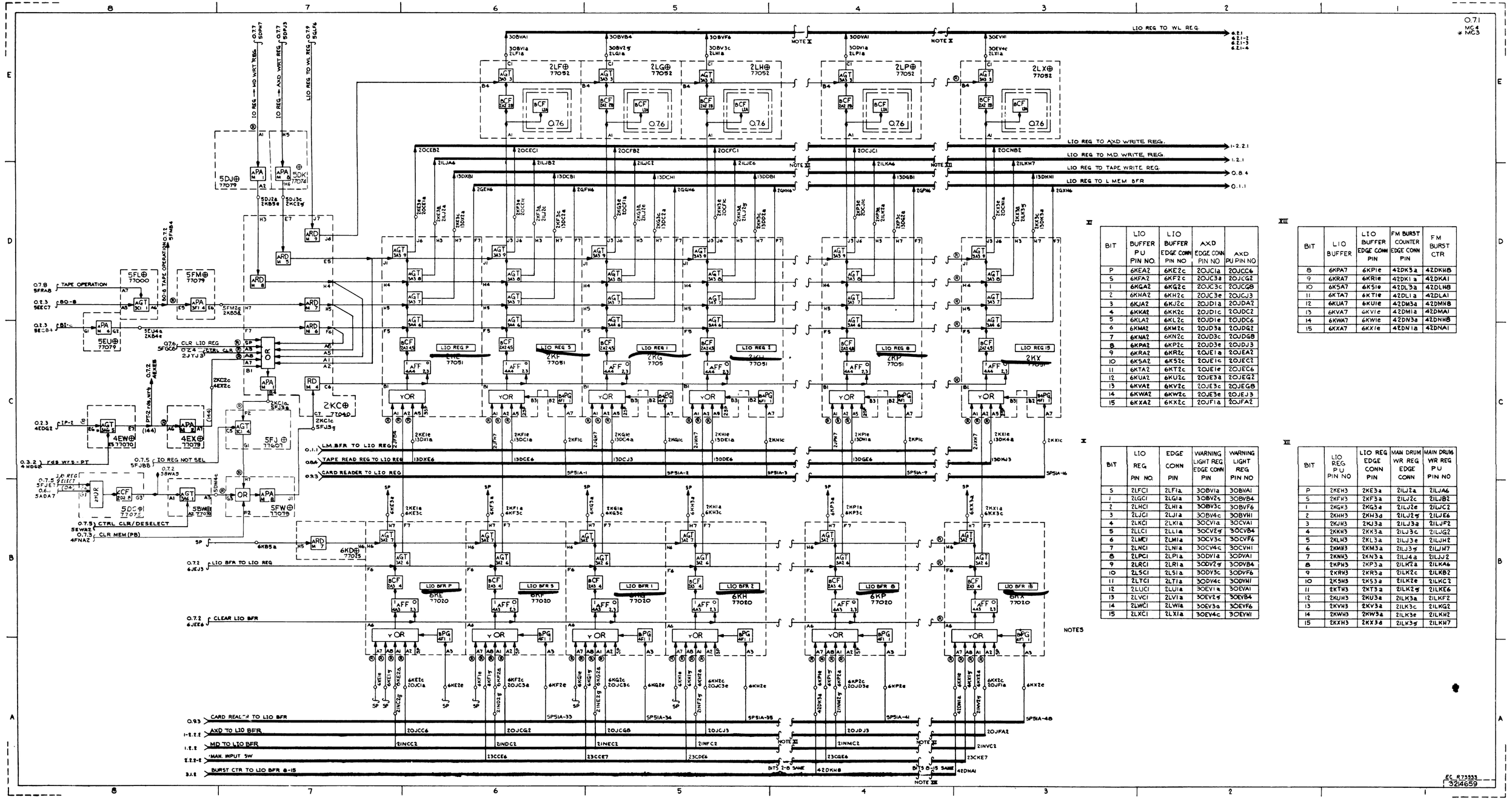

5AC 77064
5AD 77064
5AE 77064
330&
IX INT BIT 10
IX INT BIT 11
IX INT BIT 12
IX INT BIT 13
IX INT BIT 14
IX INT OFF 15
5AT 77009
5AU 77009
5AV 77009
5AW 77009
5AX 77009
5AY 77009
4FL⊕ 77000
4FE⊕ 77006
L MEM BFR TO IX INT REG
CLR L-IO BIT STORAGE
LOAD FROM 4AM1 (PB)
CONTROL CLEAR
IX INT TO MAIN DRUM SEL REG
CP①
CP②
PT-5 sel MD
PT-10 PB LOAD AM#1
EC 73401
3134107



INDEX INTERVAL DECODING



MISC CLASS INDEX INTERNAL VARIATIONS



BIT	LIO BUFFER PU PIN NO.	LIO BUFFER EDGE CONN PIN NO	AXD EDGE CONN PIN NO	AXD PU PIN NO
P	6KEA2	6KE2c	2OJC1a	2OJCC6
S	6KFA2	6KF2c	2OJC3a	2OJCG2
1	6KGA2	6KG2c	2OJC3c	2OJCG8
2	6KHA2	6KH2c	2OJC3e	2OJCJ3
3	6KJA2	6KJ2c	2OJD1a	2OJDA2
4	6KKA2	6KK2c	2OJD1c	2OJDC2
5	6KLA2	6KL2c	2OJD1e	2OJDC6
6	6KMA2	6KM2c	2OJD3a	2OJDG2
7	6KNA2	6KN2c	2OJD3c	2OJDG8
8	6KPA2	6KP2c	2OJD3e	2OJDJ3
9	6KRA2	6KR2c	2OJE1a	2OJEA2
10	6KSA2	6KS2c	2OJE1c	2OJEC2
11	6KTA2	6KT2c	2OJE1e	2OJEC6
12	6KUA2	6KU2c	2OJE3a	2OJEG2
13	6KVA2	6KV2c	2OJE3c	2OJEG8
14	6KWA2	6KW2c	2OJE3e	2OJEJ3
15	6KXA2	6KX2c	2OJF1a	2OJFA2

BIT	LIO REG PU PIN NO.	EDGE CONN PIN	WARNING LIGHT REG EDGE CONN PIN	WARNING LIGHT REG PU PIN NO
S	2LFC1	2LF1a	3OBV1a	3OBVA1
1	2LGC1	2LG1a	3OBV2s	3OBVB4
2	2LHC1	2LH1a	3OBV3c	3OBVF6
3	2LJC1	2LJ1a	3OBV4c	3OBVH1
4	2LKC1	2LK1a	3OCV1a	3OCVA1
5	2LLC1	2LL1a	3OCV2s	3OCVB4
6	2LMC1	2LM1a	3OCV3c	3OCVF6
7	2LNC1	2LN1a	3OCV4c	3OCVH1
8	2LPC1	2LP1a	3ODV1a	3ODVA1
9	2LRC1	2LR1a	3ODV2s	3ODVB4
10	2LSC1	2LS1a	3ODV3c	3ODVF6
11	2LTC1	2LT1a	3ODV4c	3ODVH1
12	2LUC1	2LU1a	3OEV1a	3OEVA1
13	2LVC1	2LV1a	3OEV2s	3OEVB4
14	2LWC1	2LW1a	3OEV3a	3OEVF6
15	2LXC1	2LX1a	3OEV4c	3OEVH1

NOTES

BIT	LIO BUFFER	LIO BUFFER EDGE CONN PIN	FM BURST COUNTER EDGE CONN PIN	FM BURST CTR
8	6KPA7	6KP1e	42DK3a	42DKH8
9	6KRA7	6KR1e	42DK1a	42DKA1
10	6K5A7	6K51e	42DL3a	42DLH8
11	6KTA7	6KT1e	42DL1a	42DLA1
12	6KUA7	6KU1e	42DM3a	42DMH8
13	6KVA7	6KV1e	42DM1a	42DMA1
14	6KWA7	6KW1e	42DN3a	42DNH8
15	6KXA7	6KX1e	42DN1a	42DNA1

BIT	LIO REG PU PIN NO	LIO REG EDGE CONN PIN	MAIN DRUM WR REG EDGE CONN	MAIN DRUM WR REG PU PIN NO
P	2KEH3	2KE3a	2ILJ2a	2ILJA6
S	2KFH3	2KF3a	2ILJ2c	2ILJB2
1	2KGH3	2KG3a	2ILJ2e	2ILJC2
2	2KHH3	2KH3a	2ILJ2g	2ILJE6
3	2KJH3	2KJ3a	2ILJ3a	2ILJF2
4	2KKH3	2KK3a	2ILJ3c	2ILJG2
5	2KLH3	2KL3a	2ILJ3e	2ILJH2
6	2KMH3	2KM3a	2ILJ3g	2ILJH7
7	2KNH3	2KN3a	2ILJ4a	2ILJJ2
8	2KPH3	2KP3a	2ILK2a	2ILKA6
9	2KRH3	2KR3a	2ILK2c	2ILKB2
10	2K5H3	2KS3a	2ILK2e	2ILKC2
11	2KTH3	2KT3a	2ILK2g	2ILKE6
12	2KUH3	2KU3a	2ILK3a	2ILKF2
13	2KVH3	2KV3a	2ILK3c	2ILKG2
14	2KWH3	2KW3a	2ILK3e	2ILKH2
15	2KXH3	2KX3a	2ILK3g	2ILKH7

EC R73933
3214659

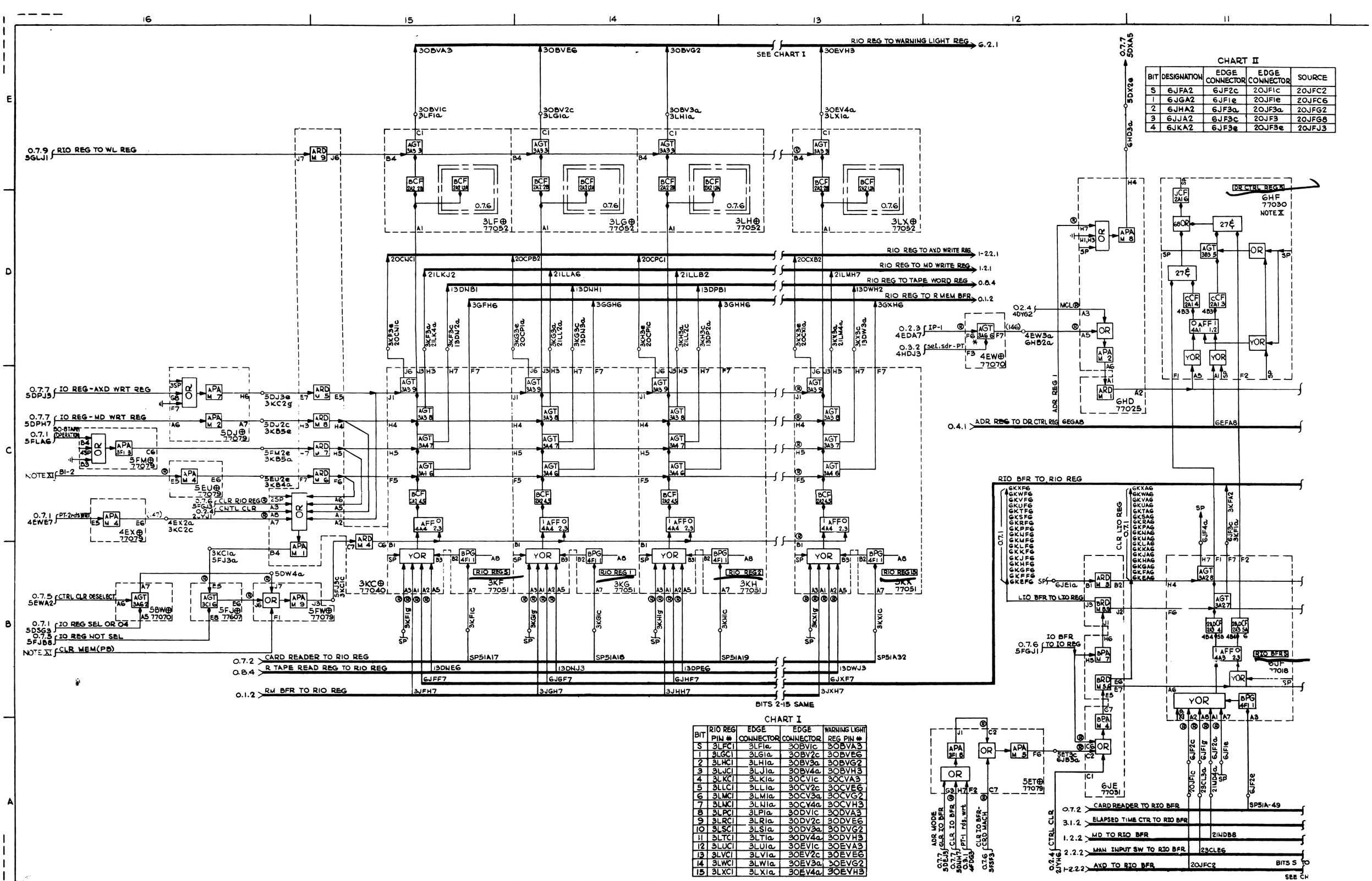


CHART II

BIT	DESIGNATION	EDGE CONNECTOR	EDGE CONNECTOR	SOURCE
S	6JFA2	6JF2c	20JF1C	20JFC2
1	6JGA2	6JF1e	20JF1e	20JFC6
2	6JHA2	6JF3a	20JF3a	20JFG2
3	6JJA2	6JF3c	20JF3	20JFG8
4	6JKA2	6JF3e	20JF3e	20JFJ3

CHART I

BIT	RIO REG PIN #	EDGE CONNECTOR	EDGE CONNECTOR	WARNING LIGHT REG PIN #
S	3LFC1	3LF1a	30BV1c	30BVA3
1	3LGC1	3LG1a	30BV2c	30BVE6
2	3LHC1	3LH1a	30BV3a	30BVG2
3	3LJC1	3LJ1a	30BV4a	30BVH3
4	3LKC1	3LK1a	30CV1c	30CVA3
5	3LLC1	3LL1a	30CV2c	30CVE6
6	3LMC1	3LM1a	30CV3a	30CVG2
7	3LNC1	3LN1a	30CV4a	30CVH3
8	3LPC1	3LP1a	30DV1c	30DVA3
9	3LRC1	3LR1a	30DV2c	30DVE6
10	3LSC1	3LS1a	30DV3a	30DVG2
11	3LTC1	3LT1a	30DV4a	30DVH3
12	3LUC1	3LU1a	30EV1c	30EVA3
13	3LVC1	3LV1a	30EV2c	30EVE6
14	3LWC1	3LW1a	30EV3a	30EVG2
15	3LXC1	3LX1a	30EV4a	30EVH3


0.7.2
MC-4
*MC-3
COMPARE ID 7-15
COMPARE ADR MODE
6HC⊕ 77079
DR CTRL REG 4
6HK 77030 NOTE X
DR CTRL REG 5
6HL 77030
DR CTRL REG 6
6HM 77030
DR CTRL REG 7
DR CTRL REG 8
6HP 77030
DR CTRL REG 9
6HR 77030
DR CTRL REG 10
6HS 77030
DR CTRL REG 11
6HT 77030
DR CTRL REG 12
6HU 77030
DR CTRL REG 13
6HV 77030
DR CTRL REG 14
6HW 77030
DR CTRL REG 15
6HX 77030
NO COMPARE 5&6
NO COMPARE 7-10
NO COMPARE 11
NO COMPARE 12 & 13
NO COMPARE 14 & 15
RIO BFR 4
6JK 77018
RIO BFR 5
6JL 77018
RIO BFR 6
6JM 77018
RIO BFR 7
6JN 77018
RIO BFR 8
6JP 77018
RIO BFR 9
6JR 77018
RIO BFR 10
6JS 77018
RIO BFR 11
6JT 77018
RIO BFR 12
6JU 77018
RIO BFR 13
6JV 77018
RIO BFR 14
6JW 77018
RIO BFR 15
6JX 77018
6GC⊕ 77000
INTERLEAVE CIRCUIT
6HE 77604
INTERLEAVE BY 64
INTERLEAVE BY 8
INTERLEAVE BY 16
5ET⊕ 77079
5AS⊕ 77000
STEP DR CTL REG
SOURCE POINTS
PU's GHF THRU GHK NOT SUPPLIED FOR DC-16 & HIGHER DC
NOTE
3214667
4 SAME
CHART II
RIGHT IO REG

IO WORD COUNTER


0.7.4
MC4
* MC3
5BN 77058
5BM 77058
5BK 77058
5BS ⊕ 77072
5BP ⊕ 77065
5BY ⊕ 77006
5BX ⊕ 77019
5BV ⊕ 77000
5BU ⊕ 77019
4FD ⊕ 77000
5BG 77058
5BC 77058
5BE 77058
5BH 77058
5BF 77058
5BJ 77058
5BL 77058
5BD 77058
5EL 77006
5FS 77073
5AP 77073
5CK ⊕ 77000
5CF ⊕ 77000
5CE ⊕ 77000
5CD ⊕ 77068
SENSE SYNC
SWITCHING CONSOLE
INACTIVE
COMPUTER ACTIVE
ACTIVE RELAY
RETURN
NOTE XII
CHART
TO | FROM UNIT 92 FOR COMPUTER "A" | FROM UNIT 92 FOR COMPUTER "B"
5BM3e | 4c | FK2C6 | 4g | GK1C6
5BM3g | 4a | FK2C5 | 4e | GK1C5
XII BACK PANEL JUMPERS ARE INSTALLED THUS MAKING THESE APG EFFECTIVELY BPG. SEE P.U. BLOCK & CIRCUIT SCHEMATIC.
XI IF THIS DRAWING IS BEING USED AS COMPUTER "A" LOGIC AND COMPUTER "A" IS BEING MARGINAL CHECKED, THEN THE SOURCE IS IN COMPUTER "A". IF COMPUTER "A" IS NOT BEING MARGINAL CHECKED, THEN THE SOURCE IS IN COMPUTER "B".
X PARTS OF THIS CIRCUIT APPEAR IN A PHANTOMED AREA ON 55.5.1.3
NOTES:
EC-R73685
3114977
SENSE

△△△ REFERS TO THE FOLLOWING TABLE

OPERATE NUMBER	MACHINE	COMPUTER A			COMPUTER B			LOGIC
		EDGE CONN UNIT 5	EDGE CONN UNIT 92	RELAY UNIT 92	EDGE CONN UNIT 5	EDGE CONN UNIT 92	RELAY UNIT 92	
24	DC	CN2A	CE3A	CF(K2)A1	CN2A	CE4A	CG(K1)A1	2.6.2
25	DC	CN2C	AE3A	AF(K2)A1	CN2C	AE4A	AG(K1)A1	2.6.3
63	DC	CV3A	BE3C	BF(K2)A2	CV3A	BE4C	BG(K1)A2	2.6.1, 2.6.3
64	DC	CV3C	BE3A	BF(K2)A1	CV3C	BE4A	BG(K1)A1	2.6.2
65	DC	CV3E	BE3E	BF(K2)A3	CV3E	BE4E	BG(K1)A3	2.6.2
66	DC	CV3G	BE3G	BF(K2)A4	CV3G	BE4G	BG(K1)A4	2.6.2

△△ REFERS TO THE FOLLOWING TABLE

FROM	TO FOR SYSTEM A	TO FOR SYSTEM B
5CM3a	4K	4l
5CM3g	1a	1b

□ IF DRAWING IS USED AS SYSTEM "A" DRAWING, THEN □ REFERS TO ORIGIN OR DESTINATION ON SYSTEM "B" AND VICE VERSA

NOTES:

XII AT PC-1 SPARE FOR OTHER SITES SEE TABLE △△△ ABOVE

XI APPLIES TO PC-1 ONLY OTHER SITES-SPARE

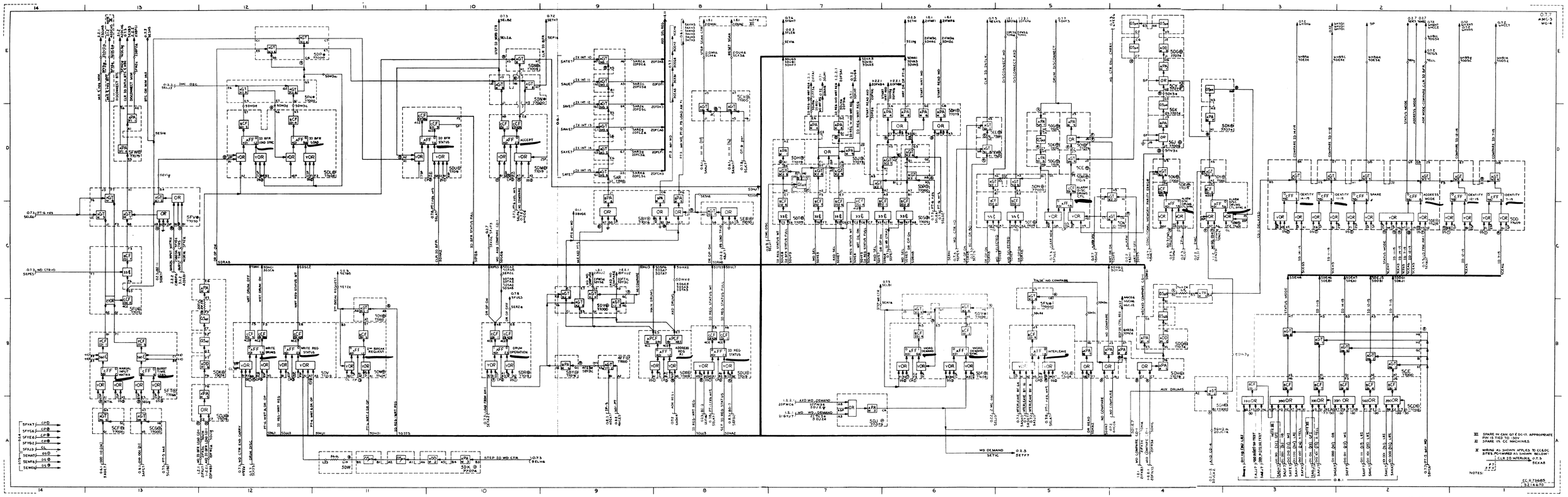
X INTERCOM #2, #3 & #4 ARE CONNECTED THE SAME WAY AS SHOWN FOR INTERCOM #1

EC-R73685

3214685

SELECT

CLR IO REG (W L)
INTERWORD DELAY
FIRING DELAY
CONDITIONING DELAY
CARD WORD TRANSFER
DELAY
CARD MACH THY BFR CTL
INDEX PULSE (CARD MACH)
SET BRK REQ & WAIT FF
SET WAIT FF
CLR I-O REG
CLR O-I REG
CLR TO BFR-CRD MACH
IO BFR → IO REG
START PRINTER
START PUNCH
START READER
DISCONNECT CARD READER
DISCONNECT PRINTER PUNCH
SET DSE IO INTLK SYNC FF
CARD READER
CARD MACH OPER
2ND BREAK REQUEST
CRD MACH 2ND BRK REQ
CARD MACHINE SELECTED
CARD READER 1st BREAK REQUEST
PRINTER
PUNCH
REQUEST DSC READER
REQUEST DSC PRINTER & PUNCH
WORD CTR-O
PRINTER SELECTED PT-5
PUNCH SELECTED PT-5
PT-10 PUSHBUTTON LOAD
PT-5 READER SELECTED
LOAD FM CARD READER
REQUEST BREAK (READER)
L IO REG 5
L IO REG 1
L IO REG 9
L IO REG 13
R IO REG 5
R IO REG 1
R IO REG 9
R IO REG 13
PLATE PRT ODD WORD EXIT
PLATE PRT EVEN WORD EXIT
OP PRINTER #1
OP PRINTER #2
OP PRINTER #3
OP PRINTER #4
OP PRINTER #5
OP PRINTER #6
OP PRINTER #7
OP PRINTER #8
OP PRINTER #9
OP PRINTER #10
OP PUNCH #1
OP PUNCH #2
EC 734911
3124980
OPERATE



MISC 10

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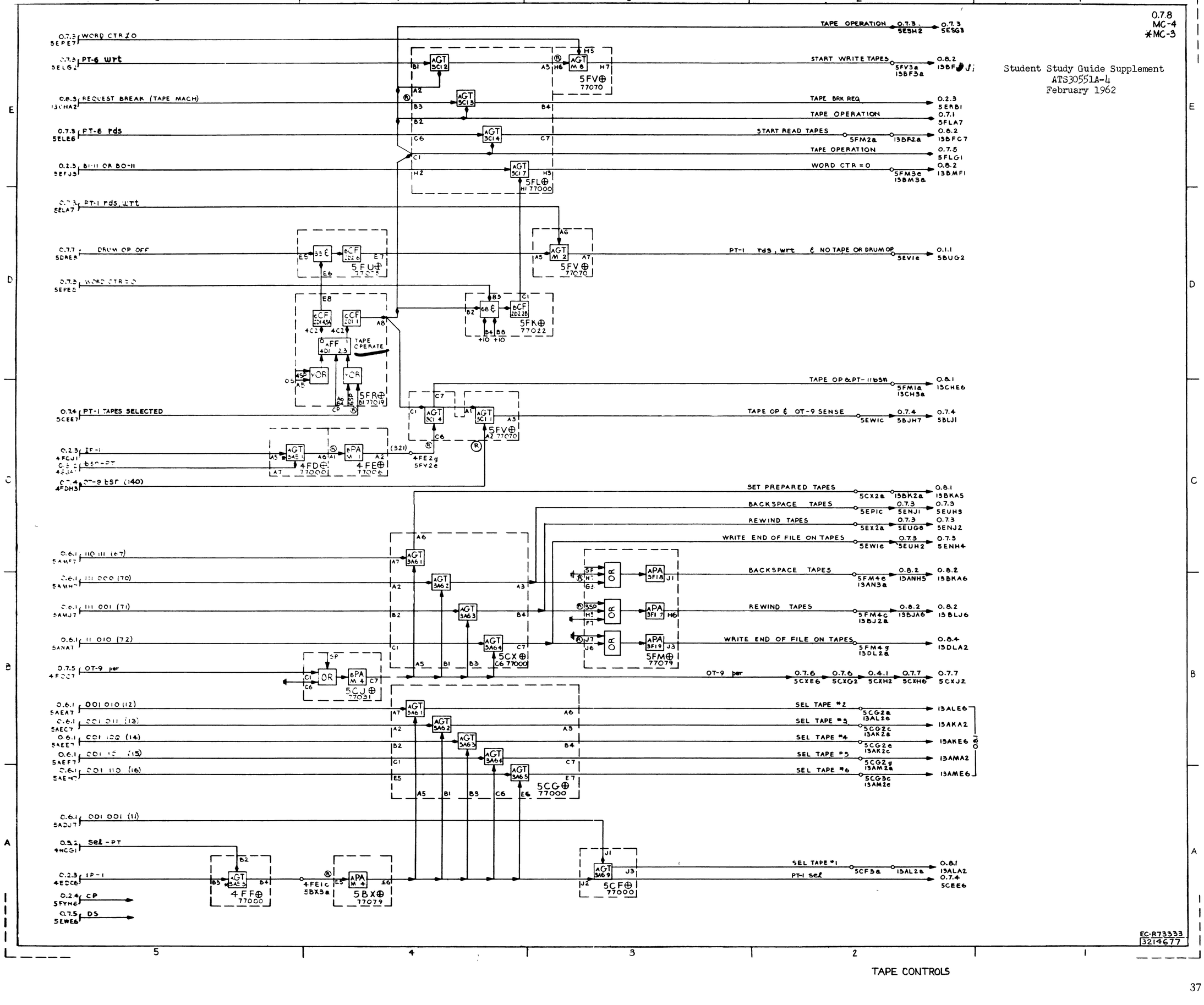
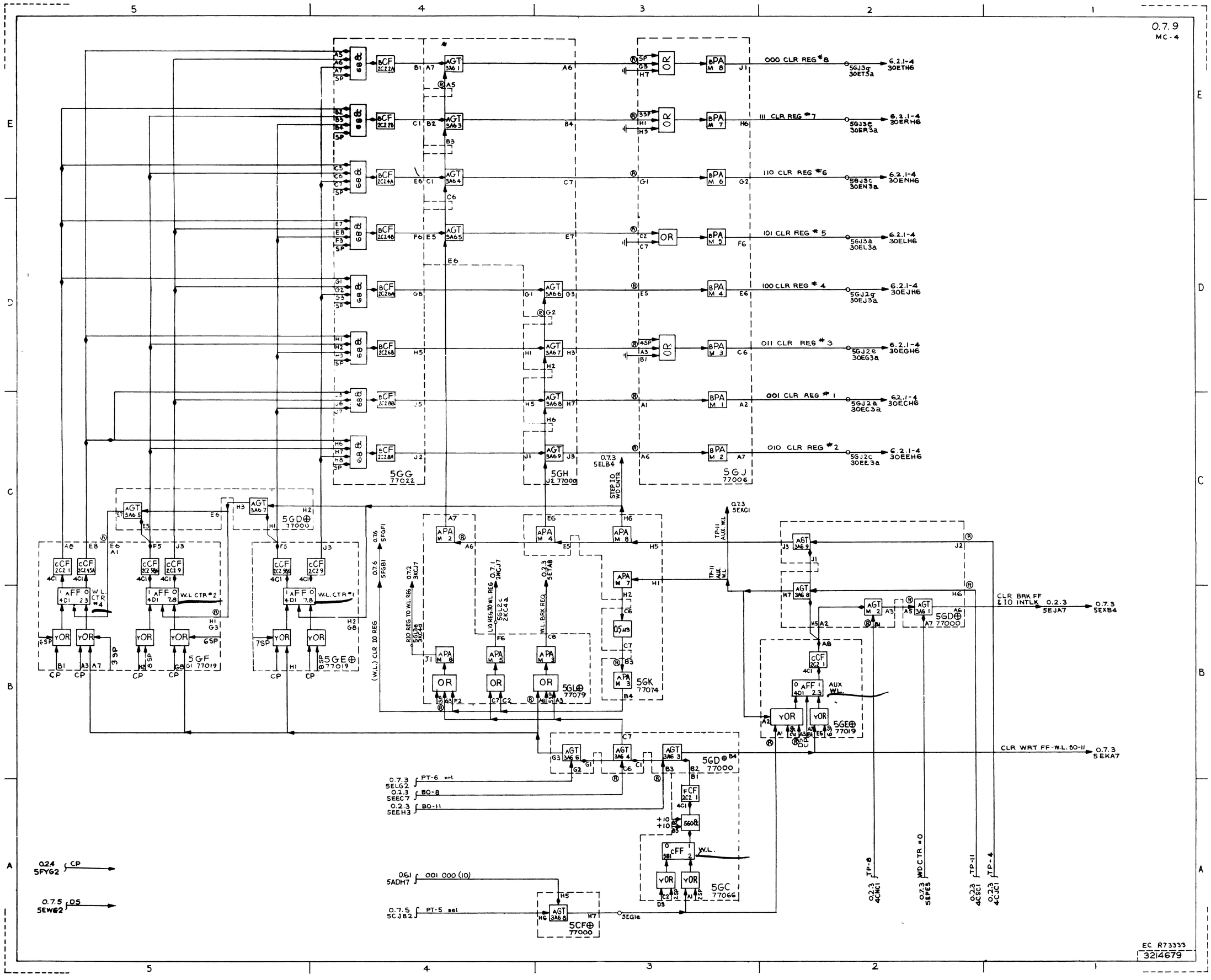
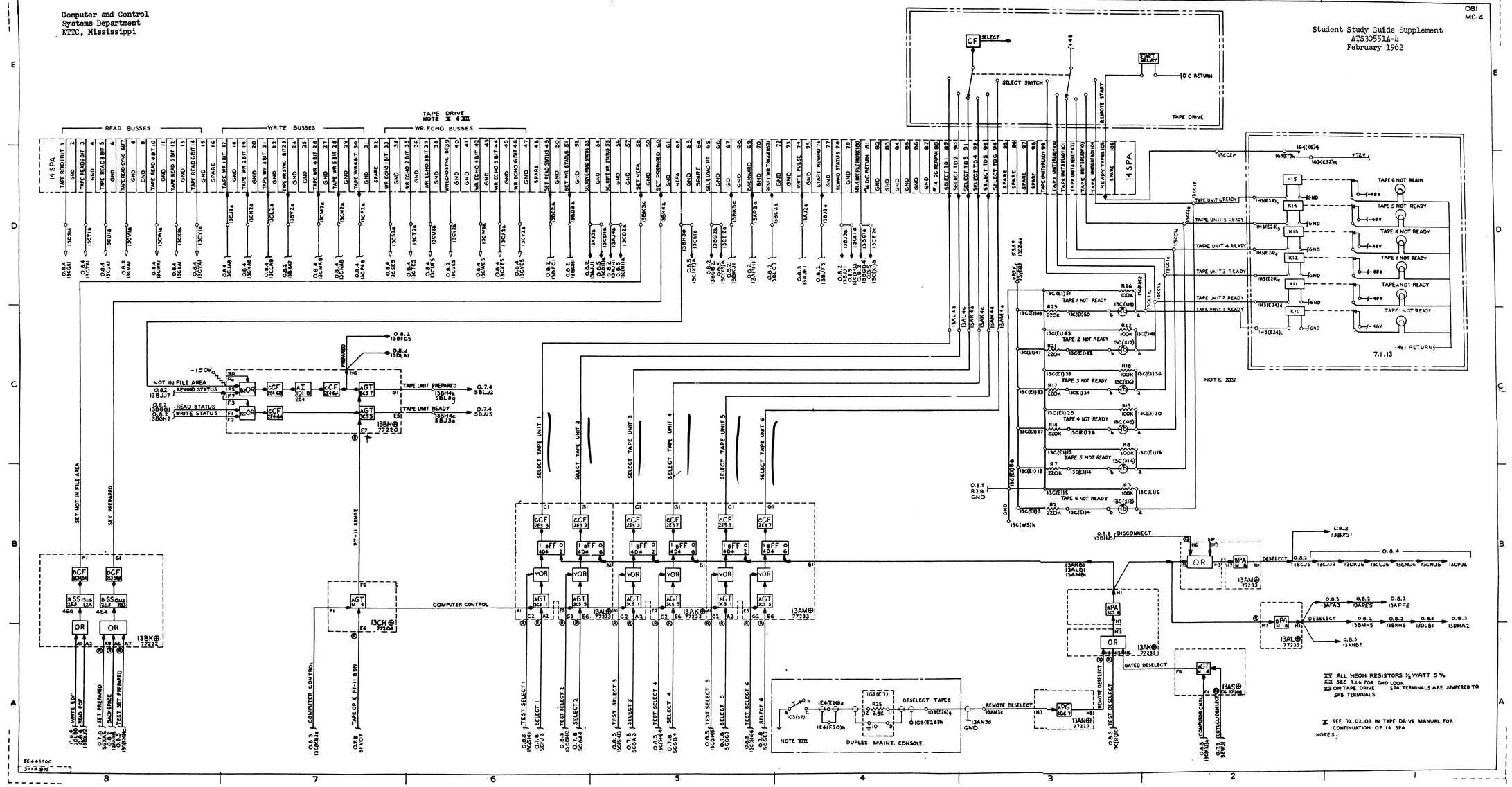
ATS30551A-4
February 1962



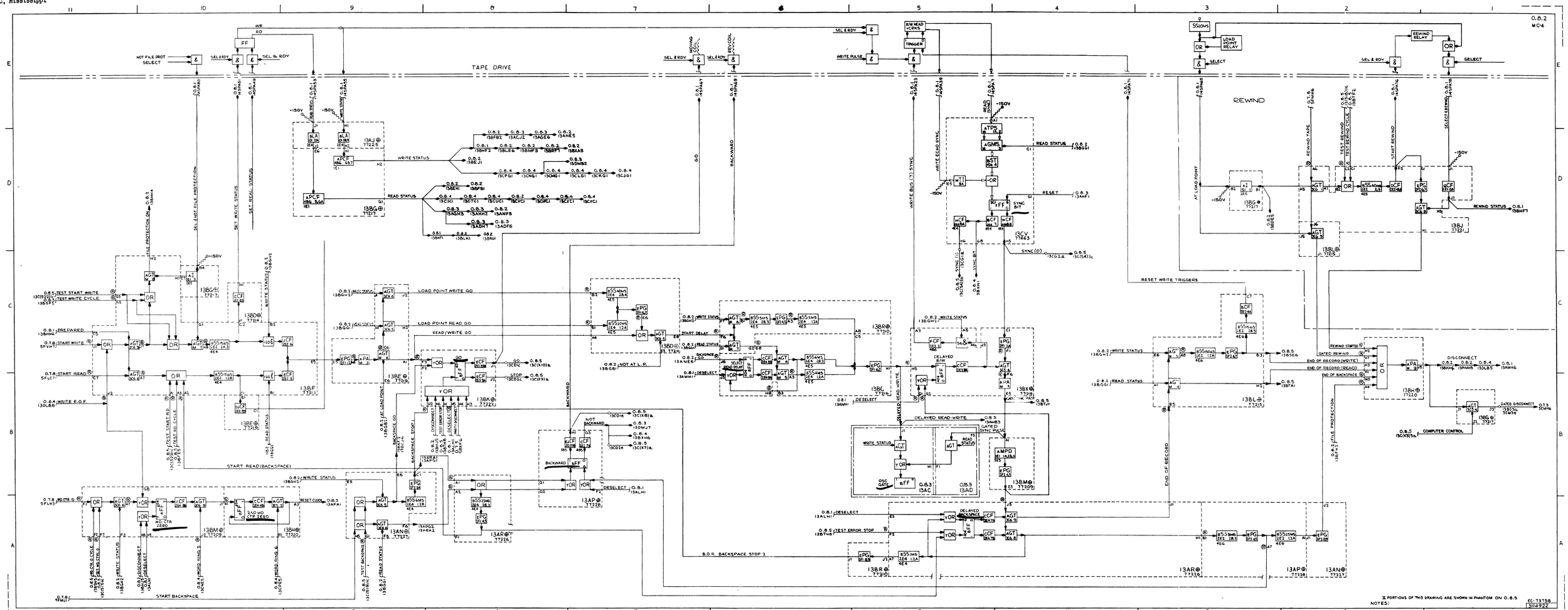
TAPE CONTROLS



WARNING LIGHT CTRLS



MAGNETIC TAPE SYSTEM SEL & STATUS INDICATION


TAPE DRIVE
REWIND
MAGNETIC TAPE SYSTEM OPERATION CONTROL
NOTES:
EC-13758
3114922

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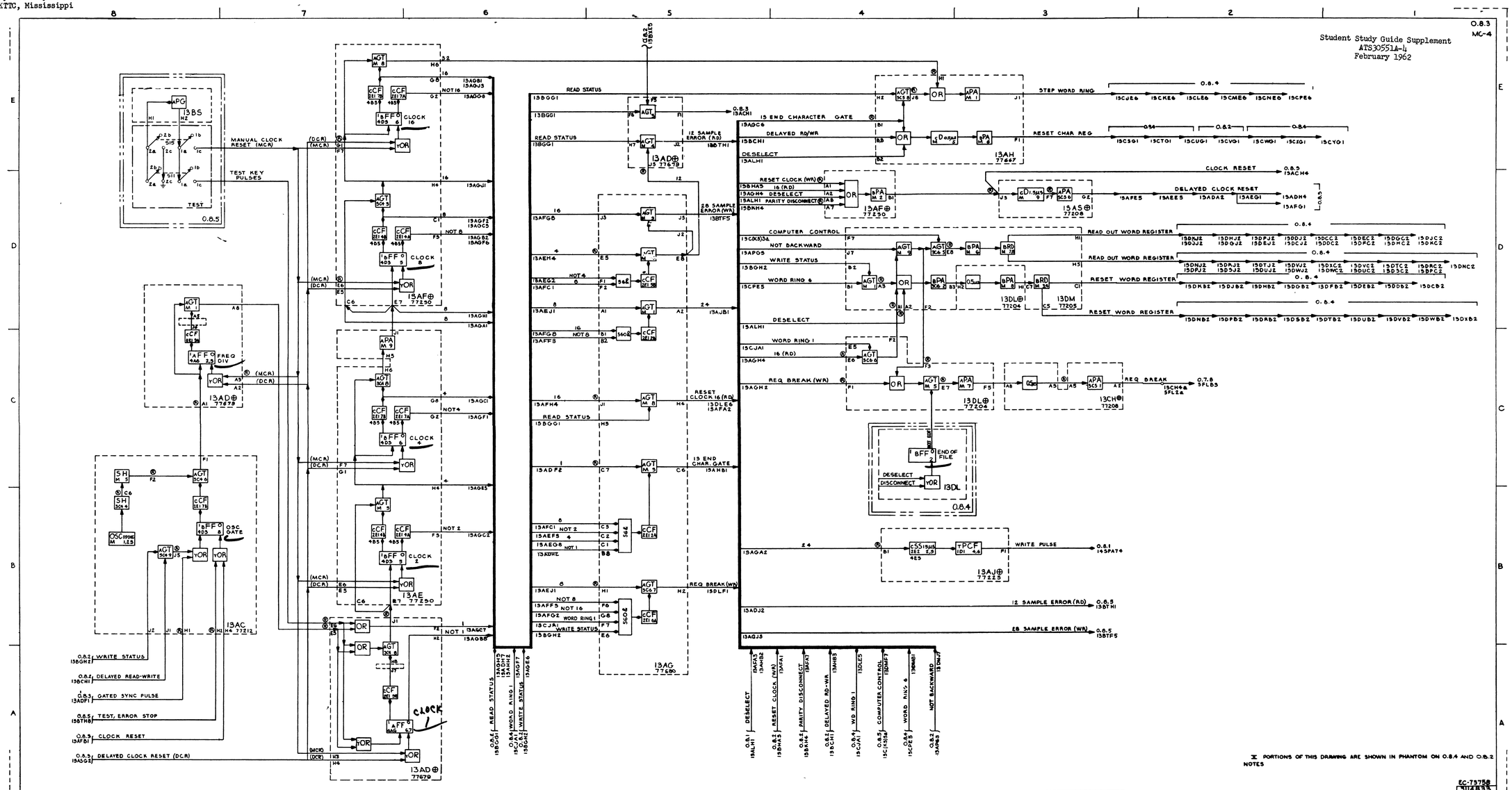
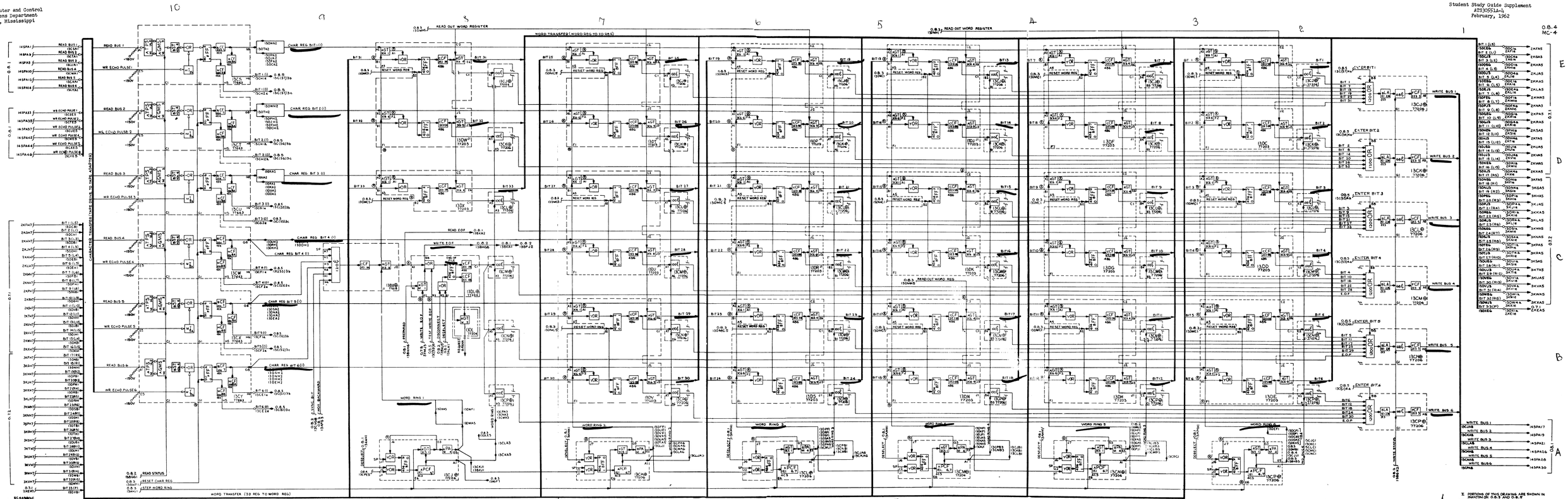
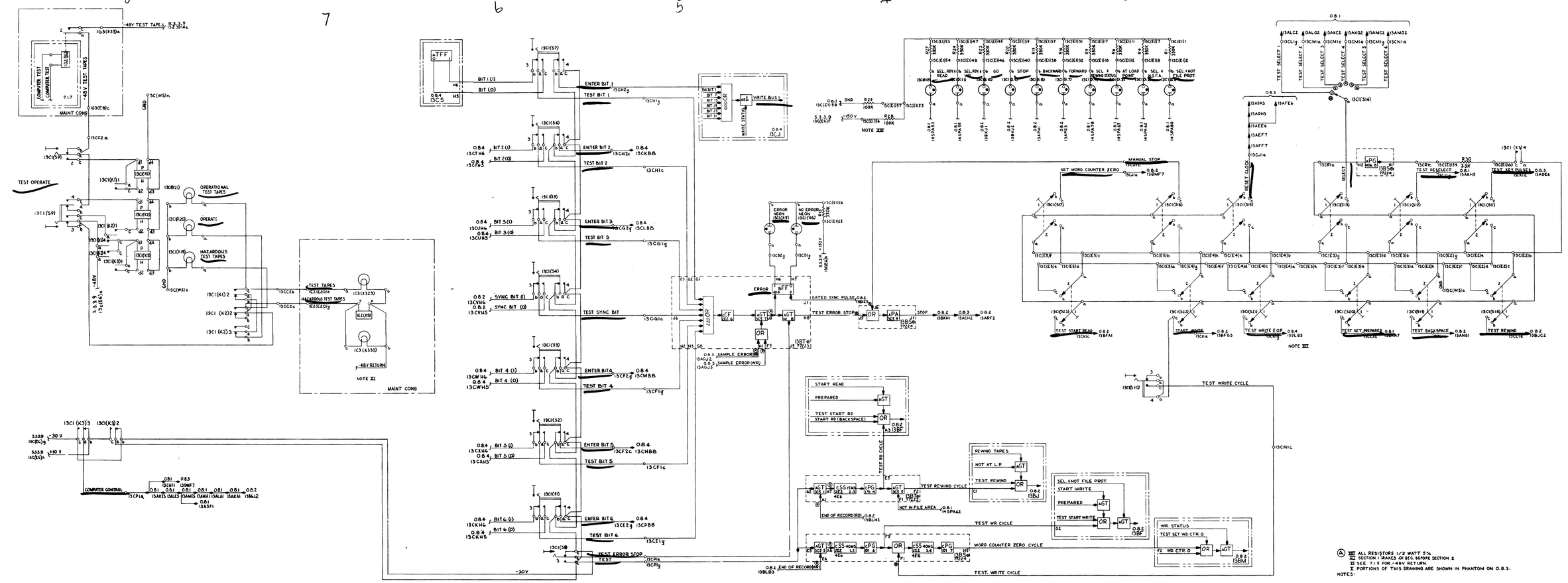


EC-73758
3114835

MAGNETIC TAPE SYSTEM TIME PULSE GENERATOR AND DISTRIBUTOR

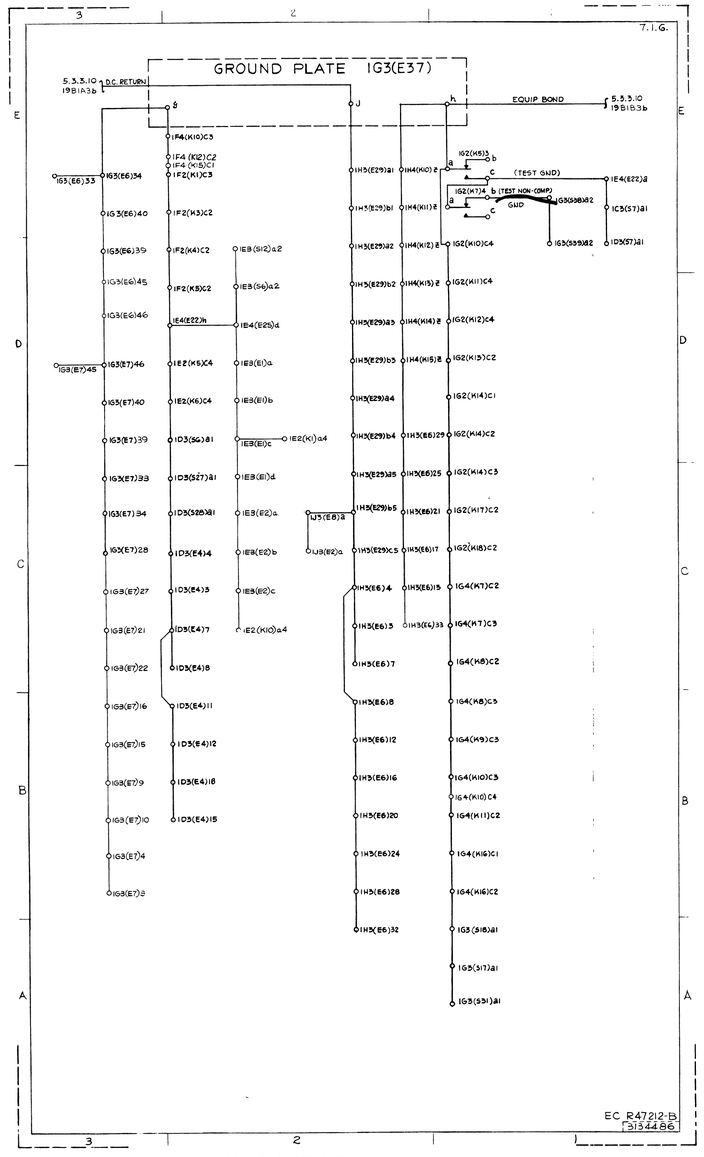

READ BUS 1
READ BUS 2
READ BUS 3
READ BUS 4
READ BUS 5
READ BUS 6
WR ECHO PULSE 1
WR ECHO PULSE 2
WR ECHO PULSE 3
WR ECHO PULSE 4
WR ECHO PULSE 5
WR ECHO PULSE 6
CHAR REG BIT 1(0)
CHAR REG BIT 2(0)
CHAR REG BIT 3 (0)
CHAR REG BIT 4 (0)
CHAR REG BIT 5(0)
CHAR REG BIT 6(0)
CHARACTER TRANSFER (CHAR REG TO MAIN ADDRESS)
READ OUT WORD REGISTER
WORD TRANSFER (WORD REG TO IO REG)
WORD TRANSFER (IO REG TO WORD REG)
READ STATUS
RESET CHAR REG
ENTER WORD RING
READ EOF
WRITE EOF
WORD RING 1
WORD RING 2
WORD RING 3
WORD RING 4
WORD RING 5
WORD RING 6
ENTER BIT 1
ENTER BIT 2
ENTER BIT 3
ENTER BIT 4
ENTER BIT 5
ENTER BIT 6
WRITE BUS 1
WRITE BUS 2
WRITE BUS 3
WRITE BUS 4
WRITE BUS 5
WRITE BUS 6
MAGNETIC TAPE SYSTEM WORD TRANSFER



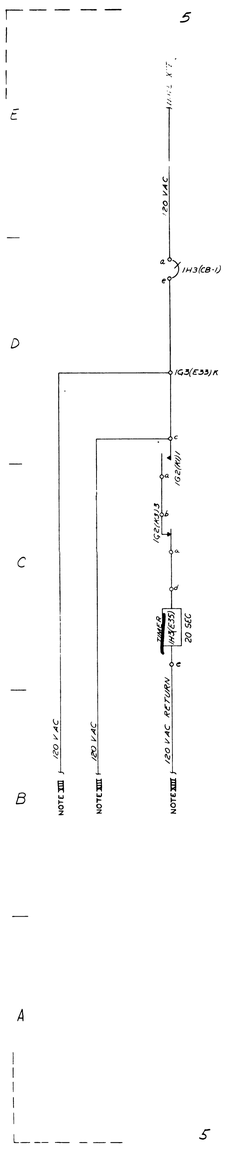
44206
3109805

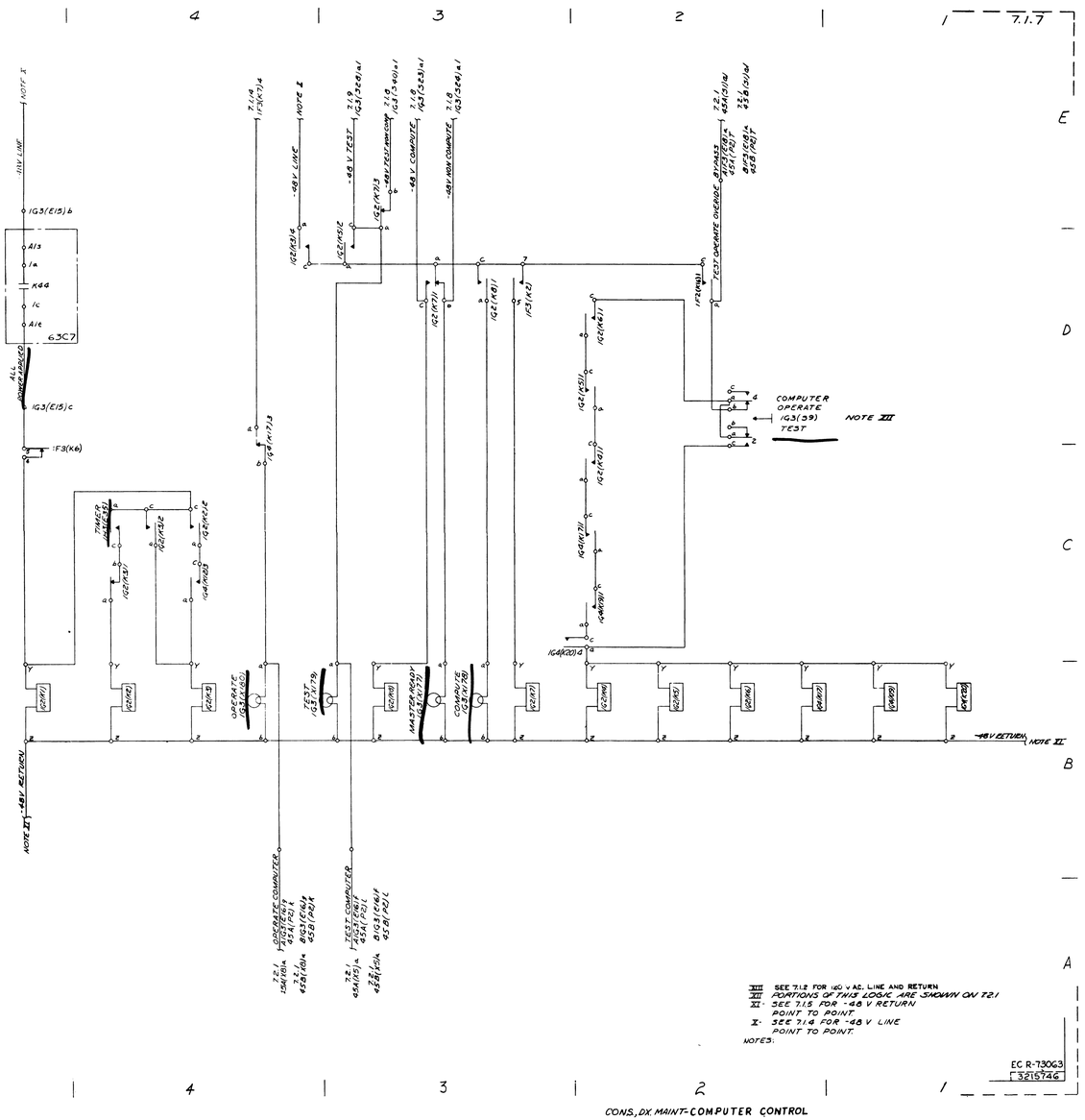
Ⓐ III ALL RESISTORS 1/2 WATT 5%
III SECTION 1 BRAKES OF SEC. BEFORE SECTION 2
II SEE 7.1.5 FOR -48V RETURN.
I PORTIONS OF THIS DRAWING ARE SHOWN IN PHANTOM ON 0.8.3.
NOTES:

BLOCK SCHEMATIC-MAGNETIC TAPE SYSTEM TEST, CIRCUITS & CONTROLS

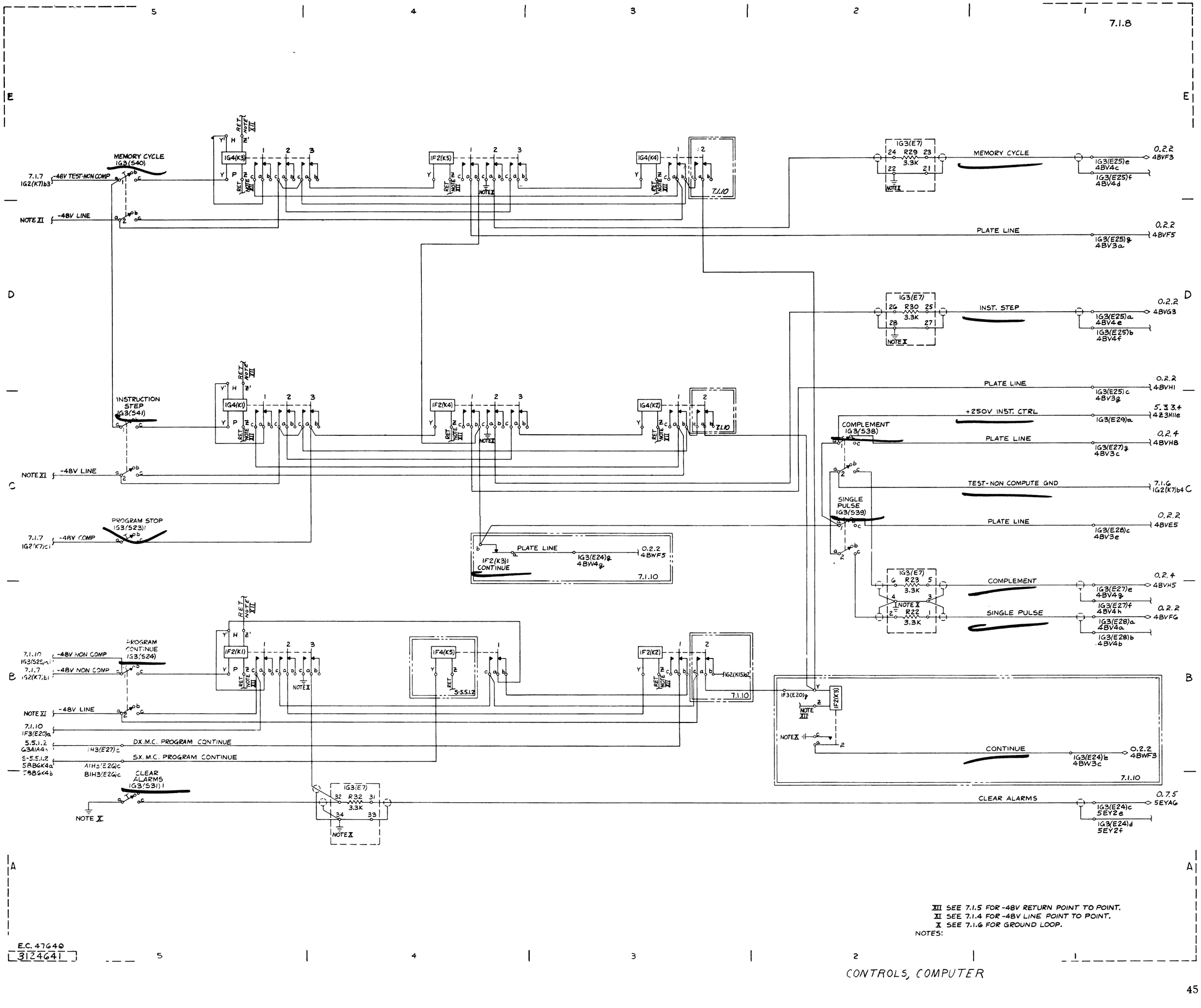


CONS. DX. MAINT. GROUND LOOPS



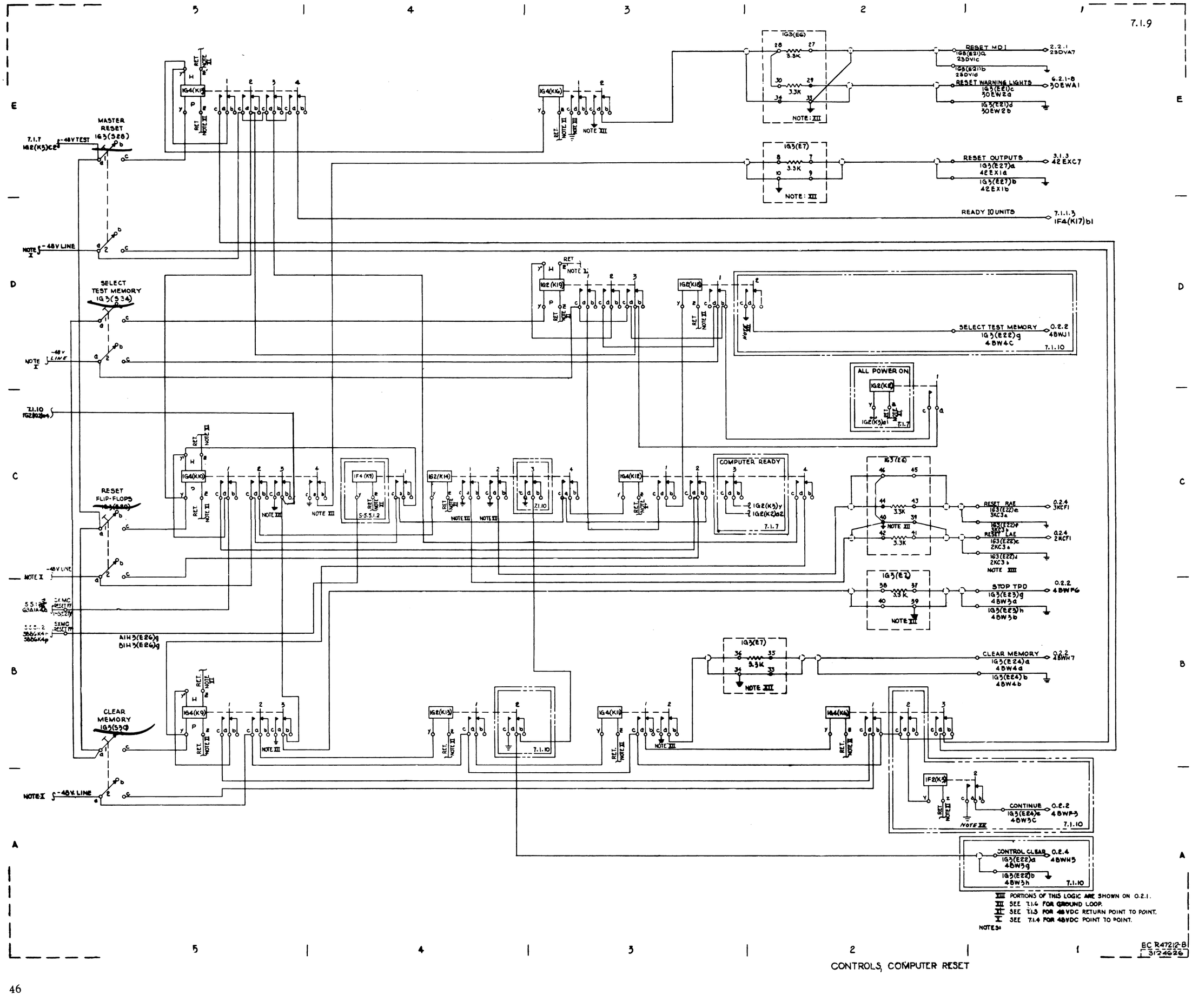


CONS, DX MAINT-COMPUTER CONTROL

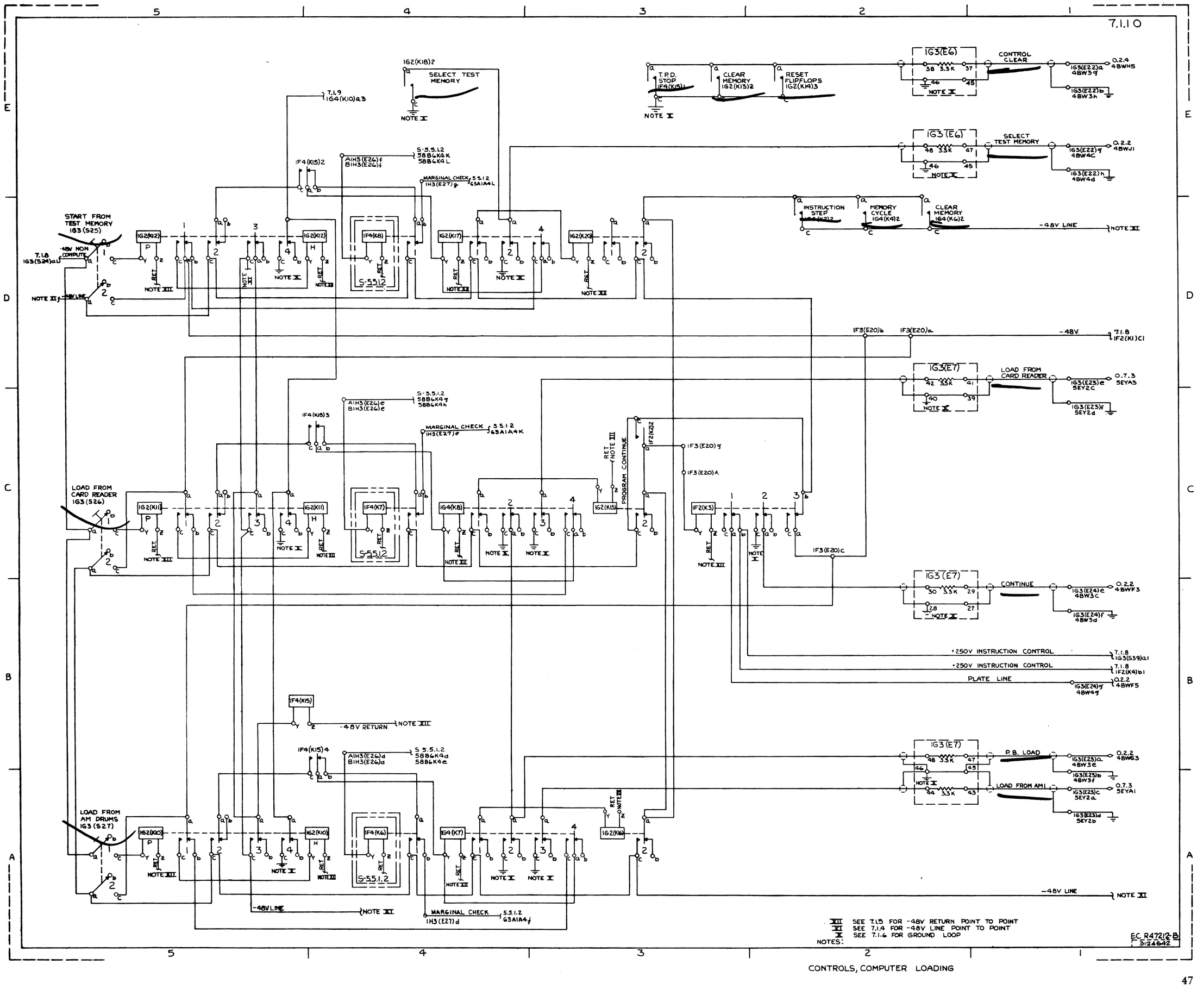


XII SEE 7.1.5 FOR -48V RETURN POINT TO POINT.
XI SEE 7.1.4 FOR -48V LINE POINT TO POINT.
X SEE 7.1.6 FOR GROUND LOOP.
NOTES:

E.C. 47640
3124641

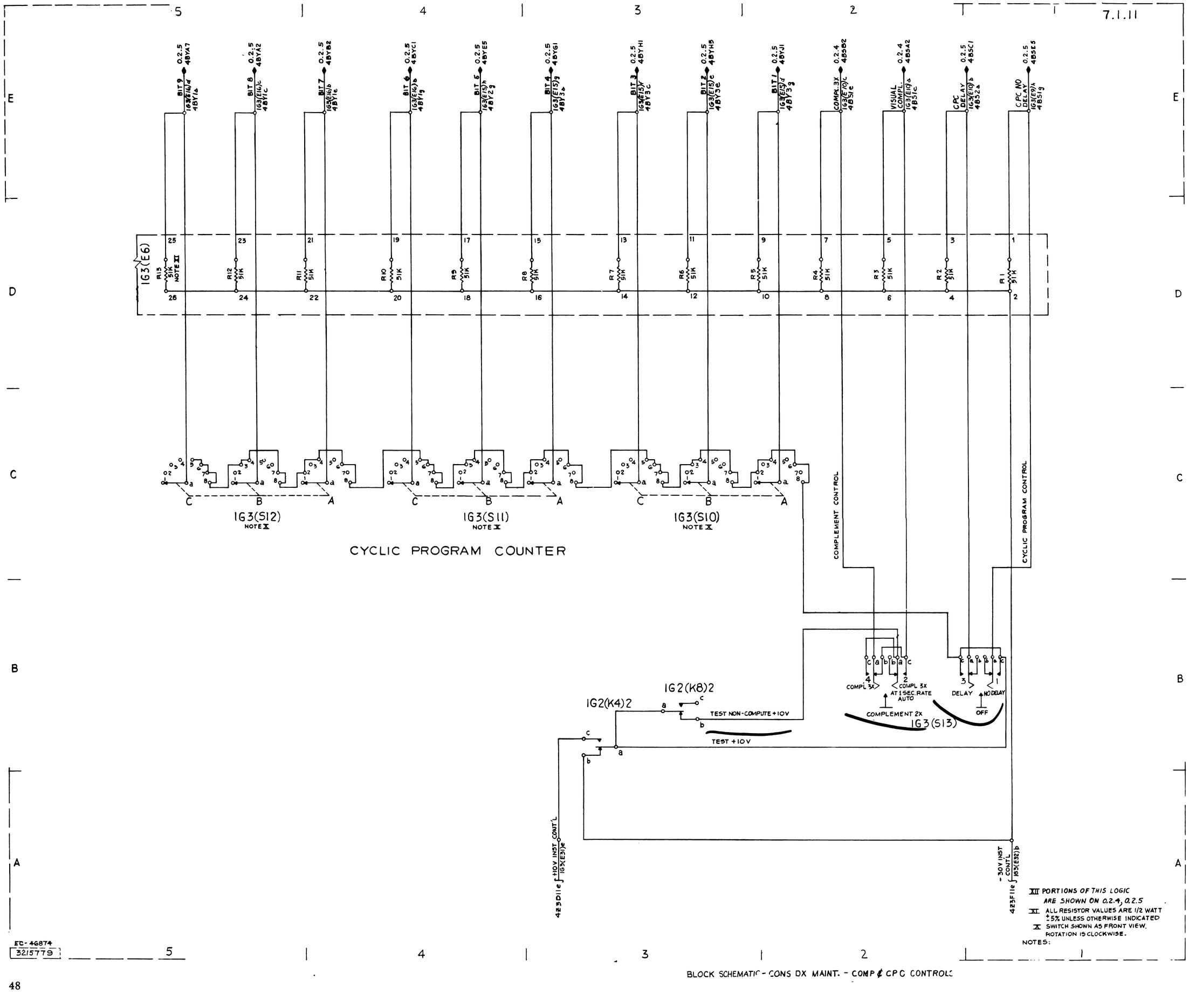


CONTROLS, COMPUTER RESET



NOTES:
- XII SEE 7.1.5 FOR -48V RETURN POINT TO POINT
- XI SEE 7.1.4 FOR -48V LINE POINT TO POINT
- X SEE 7.1.6 FOR GROUND LOOP

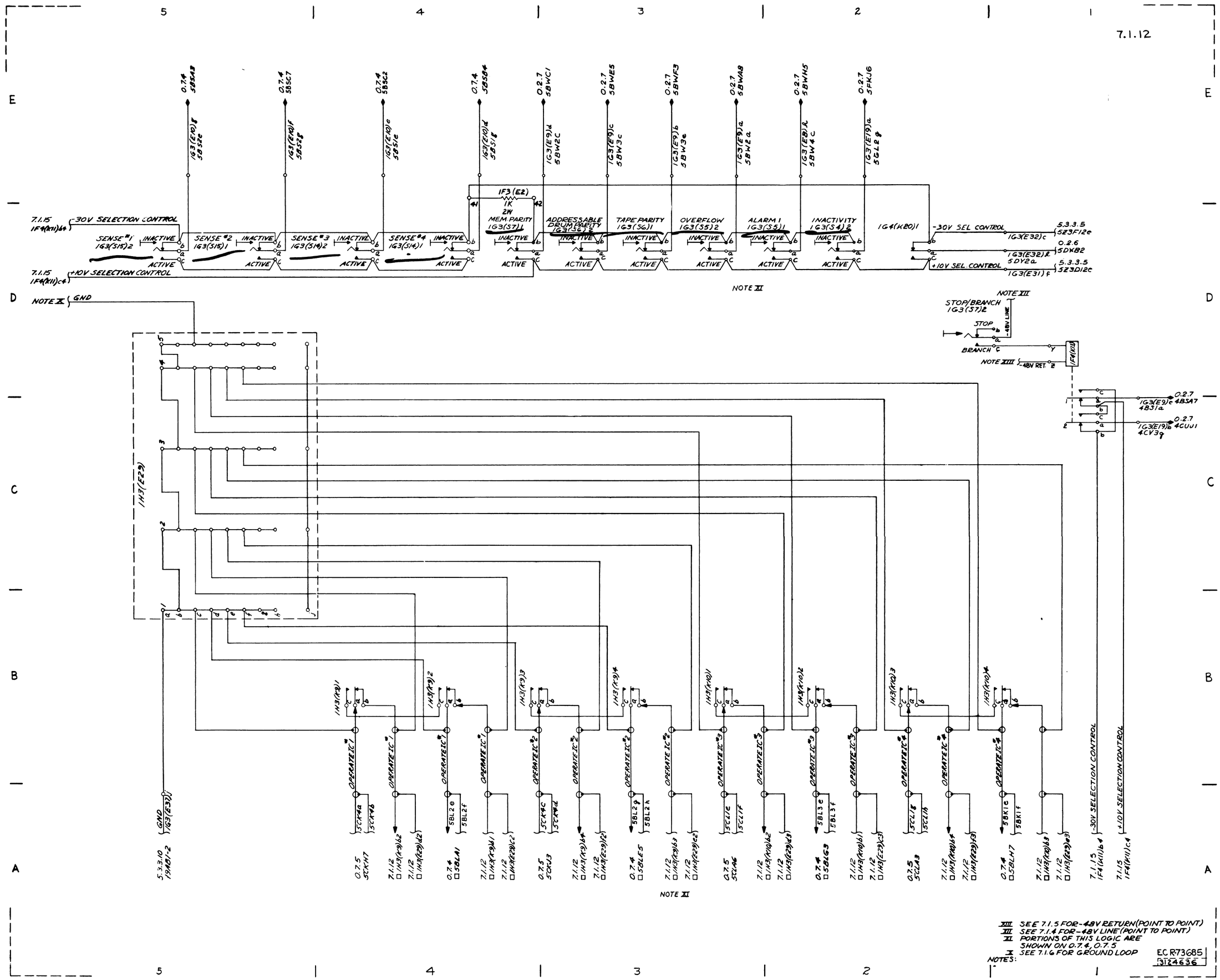
EC R47212-B
3124642



CYCLIC PROGRAM COUNTER

BLOCK SCHEMATIC - CONS DX MAINT. - COMP & CPC CONTROL

EC-46874
3215779

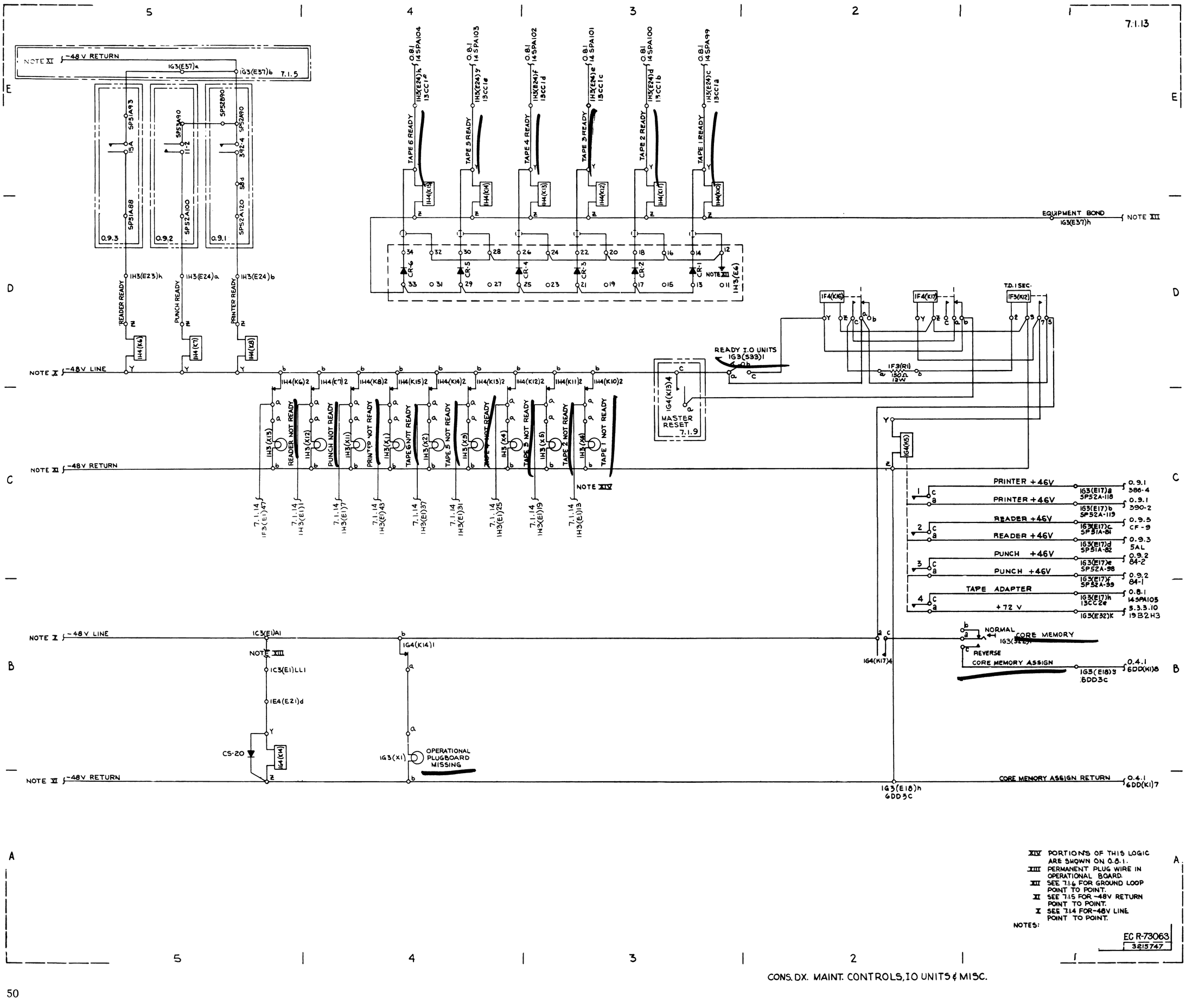


XIII SEE 7.1.5 FOR -48V RETURN (POINT TO POINT)
XII SEE 7.1.4 FOR -48V LINE (POINT TO POINT)
XI PORTIONS OF THIS LOGIC ARE SHOWN ON 0.7.4, 0.7.5
X SEE 7.1.6 FOR GROUND LOOP

NOTES:

EC R73685
3124636

BLOCK SCHEMATIC - CONS. DX, MAINT. COMP. ALARM & IC CONTROL

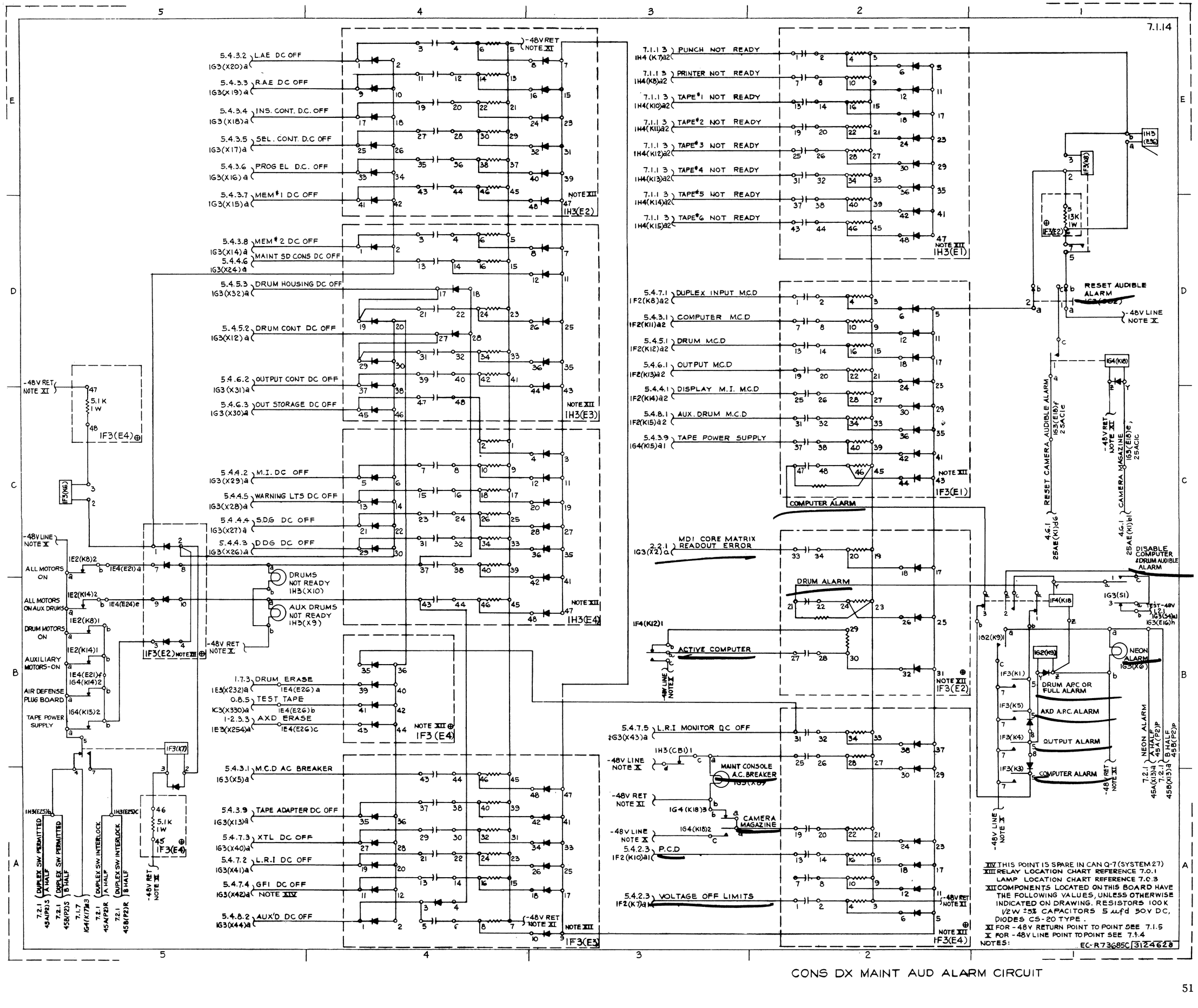


XIV PORTIONS OF THIS LOGIC ARE SHOWN ON 0.8.1.
XIII PERMANENT PLUG WIRE IN OPERATIONAL BOARD.
XII SEE 7.1.6 FOR GROUND LOOP POINT TO POINT.
XI SEE 7.1.5 FOR -48V RETURN POINT TO POINT.
X SEE 7.1.4 FOR-48V LINE POINT TO POINT.

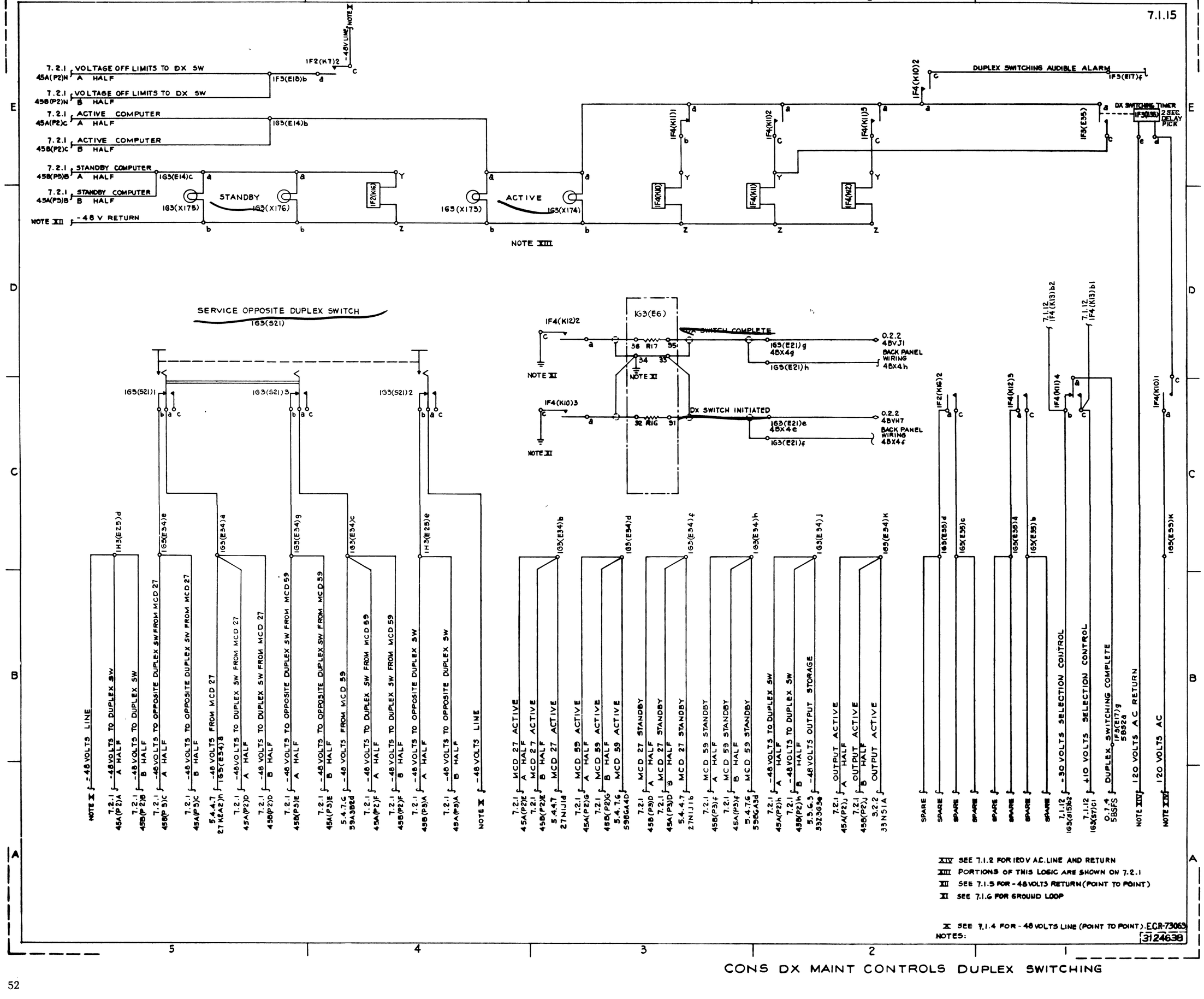
NOTES:

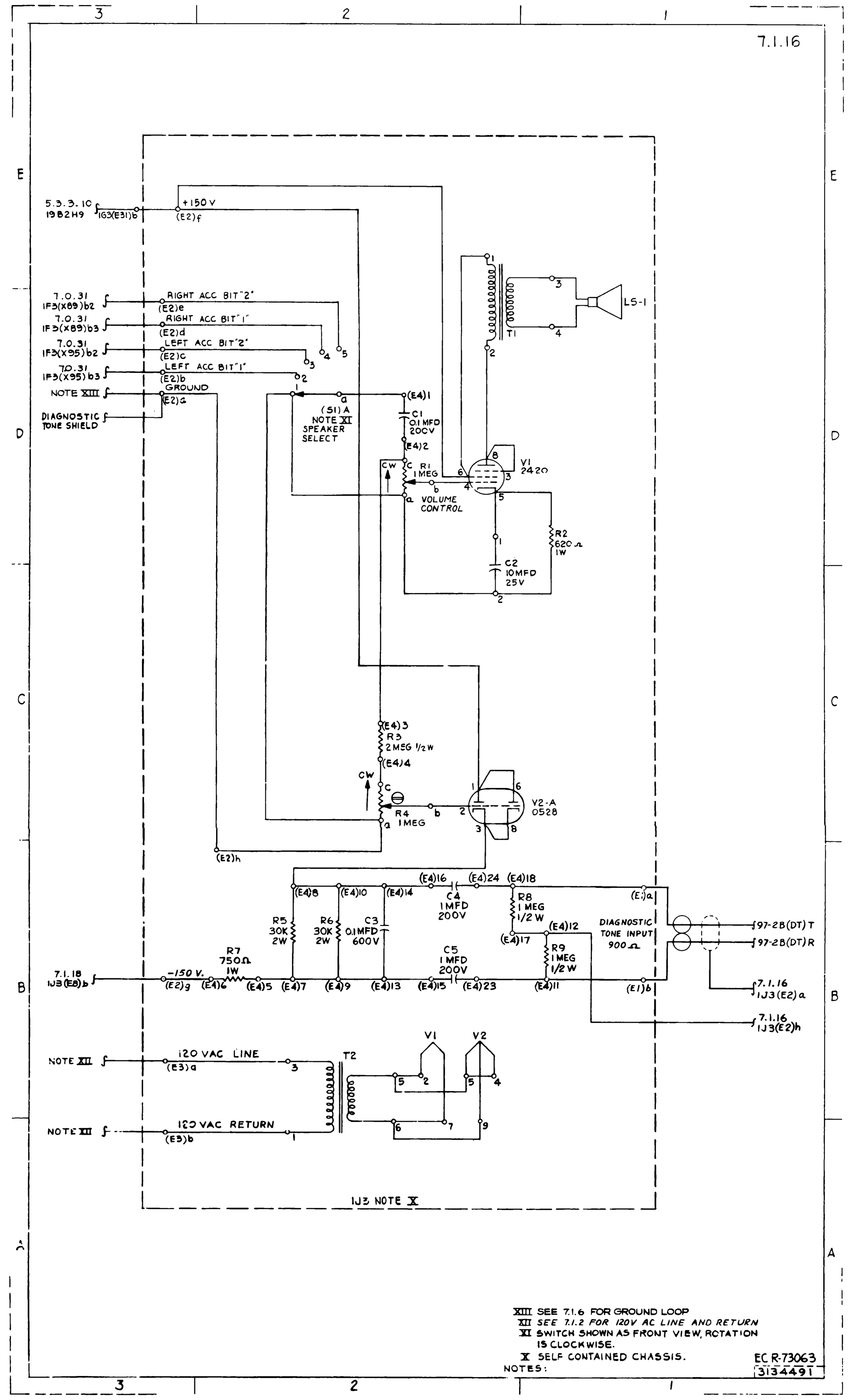
EC R-73063
3215747

CONS. DX. MAINT. CONTROLS, IO UNITS & MISC.



CONS DX MAINT AUD ALARM CIRCUIT


7.2.1 45A(P2)N A HALF VOLTAGE OFF LIMITS TO DX SW
7.2.1 45B(P2)N B HALF VOLTAGE OFF LIMITS TO DX SW
7.2.1 45A(P2)C A HALF ACTIVE COMPUTER
7.2.1 45B(P2)C B HALF ACTIVE COMPUTER
7.2.1 45B(P3)B A HALF STANDBY COMPUTER
7.2.1 45A(P3)B B HALF STANDBY COMPUTER
NOTE XII -48 V RETURN
-48V LINE NOTE X
IF2(K7)2
IF3(E18)b
IG3(E14)b
IG3(E14)c
IG3(X175)
STANDBY
IG3(X176)
IF2(K16)
IG3(X173)
ACTIVE
IG3(X174)
IF4(K11)1
IF4(K10)2
IF4(K11)3
IF4(K10)
IF4(K11)
IF4(K12)
IF4(K11)2
DUPLEX SWITCHING AUDIBLE ALARM
IF3(E17)f
IF4(K10)2
IF3(E35)
DX SWITCHING TIMER
IF3(E38) 2 SEC. DELAY PICK
NOTE XIII
SERVICE OPPOSITE DUPLEX SWITCH
IG3(S21)
IG3(S21)1
IG3(S21)3
IG3(S21)2
IF4(K12)2
IG3(E6)
DX SWITCH COMPLETE
36 R17 35
34 33
NOTE XI
IG3(E21)g
4BX4g
IG3(E21)h
0.2.2 4BVJ1 BACK PANEL WIRING 4BX4h
IF4(K10)3
DX SWITCH INITIATED
32 R16 31
IG3(E21)e
4BX4e
IG3(E21)f
0.2.2 4BVH7 BACK PANEL WIRING 4BX4f
7.1.12 IF4(K13)b2
7.1.12 IF4(K13)b1
IF2(K6)2
IF4(K12)3
IF4(K11)4
IF4(K10)1
IH3(E25)d
IH3(E25)e
IG5(E34)a
IG5(E34)b
IG5(E34)c
IG5(E34)d
IG5(E34)e
IG5(E34)f
IG5(E34)g
IG5(E34)h
IG5(E34)J
IG5(E34)K
IG5(E35)d
IG5(E35)c
IG5(E35)b
NOTE X -48 VOLTS LINE
7.2.1 45A(P2)A A HALF -48 VOLTS TO DUPLEX SW
7.2.1 45B(P2)B B HALF -48 VOLTS TO DUPLEX SW
7.2.1 45B(P2)B -48 VOLTS TO OPPOSITE DUPLEX SW FROM MCD 27 A HALF
7.2.1 45A(P3)C -48 VOLTS TO OPPOSITE DUPLEX SW FROM MCD 27 B HALF
5.4.4.7 27KRA2)A -48 VOLTS FROM MCD 27 IG5(E34)a
7.2.1 45A(P2)D -48 VOLTS TO DUPLEX SW FROM MCD 27 A HALF
7.2.1 45B(P2)D -48 VOLTS TO DUPLEX SW FROM MCD 27 B HALF
7.2.1 45B(P3)E -48 VOLTS TO OPPOSITE DUPLEX SW FROM MCD 59 A HALF
7.2.1 45A(P3)E -48 VOLTS TO OPPOSITE DUPLEX SW FROM MCD 59 B HALF
5.4.7.6 59A3B2d -48 VOLTS FROM MCD 59
7.2.1 45A(P2)F -48 VOLTS TO DUPLEX SW FROM MCD 59 A HALF
7.2.1 45B(P2)F -48 VOLTS TO DUPLEX SW FROM MCD 59 B HALF
7.2.1 45B(P3)A -48 VOLTS TO OPPOSITE DUPLEX SW A HALF
7.2.1 45A(P3)A -48 VOLTS TO OPPOSITE DUPLEX SW B HALF
NOTE X -48 VOLTS LINE
7.2.1 45A(P2)E MCD 27 ACTIVE A HALF
7.2.1 45B(P2)E MCD 27 ACTIVE B HALF
5.4.4.7 27N1J1d MCD 27 ACTIVE
7.2.1 45A(P2)G MCD 59 ACTIVE A HALF
7.2.1 45B(P2)G MCD 59 ACTIVE B HALF
5.4.7.6 59GA4D MCD 59 ACTIVE
7.2.1 45B(P3)D MCD 27 STANDBY A HALF
7.2.1 45A(P3)D MCD 27 STANDBY B HALF
5.4.4.7 27N1J1b MCD 27 STANDBY
7.2.1 45B(P3)F MCD 59 STANDBY A HALF
7.2.1 45A(P3)F MCD 59 STANDBY B HALF
5.4.7.6 59GA3d MCD 59 STANDBY
7.2.1 45A(P2)H -48 VOLTS TO DUPLEX SW A HALF
7.2.1 45B(P2)H -48 VOLTS TO DUPLEX SW B HALF
5.3.6.3 33Z36Se -48 VOLTS OUTPUT STORAGE
7.2.1 45A(P2)J OUTPUT ACTIVE A HALF
7.2.1 45B(P2)J OUTPUT ACTIVE B HALF
3.2.2 33N51A OUTPUT ACTIVE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
7.1.12 IG9(S15)K2 -30 VOLTS SELECTION CONTROL
7.1.12 IG9(S7)D1 +10 VOLTS SELECTION CONTROL
0.7.4 58SFS DUPLEX SWITCHING COMPLETE IF2(E17)g 58S24
NOTE XIV 120 VOLTS AC RETURN
NOTE XIV 120 VOLTS AC
IG5(E35)K
XIV SEE 7.1.2 FOR 120V A.C. LINE AND RETURN
XIII PORTIONS OF THIS LOGIC ARE SHOWN ON 7.2.1
XII SEE 7.1.5 FOR -48 VOLTS RETURN (POINT TO POINT)
XI SEE 7.1.6 FOR GROUND LOOP
X SEE 7.1.4 FOR -48 VOLTS LINE (POINT TO POINT).
NOTES:
ECR-73063
3124638

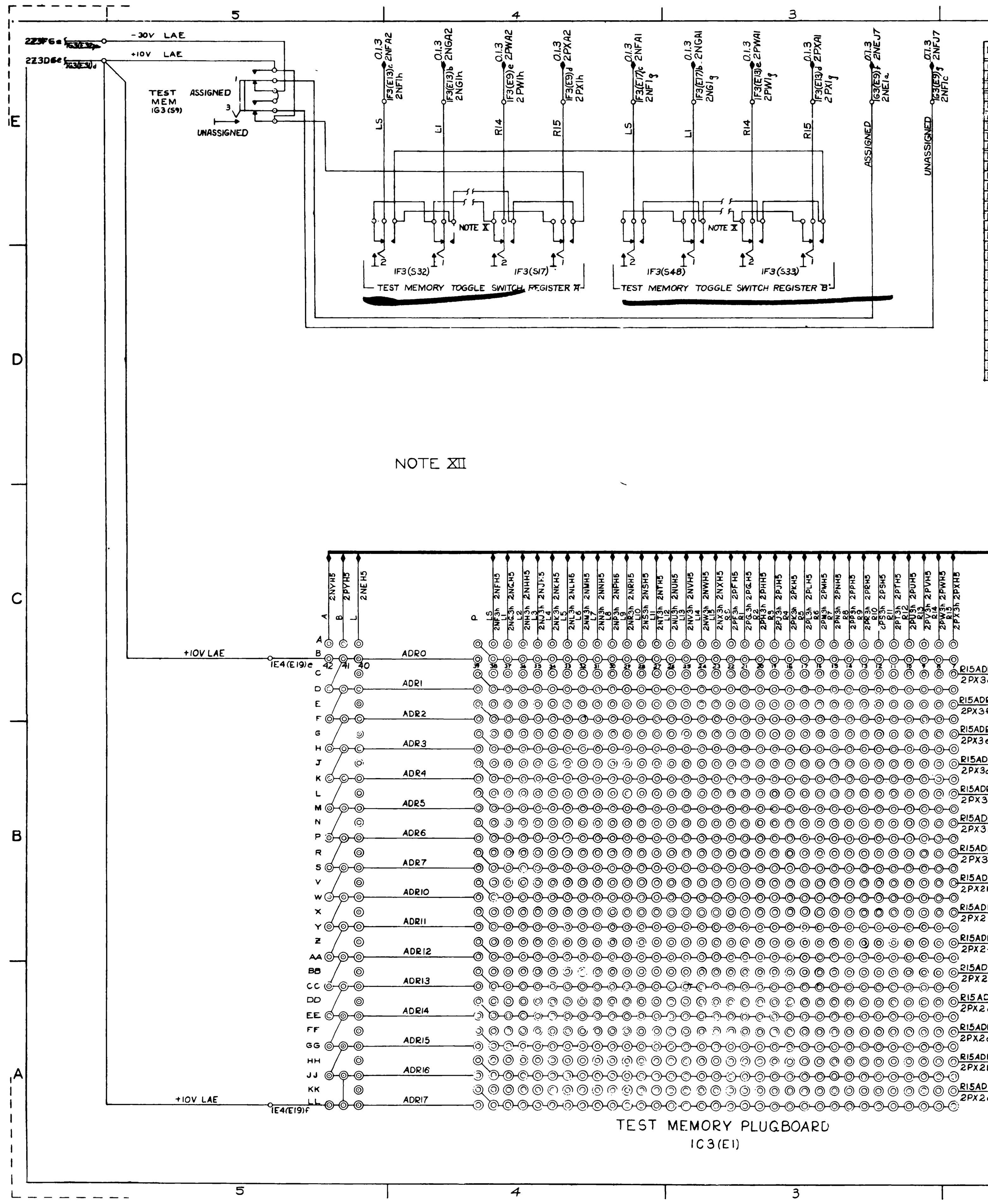


XIII SEE 7.1.6 FOR GROUND LOOP
XII SEE 7.1.2 FOR 120V AC LINE AND RETURN
XI SWITCH SHOWN AS FRONT VIEW, ROTATION IS CLOCKWISE.
X SELF CONTAINED CHASSIS.
NOTES:

EC R-73063
3134491

CONS DX MAINT AUDIO AMPLIFIER

7.1.17 DRAWING NO. 3109827 REV. B
7.1.17



TOGGLE SWITCH REGISTER "A"

POS.	TERMINAL	EDGE CONN	EDGE CONN	PLUG UNIT	LOG DWG.
LS	1F3(S32)a2	1F3(E13)c	2NF1h	2NFA2	0.1.3
L1	1F3(S32)a1	1F3(E13)b	2NG1h	2NGA2	
L2	1F3(S31)a2	1F3(E13)a	2NH1h	2NHA2	
L3	1F3(S31)a1	1F3(E12)h	2NJ1h	2NJA2	
L4	1F3(S30)a2	1F3(E12)g	2NK1h	2NKA2	
L5	1F3(S30)a1	1F3(E12)f	2NL1h	2NLA2	
L6	1F3(S29)a2	1F3(E12)e	2NM1h	2NMA2	
L7	1F3(S29)a1	1F3(E12)d	2NN1h	2NNA2	
L8	1F3(S28)a2	1F3(E12)c	2NP1h	2NPA2	
L9	1F3(S28)a1	1F3(E12)b	2NR1h	2NRA2	
L10	1F3(S27)a2	1F3(E12)a	2NS1h	2NSA2	
L11	1F3(S27)a1	1F3(E11)h	2NT1h	2NTA2	
L12	1F3(S26)a2	1F3(E11)g	2NU1h	2NUA2	
L13	1F3(S26)a1	1F3(E11)f	2NV1h	2NVA2	
L14	1F3(S25)a2	1F3(E11)e	2NW1h	2NWA2	
L15	1F3(S25)a1	1F3(E11)d	2NX1h	2NXA2	
RS	1F3(S24)a2	1F3(E11)c	2PF1h	2PFA2	
R1	1F3(S24)a1	1F3(E11)b	2PG1h	2PGA2	
R2	1F3(S23)a2	1F3(E11)a	2PH1h	2PHA2	
R3	1F3(S23)a1	1F3(E10)h	2PJ1h	2PJA2	
R4	1F3(S22)a2	1F3(E10)g	2PK1h	2PKA2	
R5	1F3(S22)a1	1F3(E10)f	2PL1h	2PLA2	
R6	1F3(S21)a2	1F3(E10)e	2PM1h	2PMA2	
R7	1F3(S21)a1	1F3(E10)d	2PN1h	2PNA2	
R8	1F3(S20)a2	1F3(E10)c	2PP1h	2PPA2	
R9	1F3(S20)a1	1F3(E10)b	2PR1h	2PRA2	
R10	1F3(S19)a2	1F3(E10)a	2PS1h	2PSA2	
R11	1F3(S19)a1	1F3(E9)h	2PT1h	2PTA2	
R12	1F3(S18)a2	1F3(E9)g	2PU1h	2PUA2	
R13	1F3(S18)a1	1F3(E9)f	2PV1h	2PVA2	
R14	1F3(S17)a2	1F3(E9)e	2PW1h	2PWA2	
R15	1F3(S17)a1	1F3(E9)d	2PX1h	2PXA2	0.1.3

TOGGLE SWITCH REGISTER B

POS.	TERMINAL	EDGE CONN	EDGE CONN	PLUG UNIT	LOG DWG
LS	1F3(S48)a2	1F3(E17)c	2NF1g	2NFA1	0.1.3
L1	1F3(S48)a1	1F3(E17)b	2NG1g	2NGA1	
L2	1F3(S47)a2	1F3(E17)a	2NH1g	2NHA1	
L3	1F3(S47)a1	1F3(E16)h	2NJ1g	2NJA1	
L4	1F3(S46)a2	1F3(E16)g	2NK1g	2NKA1	
L5	1F3(S46)a1	1F3(E16)f	2NL1g	2NLA1	
L6	1F3(S45)a2	1F3(E16)e	2NM1g	2NMA1	
L7	1F3(S45)a1	1F3(E16)d	2NN1g	2NNA1	
L8	1F3(S44)a2	1F3(E16)c	2NP1g	2NPA1	
L9	1F3(S44)a1	1F3(E16)b	2NR1g	2NRA1	
L10	1F3(S43)a2	1F3(E16)a	2NS1g	2NSA1	
L11	1F3(S43)a1	1F3(E15)h	2NT1g	2NTA1	
L12	1F3(S42)a2	1F3(E15)g	2NU1g	2NUA1	
L13	1F3(S42)a1	1F3(E15)f	2NV1g	2NVA1	
L14	1F3(S41)a2	1F3(E15)e	2NW1g	2NWA1	
L15	1F3(S41)a1	1F3(E15)d	2NX1g	2NXA1	
RS	1F3(S40)a2	1F3(E15)c	2PF1g	2PFA1	
R1	1F3(S40)a1	1F3(E15)b	2PG1g	2PGA1	
R2	1F3(S39)a2	1F3(E15)a	2PH1g	2PHA1	
R3	1F3(S39)a1	1F3(E14)h	2PJ1g	2PJA1	
R4	1F3(S38)a2	1F3(E14)g	2PK1g	2PKA1	
R5	1F3(S38)a1	1F3(E14)f	2PL1g	2PLA1	
R6	1F3(S37)a2	1F3(E14)e	2PM1g	2PMA1	
R7	1F3(S37)a1	1F3(E14)d	2PN1g	2PNA1	
R8	1F3(S36)a2	1F3(E14)c	2PP1g	2PPA1	
R9	1F3(S36)a1	1F3(E14)b	2PR1g	2PRA1	
R10	1F3(S35)a2	1F3(E14)a	2PS1g	2PSA1	
R11	1F3(S35)a1	1F3(E13)h	2PT1g	2PTA1	
R12	1F3(S34)a2	1F3(E13)g	2PU1g	2PUA1	
R13	1F3(S34)a1	1F3(E13)f	2PV1g	2PVA1	
R14	1F3(S33)a2	1F3(E13)e	2PW1g	2PWA1	
R15	1F3(S33)a1	1F3(E13)d	2PX1g	2PXA1	0.1.3

NOTE
XIII PORTIONS OF THIS LOGIC ARE SHOWN ON 0.1.3
XII FOR -48V POINT TO POINT SEE 7.1.4
X BREAK SYMBOL REPRESENTS 28 SWITCHES WIRED IN PARALLEL

EC R-73685
3109827

CONTROLS, TEST MEMORY SH. 1 OF 3

7.1.17

	ED CONN	ED CONN	PLUG UNIT	LOGIC	DESCRIPTION
	3(E1)A1				
	3(E1)A2				
	3(E1)A3				
	3(E1)A4				
	3(E1)A5				
	3(E1)A6				
	3(E1)A7	2PX 3h	2PX H5	0.1.3	R15 BIT CP ADR 0
	3(E1)A8	2PW 3h	2PW H5	0.1.3	R14 BIT CP ADR 0
	3(E1)A9	2PV 3h	2PV H5	0.1.3	R13 BIT CP ADR 0
	3(E1)A10	2PU 3h	2PU H5	0.1.3	R12 BIT CP ADR 0
	3(E1)A11	2PT 3h	2PT H5	0.1.3	R11 BIT CP ADR 0
	3(E1)A12	2PS 3h	2PS H5	0.1.3	R10 BIT CP ADR 0
	3(E1)A13	2PR 3h	2PR H5	0.1.3	R9 BIT CP ADR 0
	3(E1)A14	2PP 3h	2PP H5	0.1.3	R8 BIT CP ADR 0
	3(E1)A15	2PN 3h	2PN H5	0.1.3	R7 BIT CP ADR 0
	3(E1)A16	2PM3h	2PMH5	0.1.3	R6 BIT CP ADR 0
	3(E1)A17	2PL3h	2PLH5	0.1.3	R5 BIT CP ADR 0
	3(E1)A18	2PK3h	2PKH5	0.1.3	R4 BIT CP ADR 0
	3(E1)A19	2PJ3h	2PJH5	0.1.3	R3 BIT CP ADR 0
	3(E1)A20	2PH3h	2PHH5	0.1.3	R2 BIT CP ADR 0
	3(E1)A21	2PG3h	2PGH5	0.1.3	R1 BIT CP ADR 0
	3(E1)A22	2PF3h	2PFH5	0.1.3	RS BIT CP ADR 0
	3(E1)A23	2NX3h	2NXH5	0.1.3	L15 BIT CP ADR 0
	3(E1)A24	2NW3h	2NWH5	0.1.3	L14 BIT CP ADR 0
	3(E1)A25	2NV3h	2NVH5	0.1.3	L13 BIT CP ADR 0
	3(E1)A26	2NU3h	2NUH5	0.1.3	L12 BIT CP ADR 0
	3(E1)A27	2NT3h	2NTH5	0.1.3	L11 BIT CP ADR 0
	3(E1)A28	2NS3h	2NSH5	0.1.3	L10 BIT CP ADR 0
	3(E1)A29	2NR3h	2NRH5	0.1.3	L9 BIT CP ADR 0
	3(E1)A30	2NP3h	2NPH5	0.1.3	L8 BIT CP ADR 0
	3(E1)A31	2NN3h	2NNH5	0.1.3	L7 BIT CP ADR 0
	3(E1)A32	2NM3h	2NMH5	0.1.3	L6 BIT CP ADR 0
	3(E1)A33	2NL3h	2NLH5	0.1.3	L5 BIT CP ADR 0
	3(E1)A34	2NK3h	2NKH5	0.1.3	L4 BIT CP ADR 0
	3(E1)A35	2NJ3h	2NJH5	0.1.3	L3 BIT CP ADR 0
	3(E1)A36	2NH3h	2NHH5	0.1.3	L2 BIT CP ADR 0
	3(E1)A37	2NG3h	2NGH5	0.1.3	L1 BIT CP ADR 0
	3(E1)A38	2NF3h	2NFH5	0.1.3	LS BIT CP ADR 0
	3(E1)A40	2NE3h	2NEH5	0.1.3	LIVE BIT CP ADR 0
	3(E1)A41	2PY3h	2PYH5	0.1.3	B BIT CP ADR 0
	3(E1)A42	2NY3h	2NYH5	0.1.3	A BIT CP ADR 0
	3(E1)C1				
	3(E1)C2				
	3(E1)C3				
	3(E1)C4				
	3(E1)C5				
	3(E1)C6				
	3(E1)C7	2PX3g	2PXH3	0.1.3	R15 BIT CP ADR 1
	3(E1)C8	2PW3g	2PWH3	0.1.3	R14 BIT CP ADR 1
	3(E1)C9	2PV3g	2PVH3	0.1.3	R13 BIT CP ADR 1
	3(E1)C10	2PU3g	2PUH3	0.1.3	R12 BIT CP ADR 1
	3(E1)C11	2PT3g	2PTH3	0.1.3	R11 BIT CP ADR 1
	3(E1)C12	2PS3g	2PSH3	0.1.3	R10 BIT CP ADR 1
	3(E1)C13	2PR3g	2PRH3	0.1.3	R9 BIT CP ADR 1
	3(E1)C14	2PP3g	2PPH3	0.1.3	R8 BIT CP ADR 1
	3(E1)C15	2PN3g	2PNH3	0.1.3	R7 BIT CP ADR 1
	3(E1)C16	2PM3g	2PMH3	0.1.3	R6 BIT CP ADR 1
	3(E1)C17	2PL3g	2PLH3	0.1.3	R5 BIT CP ADR 1
	3(E1)C18	2PK3g	2PKH3	0.1.3	R4 BIT CP ADR 1
	3(E1)C19	2PJ3g	2PJH3	0.1.3	R3 BIT CP ADR 1
	3(E1)C20	2PH3g	2PHH3	0.1.3	R2 BIT CP ADR 1
	3(E1)C21	2PG3g	2PGH3	0.1.3	R1 BIT CP ADR 1
	3(E1)C22	2PF3g	2PFH3	0.1.3	RS BIT CP ADR 1
	3(E1)C23	2NX3g	2NXH3	0.1.3	L15 BIT CP ADR 1
	3(E1)C24	2NW3g	2NWH3	0.1.3	L14 BIT CP ADR 1
	3(E1)C25	2NV3g	2NVH3	0.1.3	L13 BIT CP ADR 1
	3(E1)C26	2NU3g	2NUH3	0.1.3	L12 BIT CP ADR 1
	3(E1)C27	2NT3g	2NTH3	0.1.3	L11 BIT CP ADR 1
	3(E1)C28	2NS3g	2NSH3	0.1.3	L10 BIT CP ADR 1
	3(E1)C29	2NR3g	2NRH3	0.1.3	L9 BIT CP ADR 1
	3(E1)C30	2NP3g	2NPH3	0.1.3	L8 BIT CP ADR 1
	3(E1)C31	2NN3g	2NNH3	0.1.3	L7 BIT CP ADR 1
	3(E1)C32	2NM3g	2NMH3	0.1.3	L6 BIT CP ADR 1
	3(E1)C33	2NL3g	2NLH3	0.1.3	L5 BIT CP ADR 1
	3(E1)C34	2NK3g	2NKH3	0.1.3	L4 BIT CP ADR 1
	3(E1)C35	2NJ3g	2NJH3	0.1.3	L3 BIT CP ADR 1
	3(E1)C36	2NH3g	2NHH3	0.1.3	L2 BIT CP ADR 1
	3(E1)C37	2NG3g	2NGH3	0.1.3	L1 BIT CP ADR 1
	3(E1)C38	2NF3g	2NFH3	0.1.3	LS BIT CP ADR 1
	3(E1)C40	2NE3g	2NEH3	0.1.3	LIVE BIT CP ADR 1
	3(E1)C41	2PY3g	2PYH3	0.1.3	B BIT CP ADR 1
	3(E1)C42	2NY3g	2NYH3	0.1.3	A BIT CP ADR 1
	3(E1)E1				
	3(E1)E2				
	3(E1)E3				
	3(E1)E4				
	3(E1)E5				

	ED CONN	ED CONN	PLUG UNIT	LOGIC	DESCRIPTION
	3(E1)E6				
	3(E1)E7	2PX3f	2PXH1	0.1.3	R15 BIT CP ADR 2
	3(E1)E8	2PW3f	2PWH1	0.1.3	R14 BIT CP ADR 2
	3(E1)E9	2PV3f	2PVH1	0.1.3	R13 BIT CP ADR 2
	3(E1)E10	2PU3f	2PUH1	0.1.3	R12 BIT CP ADR 2
	3(E1)E11	2PT3f	2PTH1	0.1.3	R11 BIT CP ADR 2
	3(E1)E12	2PS3f	2PSH1	0.1.3	R10 BIT CP ADR 2
	3(E1)E13	2PR3f	2PRH1	0.1.3	R9 BIT CP ADR 2
	3(E1)E14	2PP3f	2PPH1	0.1.3	R8 BIT CP ADR 2
	3(E1)E15	2PN3f	2PNH1	0.1.3	R7 BIT CP ADR 2
	3(E1)E16	2PM3f	2PMH1	0.1.3	R6 BIT CP ADR 2
	3(E1)E17	2PL3f	2PLH1	0.1.3	R5 BIT CP ADR 2
	3(E1)E18	2PK3f	2PKH1	0.1.3	R4 BIT CP ADR 2
	3(E1)E19	2PJ3f	2PJH1	0.1.3	R3 BIT CP ADR 2
	3(E1)E20	2PH3f	2PHH1	0.1.3	R2 BIT CP ADR 2
	3(E1)E21	2PG3f	2PGH1	0.1.3	R1 BIT CP ADR 2
	3(E1)E22	2PF3f	2PFH1	0.1.3	RS BIT CP ADR 2
	3(E1)E23	2NX3f	2NXH1	0.1.3	L15 BIT CP ADR 2
	3(E1)E24	2NW3f	2NWH1	0.1.3	L14 BIT CP ADR 2
	3(E1)E25	2NV3f	2NVH1	0.1.3	L13 BIT CP ADR 2
	3(E1)E26	2NU3f	2NUH1	0.1.3	L12 BIT CP ADR 2
	3(E1)E27	2NT3f	2NTH1	0.1.3	L11 BIT CP ADR 2
	3(E1)E28	2NS3f	2NSH1	0.1.3	L10 BIT CP ADR 2
	3(E1)E29	2NR3f	2NRH1	0.1.3	L9 BIT CP ADR 2
	3(E1)E30	2NP3f	2NPH1	0.1.3	L8 BIT CP ADR 2
	3(E1)E31	2NN3f	2NNH1	0.1.3	L7 BIT CP ADR 2
	3(E1)E32	2NM3f	2NMH1	0.1.3	L6 BIT CP ADR 2
	3(E1)E33	2NL3f	2NLH1	0.1.3	L5 BIT CP ADR 2
	3(E1)E34	2NK3f	2NKH1	0.1.3	L4 BIT CP ADR 2
	3(E1)E35	2NJ3f	2NJH1	0.1.3	L3 BIT CP ADR 2
	3(E1)E36	2NH3f	2NHH1	0.1.3	L2 BIT CP ADR 2
	3(E1)E37	2NG3f	2NGH1	0.1.3	L1 BIT CP ADR 2
	3(E1)E38	2NF3f	2NFH1	0.1.3	LS BIT CP ADR 2
	3(E1)E40	2NE3f	2NEH1	0.1.3	LIVE BIT CP ADR 2
	3(E1)E41	2PY3f	2PYH1	0.1.3	B BIT CP ADR 2
	3(E1)E42	2NY3f	2NYH1	0.1.3	A BIT CP ADR 2
	3(E1)G1				
	3(E1)G2				
	3(E1)G3				
	3(E1)G4				
	3(E1)G5				
	3(E1)G6				
	3(E1)G7	2PX3e	2PXG3	0.1.3	R15 BIT CP ADR 3
	3(E1)G8	2PW3e	2PWG3	0.1.3	R14 BIT CP ADR 3
	3(E1)G9	2PV3e	2PVG3	0.1.3	R13 BIT CP ADR 3
	3(E1)G10	2PU3e	2PUG3	0.1.3	R12 BIT CP ADR 3
	3(E1)G11	2PT3e	2PTG3	0.1.3	R11 BIT CP ADR 3
	3(E1)G12	2PS3e	2PSG3	0.1.3	R10 BIT CP ADR 3
	3(E1)G13	2PR3e	2PRG3	0.1.3	R9 BIT CP ADR 3
	3(E1)G14	2PP3e	2PPG3	0.1.3	R8 BIT CP ADR 3
	3(E1)G15	2PN3e	2PNG3	0.1.3	R7 BIT CP ADR 3
	3(E1)G16	2PM3e	2PMG3	0.1.3	R6 BIT CP ADR 3
	3(E1)G17	2PL3e	2PLG3	0.1.3	R5 BIT CP ADR 3
	3(E1)G18	2PK3e	2PKG3	0.1.3	R4 BIT CP ADR 3
	3(E1)G19	2PJ3e	2PJG3	0.1.3	R3 BIT CP ADR 3
	3(E1)G20	2PH3e	2PHG3	0.1.3	R2 BIT CP ADR 3
	3(E1)G21	2PG3e	2PGG3	0.1.3	R1 BIT CP ADR 3
	3(E1)G22	2PF3e	2PFG3	0.1.3	RS BIT CP ADR 3
	3(E1)G23	2NX3e	2NXG3	0.1.3	L15 BIT CP ADR 3
	3(E1)G24	2NW3e	2NWG3	0.1.3	L14 BIT CP ADR 3
	3(E1)G25	2NV3e	2NVG3	0.1.3	L13 BIT CP ADR 3
	3(E1)G26	2NU3e	2NUG3	0.1.3	L12 BIT CP ADR 3
	3(E1)G27	2NT3e	2NTG3	0.1.3	L11 BIT CP ADR 3
	3(E1)G28	2NS3e	2NSG3	0.1.3	L10 BIT CP ADR 3
	3(E1)G29	2NR3e	2NRG3	0.1.3	L9 BIT CP ADR 3
	3(E1)G30	2NP3e	2NPG3	0.1.3	L8 BIT CP ADR 3
	3(E1)G31	2NN3e	2NNG3	0.1.3	L7 BIT CP ADR 3
	3(E1)G32	2NM3e	2NMG3	0.1.3	L6 BIT CP ADR 3
	3(E1)G33	2NL3e	2NLG3	0.1.3	L5 BIT CP ADR 3
	3(E1)G34	2NK3e	2NKG3	0.1.3	L4 BIT CP ADR 3
	3(E1)G35	2NJ3e	2NJG3	0.1.3	L3 BIT CP ADR 3
	3(E1)G36	2NH3e	2NHG3	0.1.3	L2 BIT CP ADR 3
	3(E1)G37	2NG3e	2NGG3	0.1.3	L1 BIT CP ADR 3
	3(E1)G38	2NF3e	2NFG3	0.1.3	LS BIT CP ADR 3
	3(E1)G40	2NE3e	2NEG3	0.1.3	LIVE BIT CP ADR 3
	3(E1)G41	2PY3e	2PYG3	0.1.3	B BIT CP ADR 3
	3(E1)G42	2NY3e	2NYG3	0.1.3	A BIT CP ADR 3
	3(E1)J1				
	3(E1)J2				
	3(E1)J3				
	3(E1)J4				
	3(E1)J5				
	3(E1)J6				
	3(E1)J7	2PX3d	2PXG1	0.1.3	R15 BIT CP ADR 4
	3(E1)J8	2PW3d	2PWG1	0.1.3	R14 BIT CP ADR 4
	3(E1)J9	2PV3d	2PVG1	0.1.3	R13 BIT CP ADR 4
	3(E1)J10	2PU3d	2PUG1	0.1.3	R12 BIT CP ADR 4

	ED CONN	ED CONN	PLUG UNIT	LOGIC	DESCRIPTION
	3(E1)J11	2PT3d	2PTG1	0.1.3	R11 BIT CP ADR 4
	3(E1)J12	2PS3d	2PSG1	0.1.3	R10 BIT CP ADR 4
	3(E1)J13	2PR3d	2PRG1	0.1.3	R9 BIT CP ADR 4
	3(E1)J14	2PP3d	2PPG1	0.1.3	R8 BIT CP ADR 4
	3(E1)J15	2PN3d	2PNG1	0.1.3	R7 BIT CP ADR 4
	3(E1)J16	2PM3d	2PMG1	0.1.3	R6 BIT CP ADR 4
	3(E1)J17	2PL3d	2PLG1	0.1.3	R5 BIT CP ADR 4
	3(E1)J18	2PK3d	2PKG1	0.1.3	R4 BIT CP ADR 4
	3(E1)J19	2PJ3d	2PJG1	0.1.3	R3 BIT CP ADR 4
	3(E1)J20	2PH3d	2PHG1	0.1.3	R2 BIT CP ADR 4
	3(E1)J21	2PG3d	2PGG1	0.1.3	R1 BIT CP ADR 4
	3(E1)J22	2PF3d	2PFG1	0.1.3	RS BIT CP ADR 4
	3(E1)J23	2NX3d	2NXG1	0.1.3	L15 BIT CP ADR 4
	3(E1)J24	2NW3d	2NWG1	0.1.3	L14 BIT CP ADR 4
	3(E1)J25	2NV3d	2NVG1	0.1.3	L13 BIT CP ADR 4
	3(E1)J26	2NU3d	2NUG1	0.1.3	L12 BIT CP ADR 4
	3(E1)J27	2NT3d	2NTG1	0.1.3	L11 BIT CP ADR 4
	3(E1)J28	2NS3d	2NSG1	0.1.3	L10 BIT CP ADR 4
	3(E1)J29	2NR3d	2NRG1	0.1.3	L9 BIT CP ADR 4
	3(E1)J30	2NP3d	2NPG1	0.1.3	L8 BIT CP ADR 4
	3(E1)J31	2NN3d	2NNG1	0.1.3	L7 BIT CP ADR 4
	3(E1)J32	2NM3d	2NMG1	0.1.3	L6 BIT CP ADR 4
	3(E1)J33	2NL3d	2NLG1	0.1.3	L5 BIT CP ADR 4
	3(E1)J34	2NK3d	2NKG1	0.1.3	L4 BIT CP ADR 4
	3(E1)J35	2NJ3d	2NJG1	0.1.3	L3 BIT CP ADR 4
	3(E1)J36	2NH3d	2NHG1	0.1.3	L2 BIT CP ADR 4
	3(E1)J37	2NG3d	2NGG1	0.1.3	L1 BIT CP ADR 4
	3(E1)J38	2NF3d	2NFG1	0.1.3	LS BIT CP ADR 4
	3(E1)J40	2NE3d	2NEG1	0.1.3	LIVE BIT CP ADR 4
	3(E1)J41	2PY3d	2PYG1	0.1.3	B BIT CP ADR 4
	3(E1)J42	2NY3d	2NYG1	0.1.3	A BIT CP ADR 4
	3(E1)L1				
	3(E1)L2				
	3(E1)L3				
	3(E1)L4				
	3(E1)L5				
	3(E1)L6				
	3(E1)L7	2PX3c	2PXF7	0.1.3	R15 BIT CP ADR 5
	3(E1)L8	2PW3c	2PWF7	0.1.3	R14 BIT CP ADR 5
	3(E1)L9	2PV3c	2PVF7	0.1.3	R13 BIT CP ADR 5
	3(E1)L10	2PU3c	2PUF7	0.1.3	R12 BIT CP ADR 5
	3(E1)L11	2PT3c	2PTF7	0.1.3	R11 BIT CP ADR 5
	3(E1)L12	2PS3c	2PSF7	0.1.3	R10 BIT CP ADR 5
	3(E1)L13	2PR3c	2PRF7	0.1.3	R9 BIT CP ADR 5
	3(E1)L14	2PP3c	2PPF7	0.1.3	R8 BIT CP ADR 5
	3(E1)L15	2PN3c	2PNF7	0.1.3	R7 BIT CP ADR 5
	3(E1)L16	2PM3c	2PMF7	0.1.3	R6 BIT CP ADR 5
	3(E1)L17	2PL3c	2PLF7	0.1.3	R5 BIT CP ADR 5
	3(E1)L18	2PK3c	2PKF7	0.1.3	R4 BIT CP ADR 5
	3(E1)L19	2PJ3c	2PJF7	0.1.3	R3 BIT CP ADR 5
	3(E1)L20	2PH3c	2PHF7	0.1.3	R2 BIT CP ADR 5
	3(E1)L21	2PG3c	2PGF7	0.1.3	R1 BIT CP ADR 5
	3(E1)L22	2PF3c	2PFF7	0.1.3	RS BIT CP ADR 5
	3(E1)L23	2NX3c	2NXF7	0.1.3	L15 BIT CP ADR 5
	3(E1)L24	2NW3c	2NWF7	0.1.3	L14 BIT CP ADR 5
	3(E1)L25	2NV3c	2NVF7	0.1.3	L13 BIT CP ADR 5
	3(E1)L26	2NU3c	2NUF7	0.1.3	L12 BIT CP ADR 5
	3(E1)L27	2NT3c	2NTF7	0.1.3	L11 BIT CP ADR 5
	3(E1)L28	2NS3c	2NSF7	0.1.3	L10 BIT CP ADR 5
	3(E1)L29	2NR3c	2NRF7	0.1.3	L9 BIT CP ADR 5
	3(E1)L30	2NP3c	2NPF7	0.1.3	L8 BIT CP ADR 5
	3(E1)L31	2NN3c	2NNF7	0.1.3	L7 BIT CP ADR 5
	3(E1)L32	2NM3c	2NMF7	0.1.3	L6 BIT CP ADR 5
	3(E1)L33	2NL3c	2NLF7	0.1.3	L5 BIT CP ADR 5
	3(E1)L34	2NK3c	2NKF7	0.1.3	L4 BIT CP ADR 5
	3(E1)L35	2NJ3c	2NJF7	0.1.3	L3 BIT CP ADR 5
	3(E1)L36	2NH3c	2NHF7	0.1.3	L2 BIT CP ADR 5
	3(E1)L37	2NG3c	2NGF7	0.1.3	L1 BIT CP ADR 5
	3(E1)L38	2NF3c	2NFF7	0.1.3	LS BIT CP ADR 5
	3(E1)L40	2NE3c	2NEF7	0.1.3	LIVE BIT CP ADR 5
	3(E1)L41	2PY3c	2PYF7	0.1.3	B BIT CP ADR 5
	3(E1)L42	2NY3c	2NYF7	0.1.3	A BIT CP ADR 5
	3(E1)N1				
	3(E1)N2				
	3(E1)N3				
	3(E1)N4				
	3(E1)N5				
	3(E1)N6				
	3(E1)N7	2PX3b	2PXF3	0.1.3	R15 BIT CP ADR 6
	3(E1)N8	2PW3b	2PWF3	0.1.3	R14 BIT CP ADR 6
	3(E1)N9	2PV3b	2PVF3	0.1.3	R13 BIT CP ADR 6
	3(E1)N10	2PU3b	2PUF3	0.1.3	R12 BIT CP ADR 6
	3(E1)N11	2PT3b	2PTF3	0.1.3	R11 BIT CP ADR 6
	3(E1)N12	2PS3b	2PSF3	0.1.3	R10 BIT CP ADR 6
	3(E1)N13	2PR3b	2PRF3	0.1.3	R9 BIT CP ADR 6
	3(E1)N14	2PP3b	2PPF3	0.1.3	R8 BIT CP ADR 6
	3(E1)N15	2PN3b	2PNF3	0.1.3	R7 BIT CP ADR 6

	ED CONN	ED CONN	PLUG UNIT	LOGIC	DESCRIPTION
	3(E1)N16	2PM3b	2PMF3	0.1.3	R6 BIT CP ADR 6
	3(E1)N17	2PL3b	2PLF3	0.1.3	R5 BIT CP ADR 6
	3(E1)N18	2PK3b	2PKF3	0.1.3	R4 BIT CP ADR 6
	3(E1)N19	2PJ3b	2PJF3	0.1.3	R3 BIT CP ADR 6
	3(E1)N20	2PH3b	2PHF3	0.1.3	R2 BIT CP ADR 6
	3(E1)N21	2PG3b	2PGF3	0.1.3	R1 BIT CP ADR 6
	3(E1)N22	2PF3b	2PFF3	0.1.3	RS BIT CP ADR 6
	3(E1)N23	2NX3b	2NXF3	0.1.3	L15 BIT CP ADR 6
	3(E1)N24	2NW3b	2NWF3	0.1.3	L14 BIT CP ADR 6
	3(E1)N25	2NV3b	2NVF3	0.1.3	L13 BIT CP ADR 6
	3(E1)N26	2NU3b	2NUF3	0.1.3	L12 BIT CP ADR 6
	3(E1)N27	2NT3b	2NTF3	0.1.3	L11 BIT CP ADR 6
	3(E1)N28	2NS3b	2NSF3	0.1.3	L10 BIT CP ADR 6
	3(E1)N29	2NR3b	2NRF3	0.1.3	L9 BIT CP ADR 6
	3(E1)N30	2NP3b	2NPF3	0.1.3	L8 BIT CP ADR 6
	3(E1)N31	2NN3b	2NNF3	0.1.3	L7 BIT CP ADR 6
	3(E1)N32	2NM3b	2NMF3	0.1.3	L6 BIT CP ADR 6
	3(E1)N33	2NL3b	2NLF3	0.1.3	L5 BIT CP ADR 6
	3(E1)N34	2NK3b	2NKF3	0.1.3	L4 BIT CP ADR 6
	3(E1)N35	2NJ3b	2NJF3	0.1.3	L3 BIT CP ADR 6
	3(E1)N36	2NH3b	2NHF3	0.1.3	L2 BIT CP ADR 6
	3(E1)N37	2NG3b	2NGF3	0.1.3	L1 BIT CP ADR 6
	3(E1)N38	2NF3b	2NFF3	0.1.3	LS BIT CP ADR 6
	3(E1)N40	2NE3b	2NEF3	0.1.3	LIVE BIT CP ADR 6
	3(E1)N41	2PY3b	2PYF3	0.1.3	B BIT CP ADR 6
	3(E1)N42	2NY3b	2NYF3	0.1.3	A BIT CP ADR 6
	3(E1)R1				
	3(E1)R2				
	3(E1)R3				
	3(E1)R4				
	3(E1)R5				
	3(E1)R6				
	3(E1)R7	2PX3a	2PXF1	0.1.3	R15 BIT CP ADR 7
	3(E1)R8	2PW3a	2PWF1	0.1.3	R14 BIT CP ADR 7
	3(E1)R9	2PV3a	2PVF1	0.1.3	R13 BIT CP ADR 7
	3(E1)R10	2PU3a	2PUF1	0.1.3	R12 BIT CP ADR 7
	3(E1)R11	2PT3a	2PTF1	0.1.3	R11 BIT CP ADR 7
	3(E1)R12	2PS3a	2PSF1	0.1.3	R10 BIT CP ADR 7
	3(E1)R13	2PR3a	2PRF1	0.1.3	R9 BIT CP ADR 7
	3(E1)R14	2PP3a	2PPF1	0.1.3	R8 BIT CP ADR 7
	3(E1)R15	2PN3a	2PNF1	0.1.3	R7 BIT CP ADR 7
	3(E1)R16	2PM3a	2PMF1	0.1.3	R6 BIT CP ADR 7
	3(E1)R17	2PL3a	2PLF1	0.1.3	R5 BIT CP ADR 7
	3(E1)R18	2PK3a	2PKF1	0.1.3	R4 BIT CP ADR 7
	3(E1)R19	2PJ3a	2PJF1	0.1.3	R3 BIT CP ADR 7
	3(E1)R20	2PH3a	2PHF1	0.1.3	R2 BIT CP ADR 7
	3(E1)R21	2PG3a	2PGF1	0.1.3	R1 BIT CP ADR 7
	3(E1)R22	2PF3a	2PFF1	0.1.3	RS BIT CP ADR 7
	3(E1)R23	2NX3a	2NXF1	0.1.3	L15 BIT CP ADR 7
	3(E1)R24	2NW3a	2NWF1	0.1.3	L14 BIT CP ADR 7
	3(E1)R25	2NV3a	2NVF1	0.1.3	L13 BIT CP ADR 7
	3(E1)R26	2NU3a	2NUF1	0.1.3	L12 BIT CP ADR 7
	3(E1)R27	2NT3a	2NTF1	0.1.3	L11 BIT CP ADR 7
	3(E1)R28	2NS3a	2NSF1	0.1.3	L10 BIT CP ADR 7
	3(E1)R29	2NR3a	2NRF1	0.1.3	L9 BIT CP ADR 7
	3(E1)R30	2NP3a	2NPF1	0.1.3	L8 BIT CP ADR 7
	3(E1)R31	2NN3a	2NNF1	0.1.3	L7 BIT CP ADR 7
	3(E1)R32	2NM3a	2NMF1	0.1.3	L6 BIT CP ADR 7
	3(E1)R33	2NL3a	2NLF1	0.1.3	L5 BIT CP ADR 7
	3(E1)R34	2NK3a	2NKF1	0.1.3	L4 BIT CP ADR 7
	3(E1)R35	2NJ3a	2NJF1	0.1.3	L3 BIT CP ADR 7
	3(E1)R36	2NH3a	2NHF1	0.1.3	L2 BIT CP ADR 7
	3(E1)R37	2NG3a	2NGF1	0.1.3	L1 BIT CP ADR 7
	3(E1)R38	2NF3a	2NFF1	0.1.3	LS BIT CP ADR 7
	3(E1)R40	2NE3a	2NEF1	0.1.3	LIVE BIT CP ADR 7
	3(E1)R41	2PY3a	2PYF1	0.1.3	B BIT CP ADR 7
	3(E1)R42	2NY3a	2NYF1	0.1.3	A BIT CP ADR 7
	3(E1)V1				
	3(E1)V2				
	3(E1)V3				
	3(E1)V4				
	3(E1)V5				
	3(E1)V6				
	3(E1)V7	2PX2h	2PXE8	0.1.3	R15 BIT CP ADR 10
	3(E1)V8	2PW2h	2PWE8	0.1.3	R14 BIT CP ADR 10
	3(E1)V9	2PV2h	2PVE8	0.1.3	R13 BIT CP ADR 10
	3(E1)V10	2PU2h	2PUE8	0.1.3	R12 BIT CP ADR 10
	3(E1)V11	2PT2h	2PTE8	0.1.3	R11 BIT CP ADR 10
	3(E1)V12	2PS2h	2PSE8	0.1.3	R10 BIT CP ADR 10
	3(E1)V13	2PR2h	2PRE8	0.1.3	R9 BIT CP ADR 10
	3(E1)V14	2PP2h	2PPE8	0.1.3	R8 BIT CP ADR 10
	3(E1)V15	2PN2h	2PNE8	0.1.3	R7 BIT CP ADR 10
	3(E1)V16	2PM2h	2PME8	0.1.3	R6 BIT CP ADR 10
	3(E1)V17	2PL2h	2PLE8	0.1.3	R5 BIT CP ADR 10
	3(E1)V18	2PK2h	2PKE8	0.1.3	R4 BIT CP ADR 10
	3(E1)V19	2PJ2h	2PJE8	0.1.3	R3 BIT CP ADR 10
	3(E1)V20	2PH2h	2PHE8	0.1.3	R2 BIT CP ADR 10

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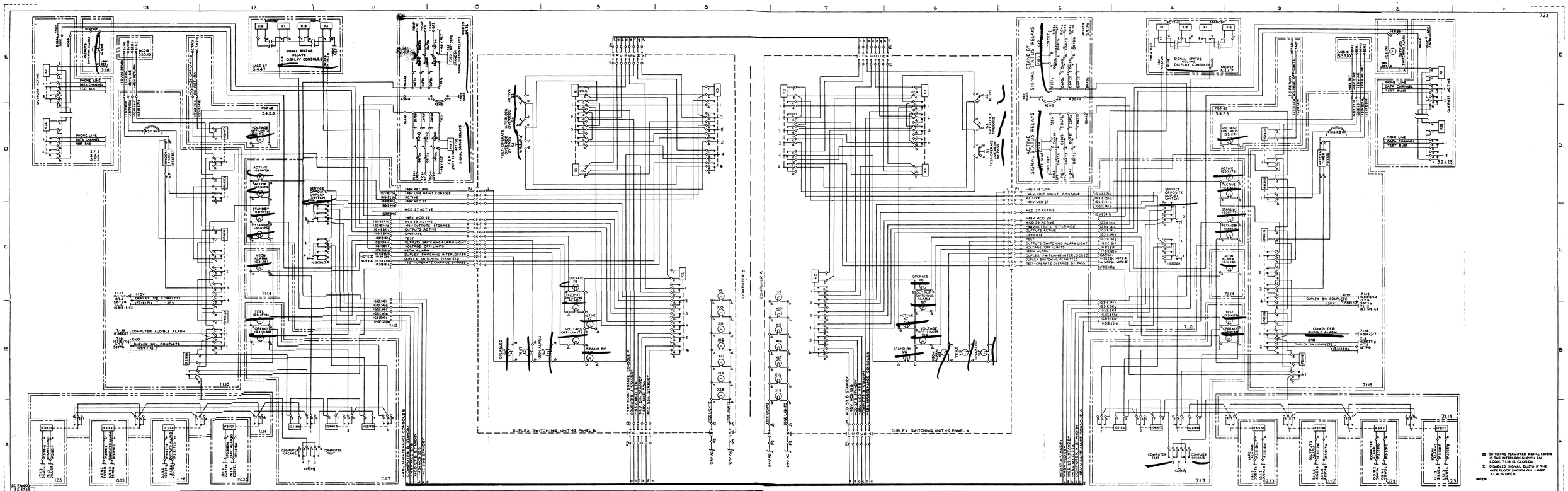
DUPLEX SWITCHING UNIT 45 PANEL B
DUPLEX SWITCHING UNIT 45 PANEL A
COMPUTER B
COMPUTER A
CONS DX SW MAINT PANELS A & B
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