

CH  
THOMPSON

Systems Engineering Laboratories

**SEL 810A**  
**Computer Maintenance Drawings**  
**Manual**

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June, 1968

This publication supersedes SEL 810A  
Computer Maintenance Drawings Manual,  
95001A, dated October, 1967

Computer Maintenance  
Manual

## LIST OF DRAWINGS

Drawing Number	Title	Drawing Number	Title
<u>CIRCUIT CARDS - SCHEMATIC &amp; ASSEMBLY DRAWINGS</u>			
8201	Schematic & Assembly RTL Memory Interface	8217	Schematic & Assembly RTL Program Register Bits 1-5
8202	Schematic & Assembly RTL "T" Register & Instruction Register Bit Slice	8218	Schematic & Assembly RTL Program Register Bits 6-11
8203	Schematic & Assembly RTL A&B Accumulators Bit Slice (3 sheets)	8219	Schematic & Assembly RTL Program Register Bits 12-15
8204	Schematic & Assembly RTL 8 Bit Full Adder	8220	Schematic & Assembly RTL - Shift Control
8205	Schematic & Assembly RTL Operation Decoder	8221	Schematic & Assembly RTL Sense Switch Decode
8206	Schematic & Assembly RTL Augmented Operation Decoder #1	8222	Schematic & Assembly RTL Overflow & A Sign Strobe & Normalize
8207	Schematic & Assembly RTL Augmented Operation Decoder #2	8223	Schematic & Assembly RTL Indirect - 2
8208	Schematic & Assembly RTL Control Cycle Generator	8224	Schematic & Assembly RTL "B" Full Code Detector & Sign Strobe
8209	Schematic & Assembly RTL Shift Counter	8225	Schematic & Assembly I - O Instruction Timing
8210	Schematic & Assembly RTL "T" Output Gate Control	8226	Schematic & Assembly RTL Memory Data Register Load & Address Clear
8211	Schematic & Assembly RTL "B" Output & "T" Comp Output Gate Control	8227	Schematic & Assembly RTL - Adder to Memory Control & Address Register Strobe
8212	Schematic & Assembly RTL "A" Output Gates	8228	Schematic & Assembly RTL Program Register Advance Logic I
8213	Schematic & Assembly RTL "B" Register and "T" Register Strobe	8229	Schematic & Assembly RTL Program Register Advance Logic II
8214	Schematic & Assembly RTL "A" Register Strobe	8230	Schematic & Assembly RTL - Program Register Advance Logic III
8215	Schematic & Assembly RTL Carry Logic	8231	Schematic & Assembly RTL Adder Zero Det.
8216	Schematic & Assembly RTL Input/Output Instruction Decode	8232	Schematic & Assembly RTL "A" Zero Det.

Drawing Number	Title	Drawing Number	Title
<u>CIRCUIT CARDS - SCHEMATIC &amp; ASSEMBLY DRAWINGS (Cont'd)</u>			
8234	Schematic & Assembly RTL Clock Control	8253	Schematic & Assembly RTL Program Protect Logic 1
8235	Schematic & Assembly RTL Clock Control #2	8254	Schematic & Assembly RTL Program Protect Logic 2
8236	Schematic & Assembly RTL Clock Control #3	8255	Stall Alarm Control
8237	Schematic & Assembly RTL Load/Display Memory Step Control	8256	Stall Alarm Counter
8238	Schematic & Assembly RTL Priority Interrupt Latch 1R1	8257	Schematic & Assembly RTL-Initialize Control (2 sheets)
8239	Schematic & Assembly RTL Priority Interrupt TOI & Disable Logic 1R1	8258	Schematic & Assembly RTL Cycle Control (2 sheets)
8240	Schematic & Assembly RTL PI Group Matrix 1R1	8259	Schematic & Assembly RTL Address Control (2 sheets)
8241	Schematic & Assembly RTL Priority Interrupt Address "and" Gates 1R1	8260	Schematic & Assembly RTL Load Address Control (2 sheets)
8242	Schematic & Assembly RTL Priority Interrupt 1R1 (7 sheets)	8261	Schematic & Assembly RTL BTC Data Transfer Control 1 (2 sheets)
8243	Schematic & Assembly RTL PI Unitary/Binary CONV(MSB'S)	8262	Schematic & Assembly RTL-BTC-Data Transfer Control 2 (2 sheets)
8244	Schematic & Assembly RTL Unitary/Binary CONV(LSB'S)	8263	> Schematic & Assembly RTL 5 Bit Dual Counter (3 sheets) <sup>2 sheets 2 of 2</sup>
8245	Schematic & Assembly RTL Power Failure Control	8264	Schematic & Assembly RTL Clock Buffers
8246	Schematic & Assembly RTL Memory Module Select Driver	8265	Schematic & Assembly RTL BPC Cycle Control
8247	Schematic & Assembly RTL 16 Bit Parity Gen/Check	8266	Schematic & Assembly RTL Protect Control
8248	Schematic & Assembly RTL Parity Control	8267	Schematic & Assembly RTL-Initial Address Control
8249	Schematic & Assembly RTL Instruction Trap	8268	Schematic & Assembly RTL-BTC Priority
8250	Schematic & Assembly RTL Variable Base Register Control	8269	Schematic & Assembly RTL Line Driver, Current Driver and Inhibit Drive Regulator
8251	Schematic & Assembly RTL Variable Base Register-Register	8270	Schematic & Assembly RTL Memory Timing #I
8252	Schematic & Assembly RTL-VBR Display Gates	8271	Schematic & Assembly RTL Memory Timing #II
		8272	Schematic & Assembly RTL Quad Data Register & Inhibit Driver

Drawing Number	Title	Drawing Number	Title
CIRCUIT CARDS - SCHEMATIC & ASSEMBLY DRAWINGS (Cont'd)			
8273	Schematic & Assembly RTL Read/Write Matrix and Line Drivers	8292	Schematic & Assembly RTL - MPY/DIV Control 8
8274	Schematic & Assembly RTL 8-Bit Memory Address Register	8293	Schematic & Assembly RTL Mask Priority Interrupt
8275	Schematic & Assembly RTL 5-Bit Memory Address Register & 8 K Control	8294	Schematic & Assembly RTL Extender Adder and TX 2 Gates
8276	Schematic & Assembly RTL Memory Parity & Protect Bit Data Registers & Inhibit Drivers	8295	Schematic & Assembly RTL Memory Access Control
8277	Schematic & Assembly RTL + 12V and Threshold Regulator	8296	Schematic & Assembly RTL Power Fail Safe
8278	Schematic & Assembly Inhibit Resistors	8297	Schematic & Assembly TI 8-Bit Ripple Adder
8279	Schematic & Assembly Memory Power Supply (2 sheets)	8298	Schematic & Assembly RTL - SPB Map Store Gates
8280	Schematic & Assembly 3.6V & 5V Power Supply (2 sheets)	8299	Program Protect Lamp Drivers
8281	Schematic & Assembly Memory Rectifiers	8543	Schematic & Assembly 2 NOR(M)
8282	Schematic & Assembly RTL - Control Panel (2 sheets)	8544	Schematic & Assembly 3 NOR(M)
8283	Schematic & Assembly RTL MPY/DIV Control 1	8545	Schematic & Assembly Inverter (M)
8284	Schematic & Assembly RTL MPY/DIV Control #2	8547	Schematic & Assembly 4 NOR(M)
8285	Schematic & Assembly RTL - MPY/DIV Control 3	8557	Schematic & Assembly 4 NOR Expander (M)
8286	Schematic & Assembly RTL - MPY/DIV Control #4	8614	Schematic & Assembly Cable Driver
8287	Schematic & Assembly RTL - MPY/DIV Control 5	8615	Schematic & Assembly Cable Terminator
8288	Schematic & Assembly RTL - MPY/DIV Control 6	8620	Schematic & Assembly Oscillator
8289	Schematic & Assembly RTL - MPY/DIV Control 7	8639	Schematic & Assembly Data Saver
8290	Schematic & Assembly RTL - MPY/DIV "T" X2 Gates	8705	Schematic & Assembly Gated Cable Driver
8291	Schematic & Assembly RTL - MPY/DIV Shifted Adder Gates	8749	Schematic & Assembly Digital Buffer (M)
		8757	Schematic & Assembly Computer Clock

Drawing Number	Title	Drawing Number	Title
<u>CIRCUIT CARDS - SCHEMATIC &amp; ASSEMBLY DRAWINGS (Cont'd)</u>			
8959	Schematic & Assembly Dual Current Driver	53072	Wiring Diagram BTC to Unit 1, 2, 3, 4 50 Pin Connector (2 sheets)
8962	Schematic & Assembly $\mu$ A Sense Amplifier #3	53092	Wiring Diagram Basis Input/Output Cable 104 Pin 1F3-P1 Amp
		53175	Wiring Diagram Control Panel (3 sheets)
<u>LOGIC DIAGRAMS</u>			
53021	Logic Diagram BPC Address to Memory	<u>POWER SUPPLY SCHEMATICS</u>	
53022	Logic Diagram BPC Buffer-Drivers	53140	Schematic Memory Power Supply Model 222
53073	Block Diagram BTC - BTC	53141	Schematic 3.6V & 5V Power Supply Model 221
53103	Logic Diagram 8K x 18 Memory a Data Flow Timing and Reg. (5 sheets)	53142	Schematic 3.6V Power Supply Model 223
53111	Logic Diagram 4K x 18 Memory a Data Flow Timing and Reg. (4 sheets)	<u>MECHANICAL ASSEMBLY DRAWINGS</u>	
83186	Augment Control	15049	Control Panel Assembly
83187	Miscellaneous Buffer	15513	Power Supply 3.6V Assembly
		15514	Power Supply 3.6V and 5.0V Assembly
		15515	Power Supply Memory
		15517	Power Supply Panel Assembly
		15595	Primary Plane Assembly (2 sheets)
		15596	Secondary Plane Assembly
		15597	Primary Module Assembly
		15598	Memory Module Assembly
		15599	Meter Panel Assembly
		15600	Final Assembly (4 sheets)
		15601	Assembly I/O Connector Panel
		15602	Table Top Assembly
		53065	Elco 6501 Assembly Connectors
<u>WIRING DIAGRAMS</u>			
52993-1	Wiring Diagram Interconnecting Cables Memory Module #1		
52993-2	Wiring Diagram Interconnecting Cables Memory Module #2		
53019	Wiring Diagram Interconnecting Cables BPC-Memory Interface		
53039	Wiring Diagram Power Supply Model 221		
53040	Wiring Diagram Power Supply Model 222 Memory		
53041	Wiring Diagram Power Supply Model 223		
53063	Wiring Diagram DC Power Dist. 810A		
53064	Wiring Diagram AC Power Distribution 810A		

SEL 95001A

Drawings  
Number

Title

CARD LOCATION DRAWINGS

52992-1	Card Layout Plane 1R1
52992-2	Card Layout Plane 1R2



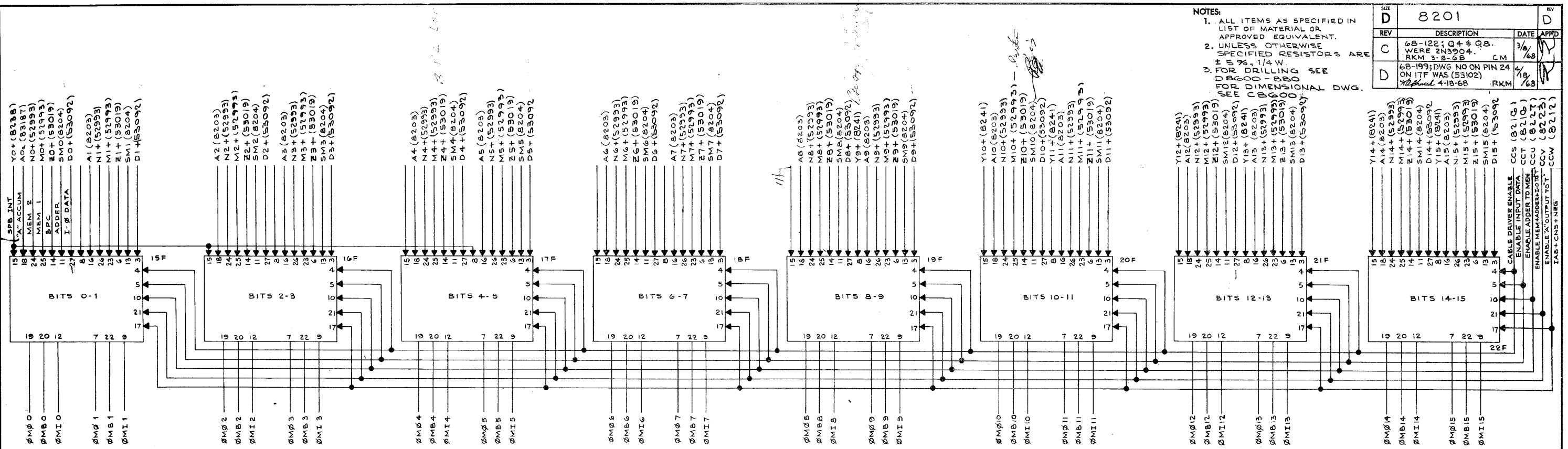
1014

Number  
Drawing

CARDIAC SECTION DRAWINGS

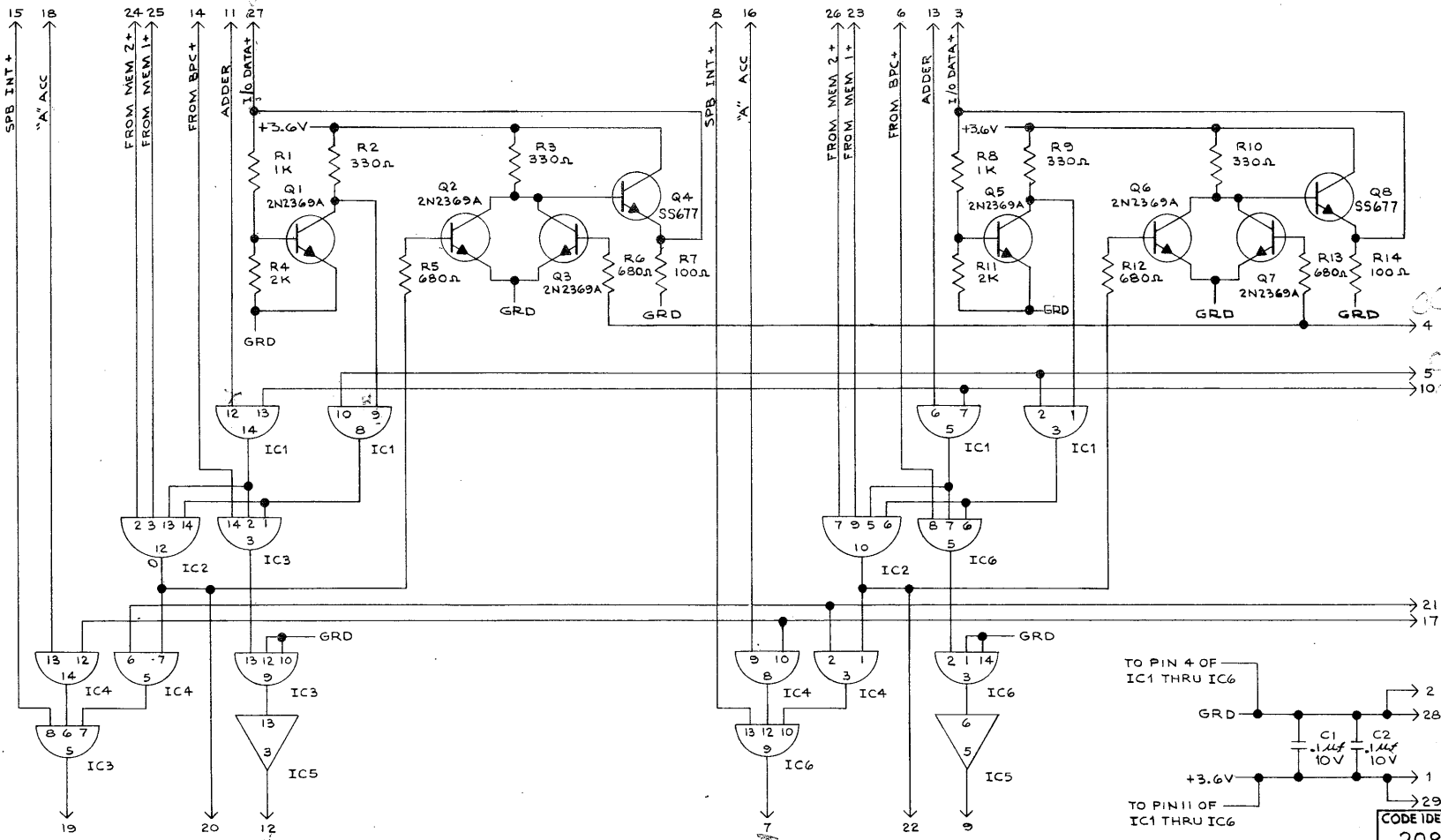
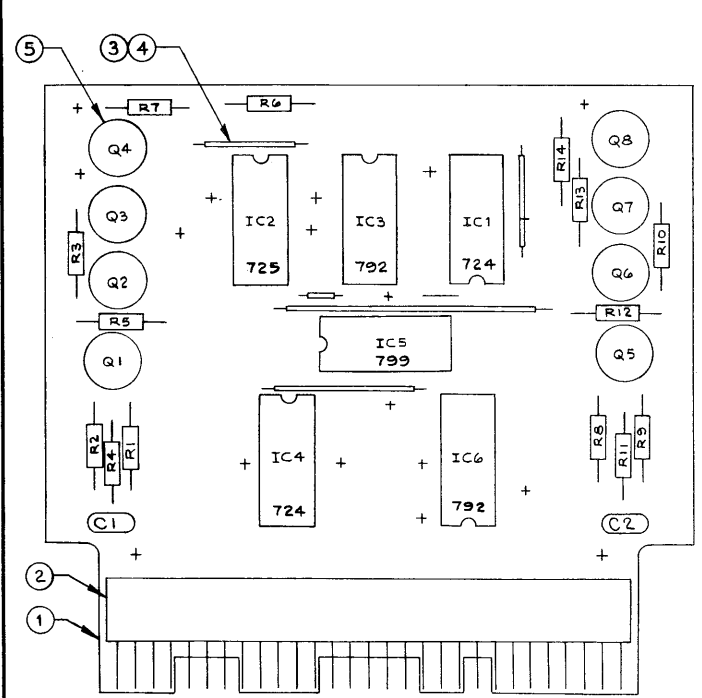
8200-1 - Cardiac Section Print 1A

8200-2 - Cardiac Section Print 1B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE ± 5%, 1/4 W.  
 3. FOR DRILLING SEE DIMENSIONAL DWG.  
 4. FOR DIMENSIONAL DWG. SEE DIMENSIONAL DWG.

REV	DESCRIPTION	DATE	APP'D
D	8201		
C	68-122; Q4 & Q8 WERE 2N2369A RKM 3-2-68	3/2/68	
D	68-199; DWG NO ON PIN 24 ON ITF WAS (53102) RKM 4-18-68	4/18/68	

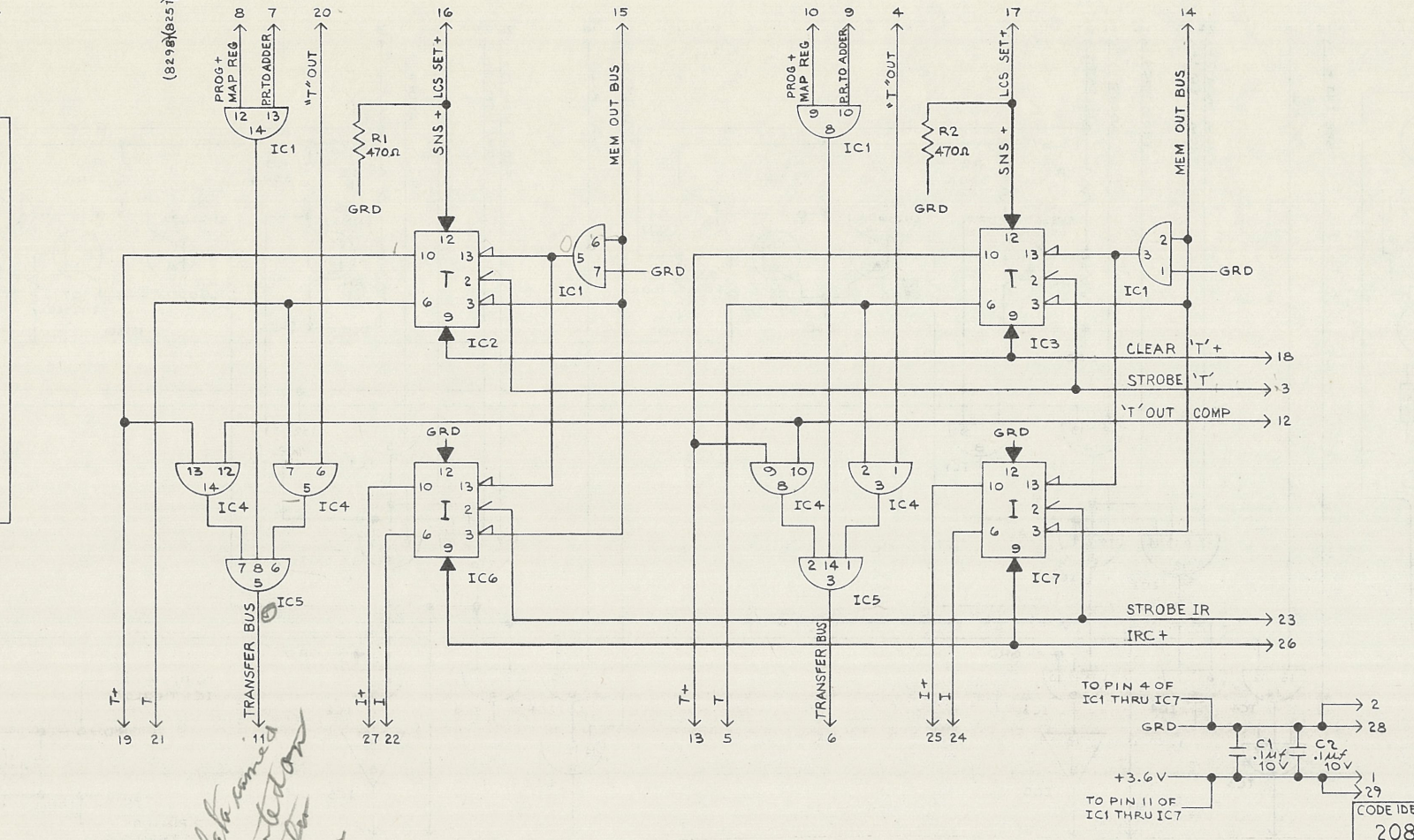
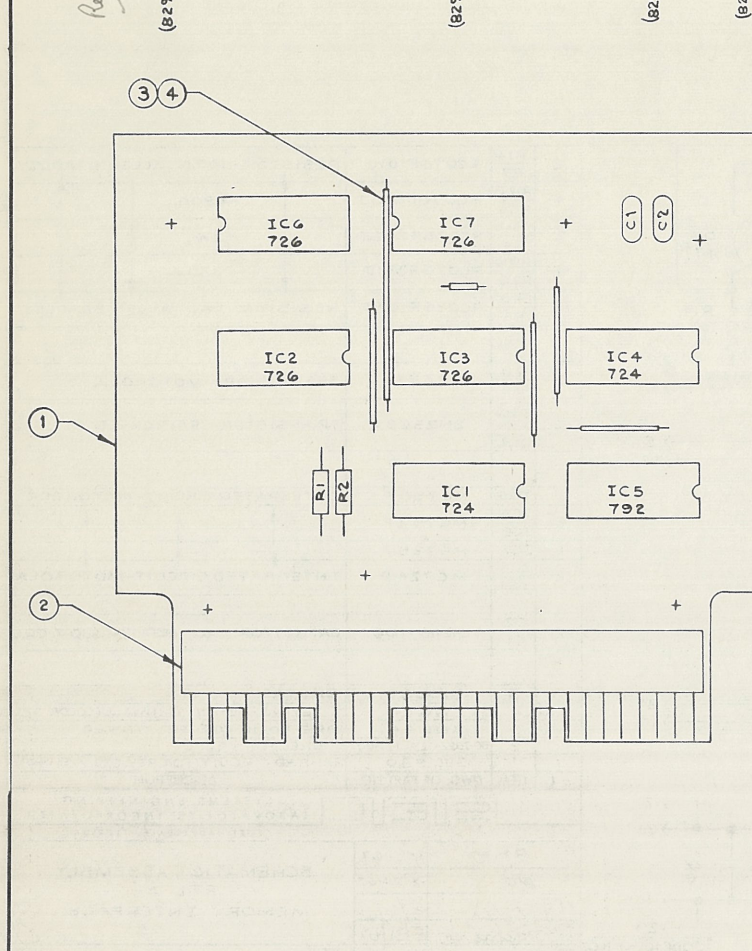
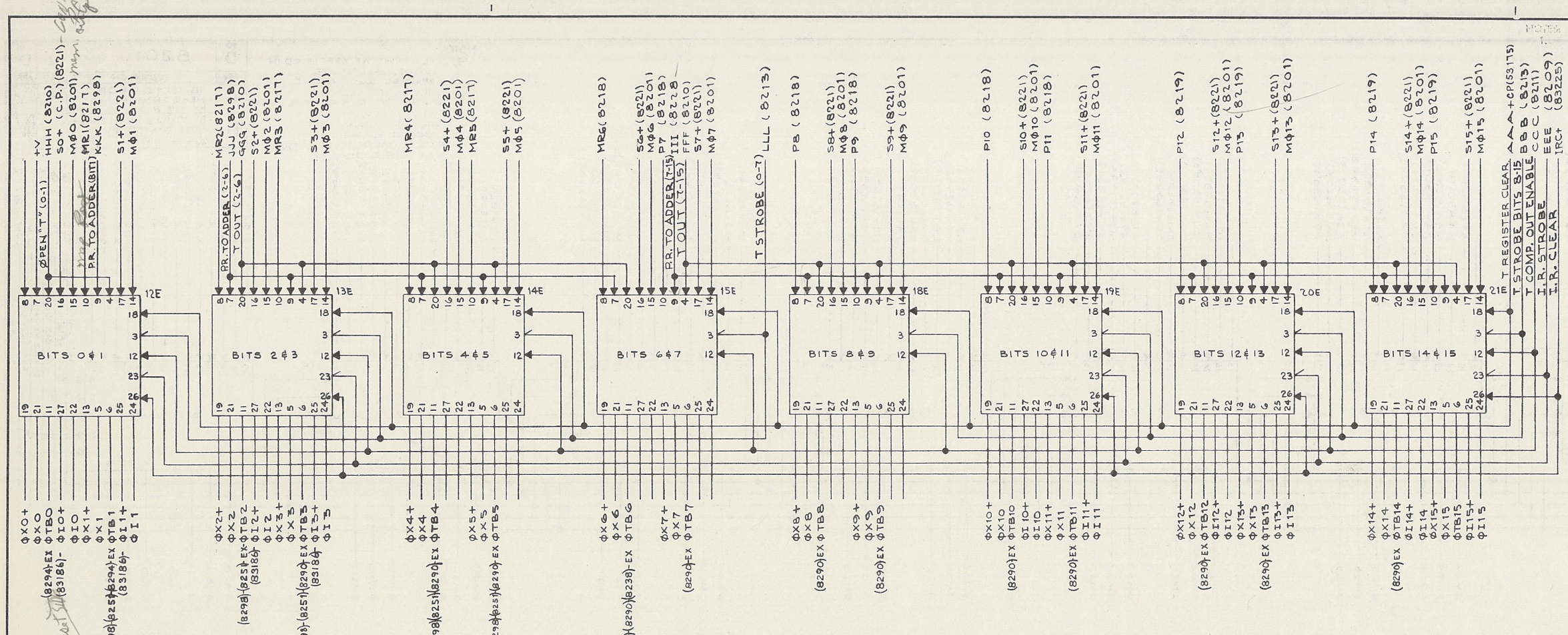


ITEM	DWG. OR PART NO.	DESCRIPTION
2	R14, R7	RC07GF101J RESISTOR-100Ω, ALLEN BRADLEY
4	R12, R5, R4	RC07GF681J -680Ω, ALLEN BRADLEY
2	R11, R4	RC07GF202J -2K, ALLEN BRADLEY
4	R9, R10, R2, R3	RC07GF331J -330Ω, ALLEN BRADLEY
2	R8, R1	RC07GF102J RESISTOR-1K, ALLEN BRADLEY
2	Q8, Q4	SS677 TRANSISTOR- MOTOROLA
6	Q6, Q7, Q3, Q5, Q1, Q2	2N2369A TRANSISTOR- FAIRCHILD
1	IC5	MC799P INTEGRATED CIRCUIT-MOTOROLA
2	IC6	MC792P INTEGRATED CIRCUIT-MOTOROLA
1	IC2	MC725P INTEGRATED CIRCUIT-MOTOROLA
2	IC4	MC724P INTEGRATED CIRCUIT-MOTOROLA
2	IC1	MC792P INTEGRATED CIRCUIT-MOTOROLA
2	C2, C1	UK10-104 CAPACITOR-.1μF ±50-20% 10V, CRL

DR	DATE	DESCRIPTION
RKM	1-3-67	SCHMATIC & ASSEMBLY
WC	2-20-67	RTL RES. INTERF.
ENG	5/31/67	MEMORY INTERFACE
APP	5/31/67	
USED ON		

CODE IDENT NO. 20886

Control Panel S1

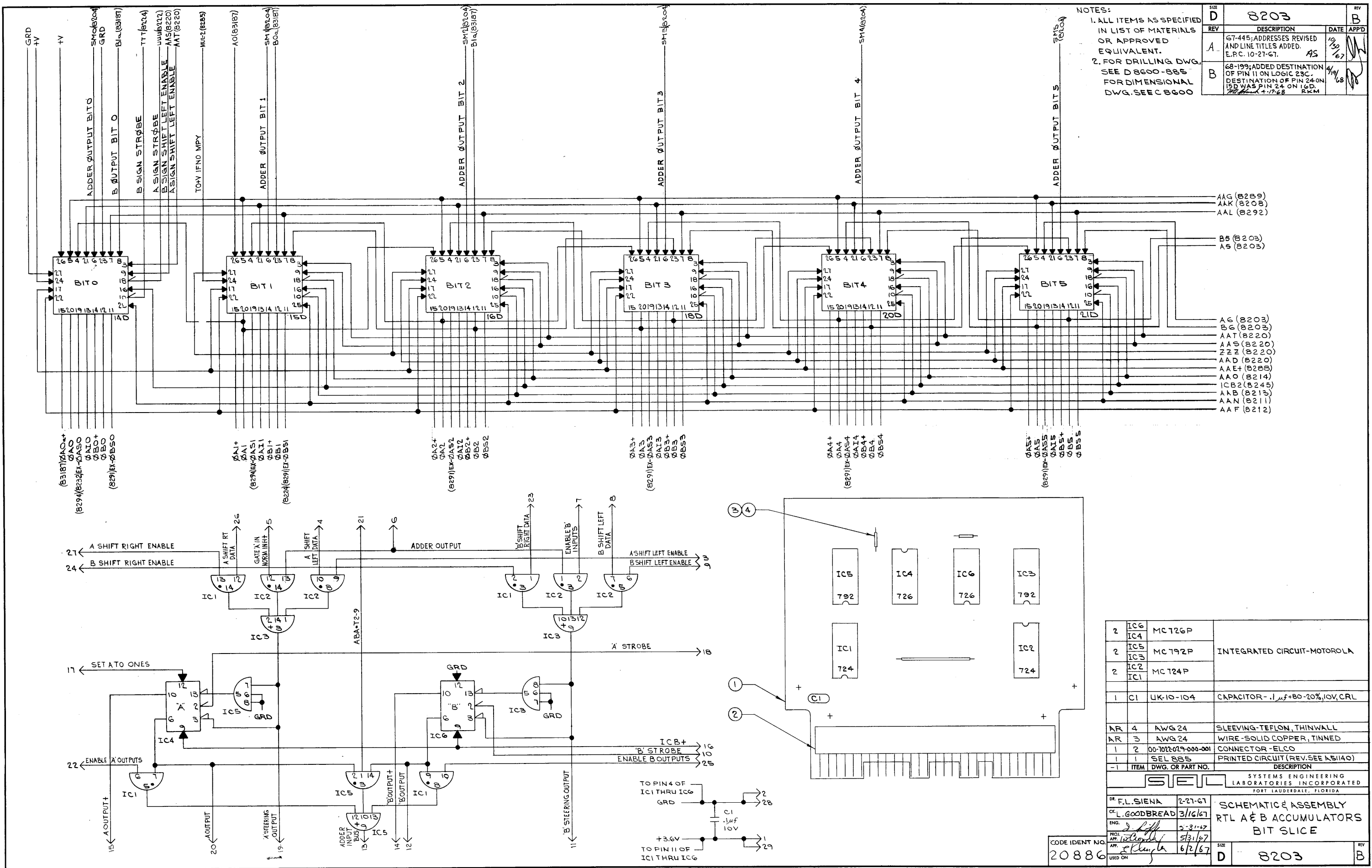


NOTES:

- ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
- UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4$  W. FOR DRILLING DWG SEE D8600-BB2. FOR DIMENSIONAL DWG. SEE C86600.

REV	DESCRIPTION	DATE	APP'D
D	8202		B
A	67-445; ADDRESSES REVISED; LINE TITLES ADDED. C.THEW 10-24-67	10/30/67	
B	68-199; DESTINATION OF PINS 26 WAS ICB3 (8202). W.L. HANDEL 4-18-68	4/18/68	RKM

2	R2 R1	RC07GF471J	RESISTOR- 470 $\Omega$ , ALLEN BRADLEY			
1	IC5 IC7	MC792P	INTEGRATED CIRCUIT- MOTOROLA			
4	IC6 IC3 IC2	MC726P	INTEGRATED CIRCUIT- MOTOROLA			
2	IC4 IC1	MC724P	INTEGRATED CIRCUIT- MOTOROLA			
2	C2 C1	UK-10-104	CAPACITOR - .14 $\mu$ F+80-20%, 10V,CRL			
AR	4	AWG 24	SLEEVING- TEFLON, THINWALL			
AR	3	AWG 24	WIRE- SOLID COPPER, TINNED			
1	2	00-7022-029-000-001	CONNECTOR- ELCO			
1	1	SEL BB2	PRINTED CIRCUIT (FOR REV. SEE A51140)			
-1	ITEM	DWG. OR PART NO.	DESCRIPTION			
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR	RKM	12-29-66	SCHEMATIC & ASSEMBLY RTL "T" REGISTER & INSTRUCTION REGISTER BIT SLICE			
CC	uc	12-30-66				
ENG.	J. Puff	5-31-67				
PROJ. APP.	J. Puff	5/21/67				
USED ON	J. Puff	5/21/67				
CODE IDENT NO.	20886	SIZE	D	8202	REV	B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D 8600-885 FOR DIMENSIONAL DWG. SEE C 8600

REV	DESCRIPTION	DATE	APP'D
D	8203		B
A	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.R.C. 10-27-67.	10/30/67	
B	68-199; ADDED DESTINATION OF PIN 11 ON LOGIC 23C. DESTINATION OF PIN 24 ON 15D WAS PIN 24 ON 16D.	4/1/68	

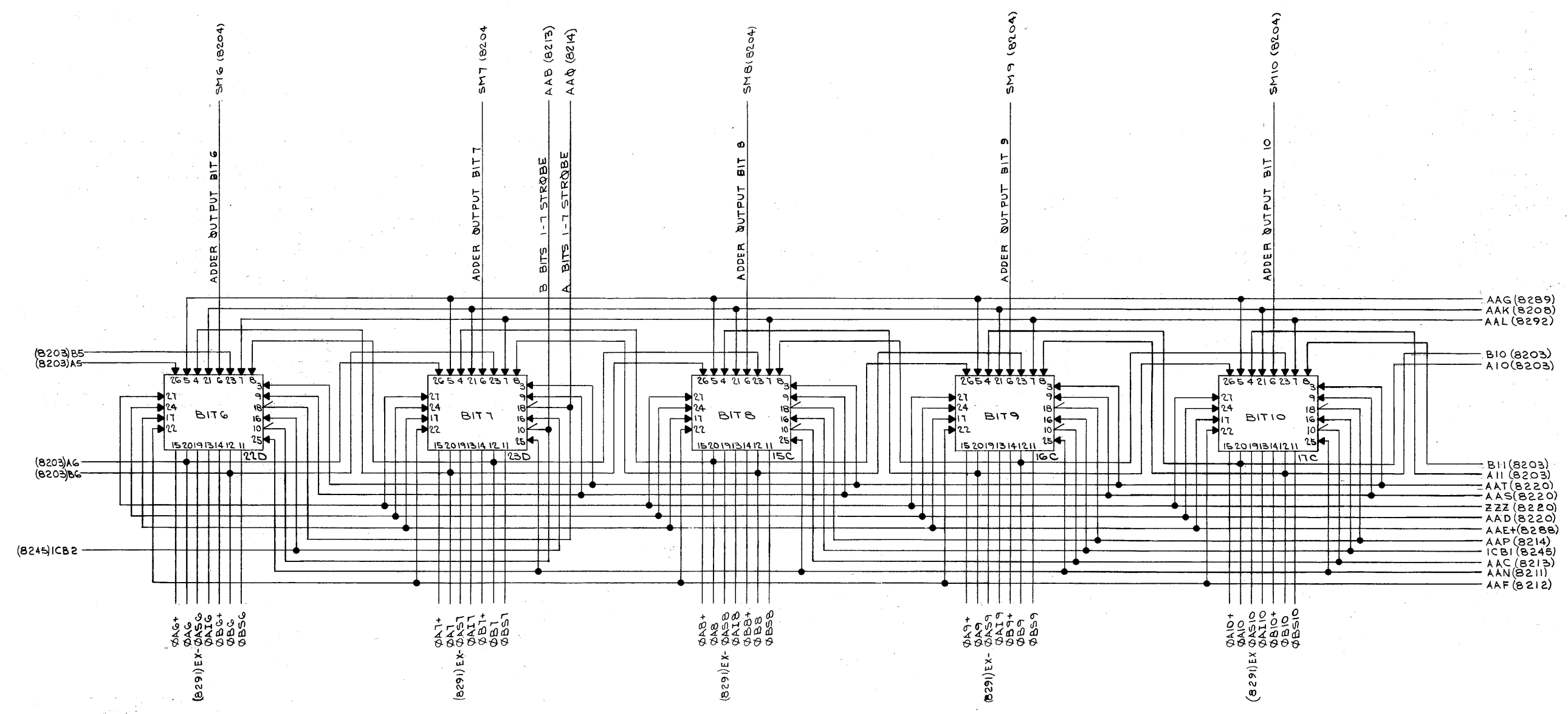
2	IC6	MC 726P	INTEGRATED CIRCUIT-MOTOROLA
2	IC5	MC 792P	
2	IC3	MC 724P	
2	IC1	MC 724P	
1	C1	UK-10-104	CAPACITOR - .1 $\mu$ F +80-20% 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-019-000-001	CONNECTOR-ELCO
1	1	SEL 885	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

DR.	F.L. SIENA	2-27-67	SCHEMATIC & ASSEMBLY RTL A & B ACCUMULATORS BIT SLICE
CC.	L. GOODBREAD	3/16/67	
ENG.		5-31-67	
PROJ. APP.		5/31/67	
APP.		6/2/67	
USED ON			

CODE IDENT NO.	20886	SIZE	D	8203	REV	B
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NOTES:  
1. SEE SHEET 1

SIZE	D	8203	REV	B
REV		DESCRIPTION	DATE	APPD
		SEE SHEET 1		



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. F.L. SIENA	2-27-67	SCHEMATIC & ASSEMBLY RTL A&B ACCUMULATORS BIT SLICE
CL. GOODBREAD	3/16/67	
ENG. J. R. [Signature]	5-31-67	
APP. [Signature]	5/31/67	
USED ON	6/2/67	

CODE IDENT NO.  
20886

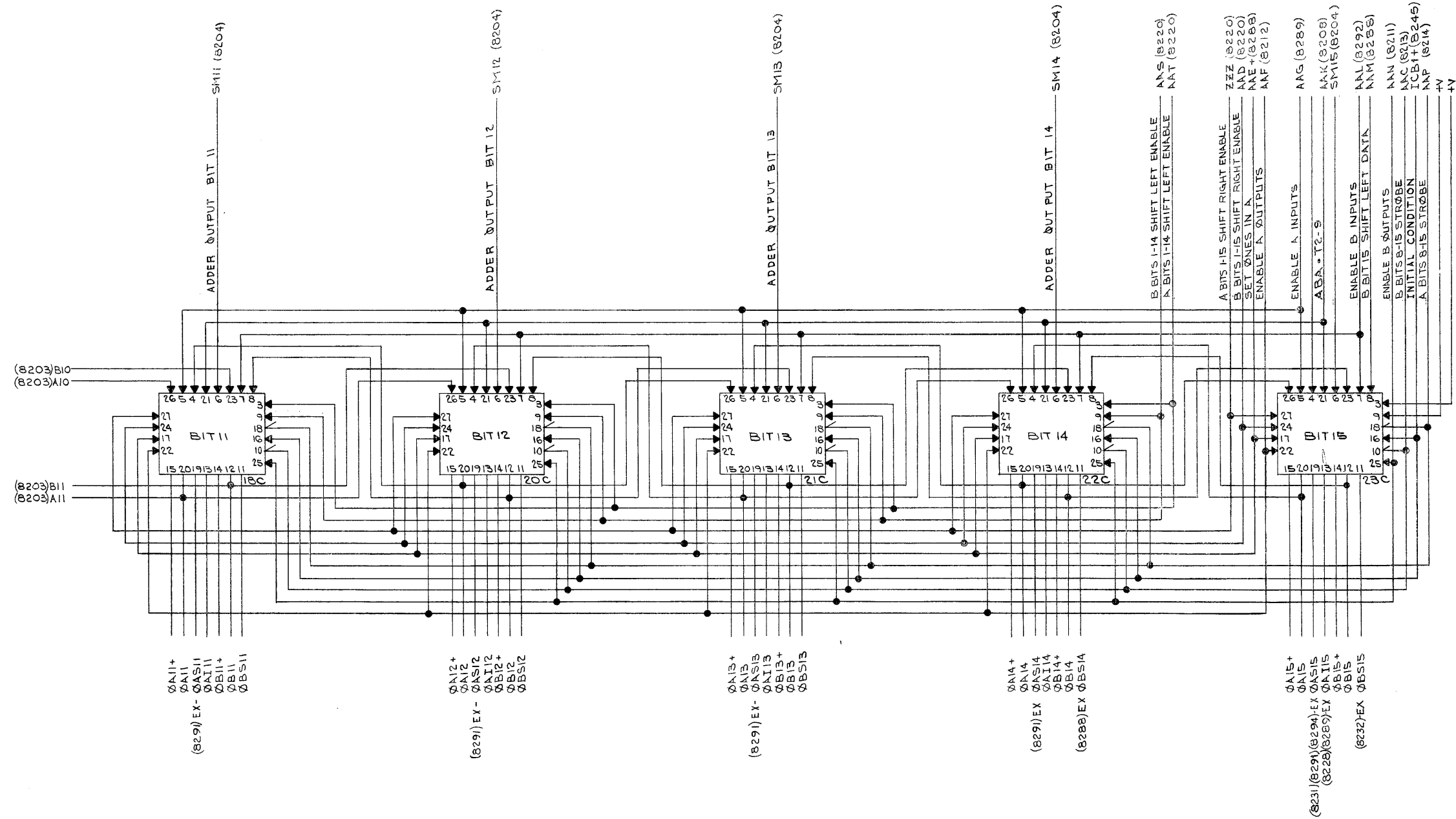
SIZE  
D

8203

REV  
B

NOTES:  
1. SEE SHEET 1

SIZE	D	8203	REV	B
REV		DESCRIPTION	DATE	APP'D
		SEE SHEET 1		



(829) EX-  
QA11+  
QA11  
QAS11  
QB11+  
QB11  
QBS11

(829) EX-  
QA12+  
QA12  
QAS12  
QB12+  
QB12  
QBS12

(829) EX-  
QA13+  
QA13  
QAS13  
QB13+  
QB13  
QBS13

(829) EX  
QA14+  
QA14  
QAS14  
QB14+  
QB14  
QBS14

(823) (829) (8294) EX  
QA15+  
QA15  
QAS15  
QB15+  
QB15  
QBS15

AAS (8220)  
AAT (8220)

ZZZ (8220)  
AAD (8220)  
NAF (8208)  
ANF (8212)

AAG (8289)  
AAK (8208)  
SMA5 (8204)

AAL (8292)  
AAM (8208)  
ANK (8211)  
NAC (8213)  
ICB1+ (8245)  
NAP (8214)  
+V  
+V

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR	F.L. SIENA 2-28-67	SCHEMATIC & ASSEMBLY RTL A&B ACCUMULATORS BIT SLICE
CF	L. GOODBREAD 3/16/67	
ENG.	9/21/67	
PROJ.	5/21/67	
APP.	6/2/67	
USED ON		

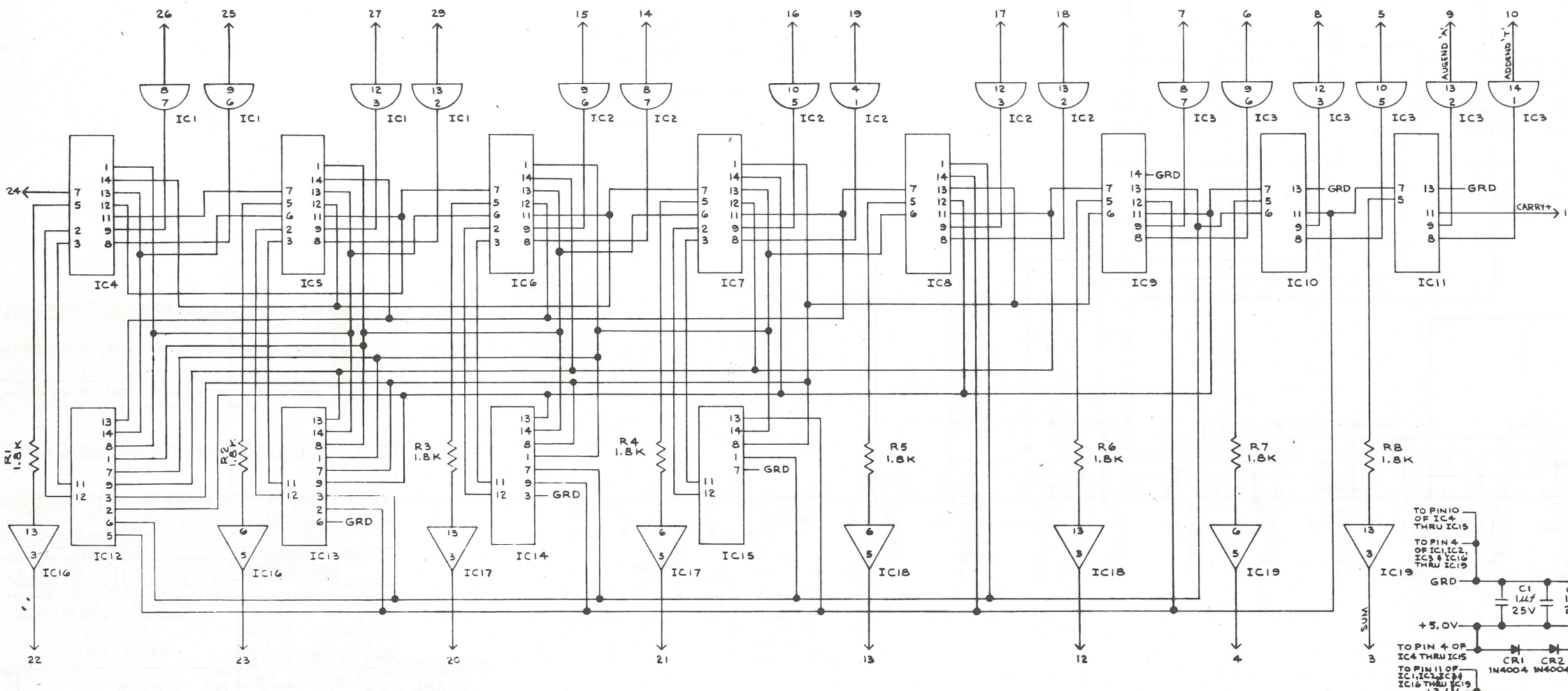
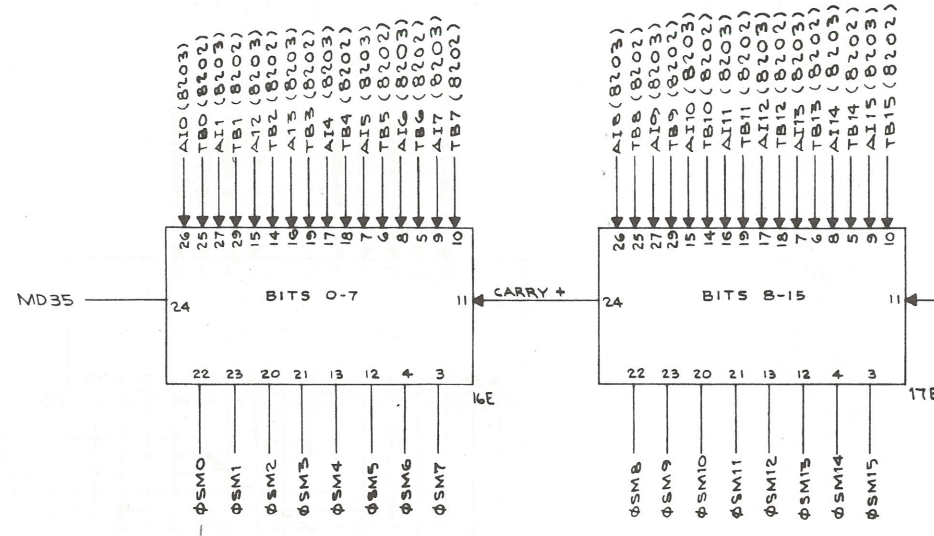
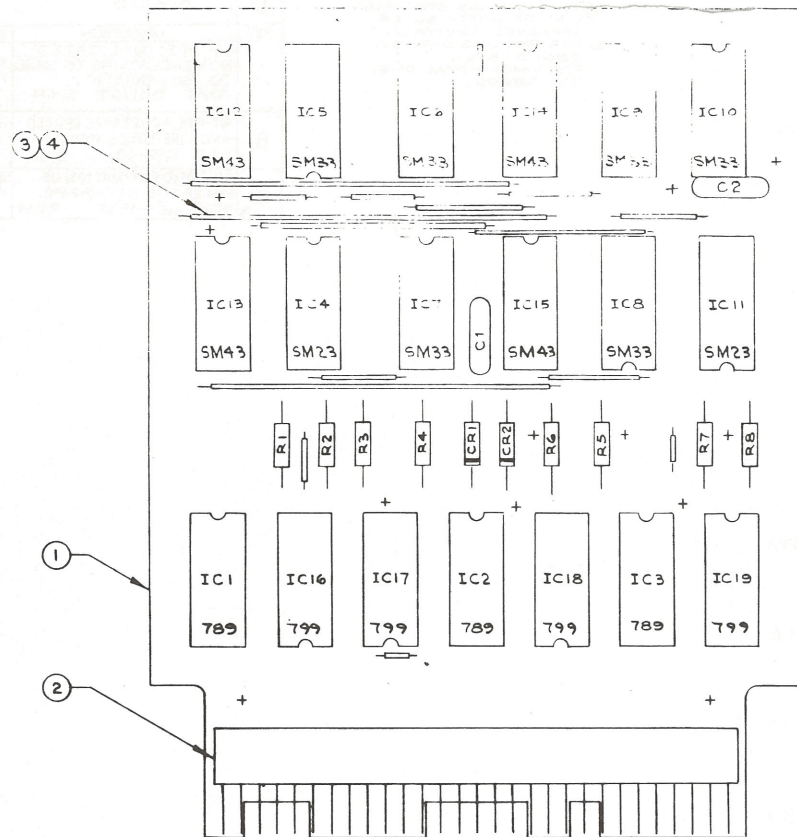
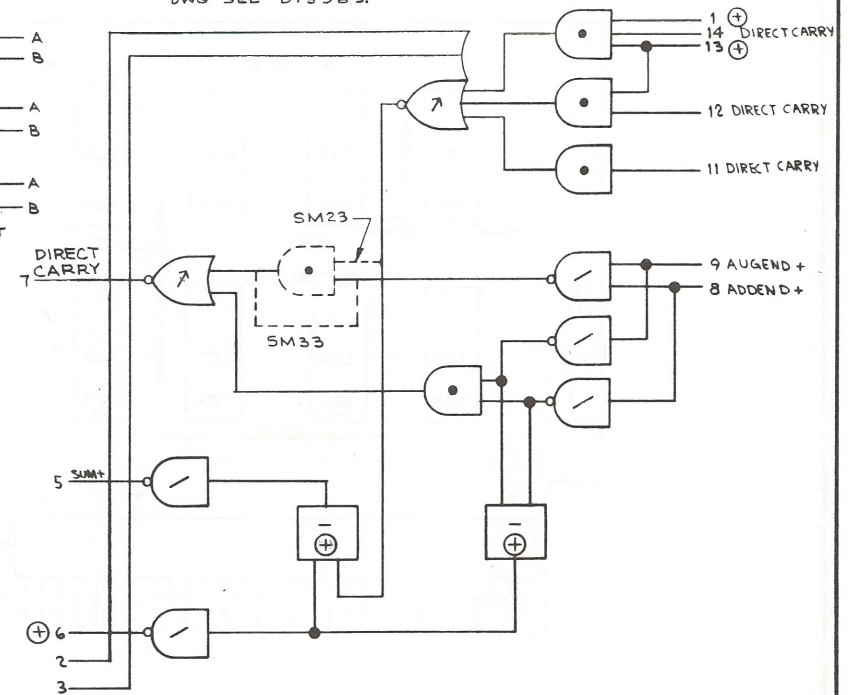
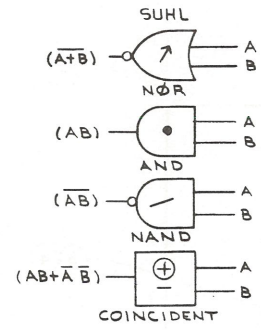
CODE IDENT NO  
20886

SIZE	D	8203	REV	B
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.  
 3. FOR DRILLING & DIMENSIONAL DWG SEE D13985.

REV	DESCRIPTION	DATE	APP'D
D	8204		
A	G7-445, ADDRESSES REVISED AND LINE TITLES ADDED. A.S. 10/24/67	12/13/67	



8	R8 THRU R1	RC07G6F182J	RESISTOR-1.8K, ALLEN BRADLEY
4	IC19 THRU IC16	MCT99P	INTEGRATED CIRCUIT-MOTOROLA
4	IC15 THRU IC12	SM43	-SYLVANIA
6	IC10 THRU IC5	SM33	-SYLVANIA
2	IC11, IC4	SM23	-SYLVANIA
3	IC3, IC2, IC1	MC789P	INTEGRATED CIRCUIT-MOTOROLA
2	CR2, CR1	1N4004	DIODE-MOTOROLA
2	C2, C1	SC13	CAPACITOR-1M $\pm$ 20%, 25V, SPRAGUE
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL (COLOR OPT.)
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL BB3	PRINTED CIRCUIT (FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	RKM	12-13-66	SCHEMATIC & ASSEMBLY RTL 8 BIT FULL ADDER
CL	WC	1-9-67	
ENG.			
PROJ. APP.		5/31/67	
APP.		5/31/67	
USED ON			

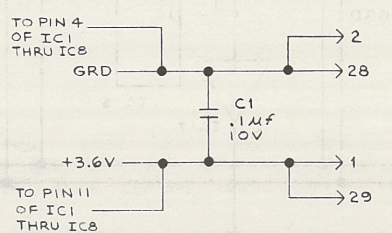
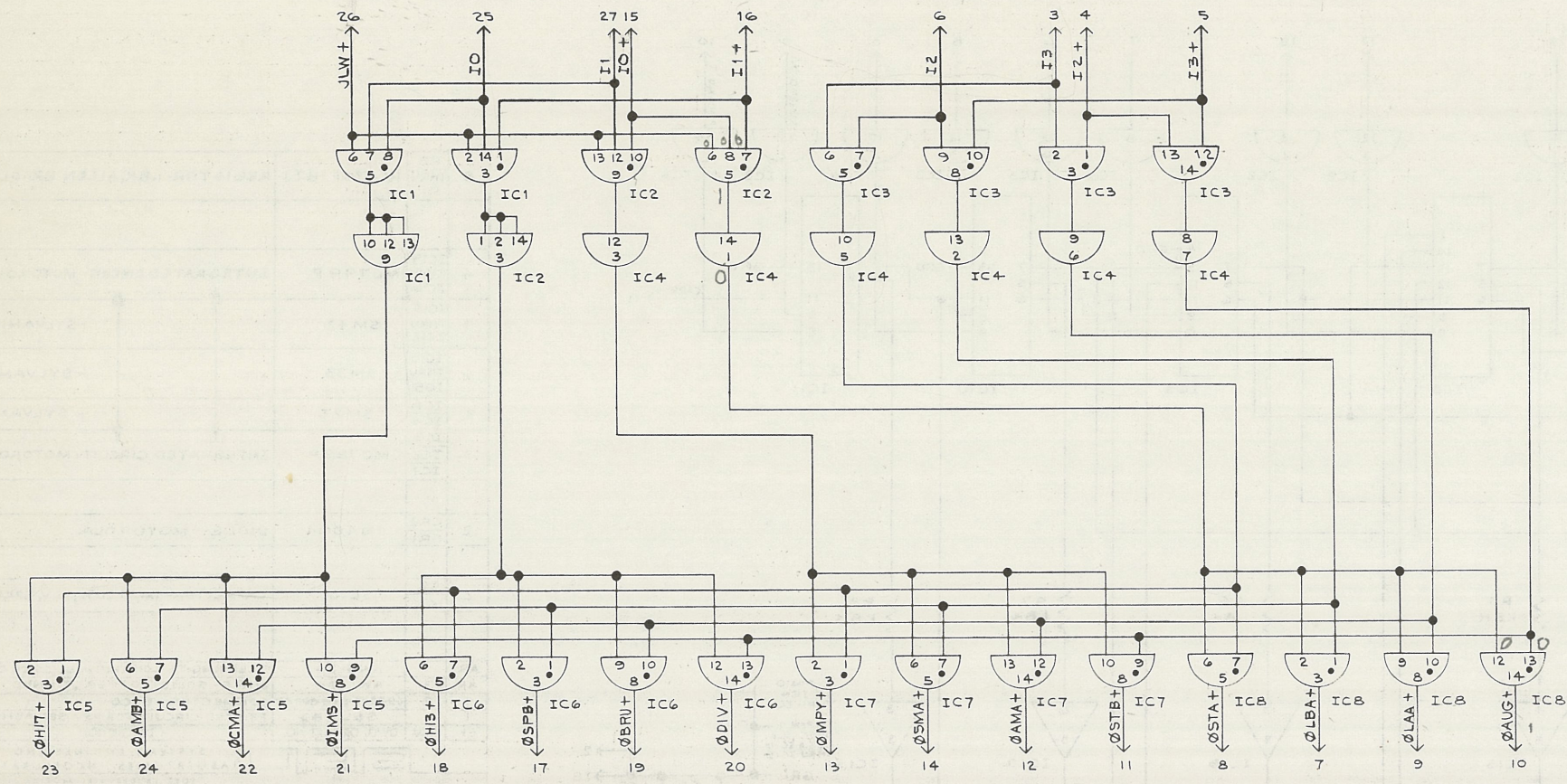
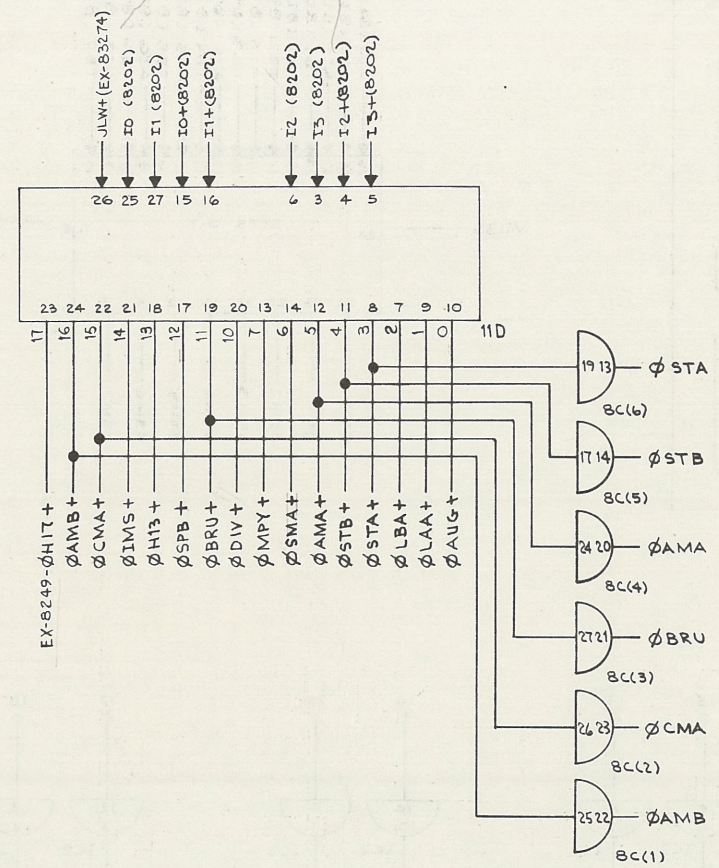
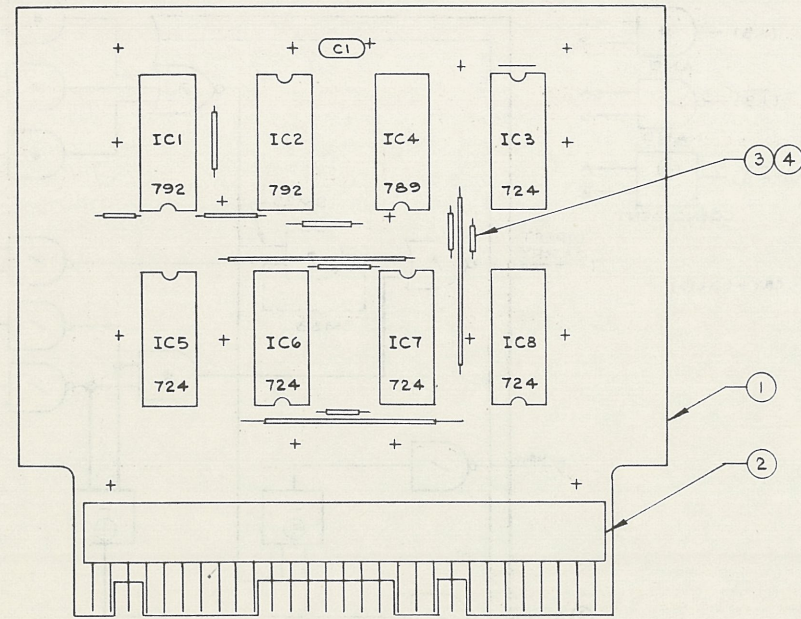
CODE IDENT NO. 20886

SIZE	8204	REV	A
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-876. FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8205		C
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67 RKM	9/12/67	
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-24-67 CW	10/30/67	
C	68-199; DESTINATION OF PIN 26 WAS STP+(8249). M. Howard 4-18-68 RKM	4/18/68	



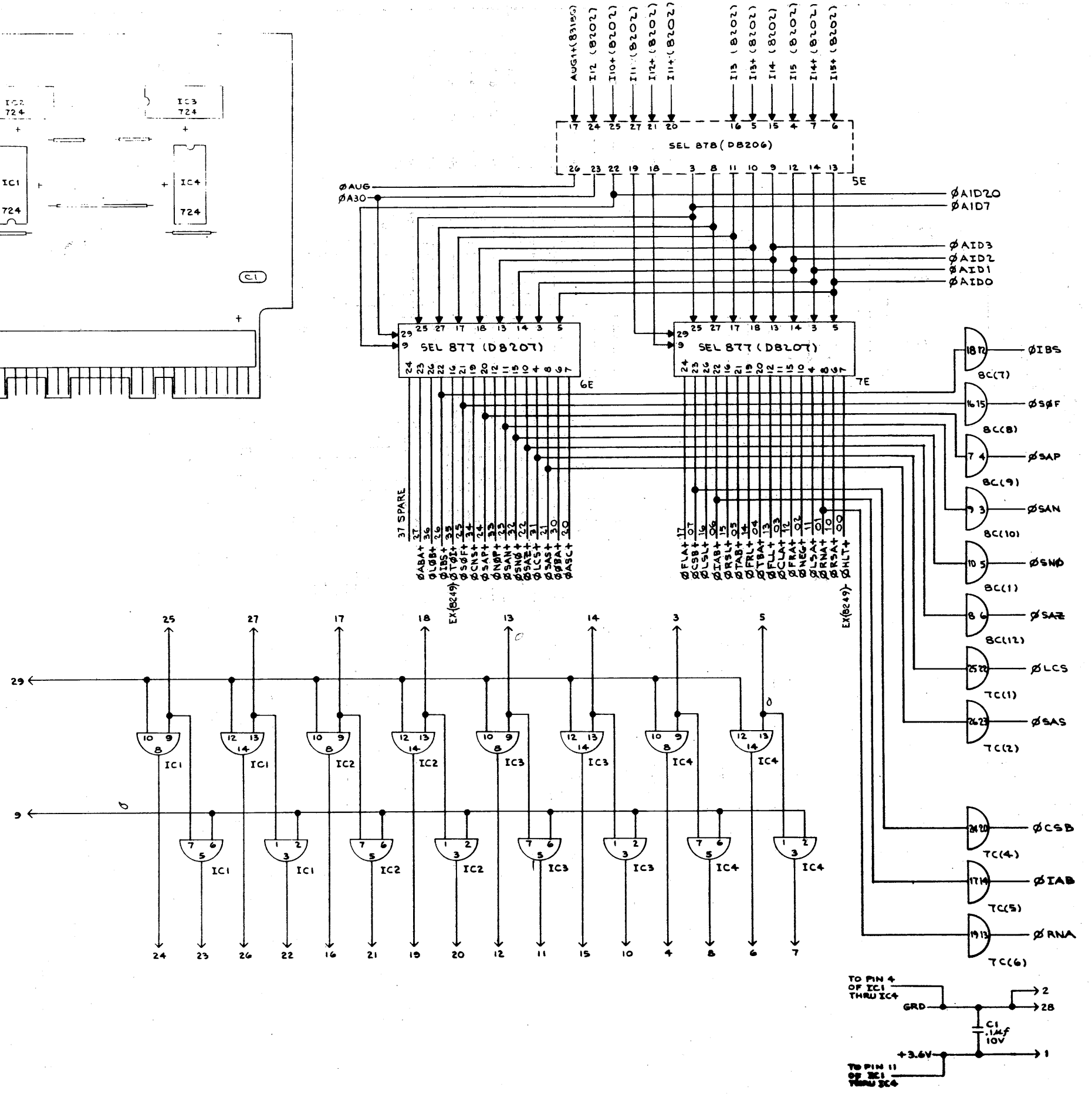
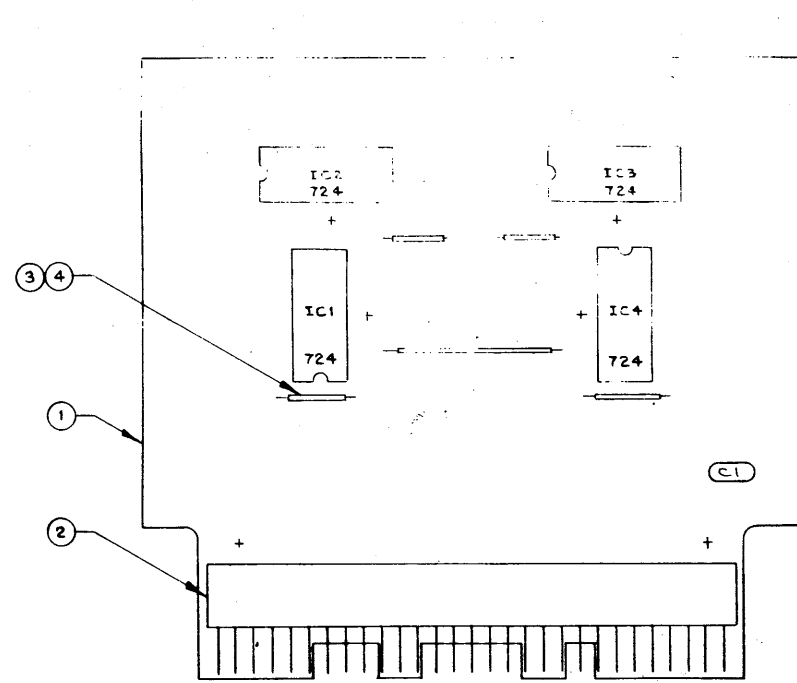
1	IC4	MC789P	INTEGRATED CIRCUIT-MOTOROLA
	IC8		
	IC7		
5	IC6	MC724P	INTEGRATED CIRCUIT-MOTOROLA
	IC5		
	IC3		
2	IC2	MC792P	INTEGRATED CIRCUIT-MOTOROLA
	IC1		
1	C1	UK10-104	CAPACITOR-.1uF+80-20%, 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL (C8524)
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 876	PRINTED CIRCUIT-(FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SEI		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR	RKM	11-3-66	SCHEMATIC & ASSEMBLY RTL OPERATION DECODER
CK	uc	12-29-66	
ENG.		5-31-67	
PROJ. APP.		5/31/67	
APP.		5/31/67	
USED ON			

CODE IDENT NO.  
20886

SIZE	REV
D	C





NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DIMS. SEE DB200-877. FOR DIMENSIONAL DIMS SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	B207		BY
A	67-204: ADDED ADDRESS 0AID2 & 0AID7. BB 6-27-67	7/12/67	RKM
B	67-445: ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-24-67	10/30/67	RKM

ITEM	DWG. OR PART NO.	DESCRIPTION
4	IC4, IC3, IC2, IC1	MCT24-P INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104 CAPACITOR-.1uF +80-20%, 10V, CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL/COLOR OPT.
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	00-7022-029-000000	CONNECTOR-ELCO
1	SEL 877	PRINTED CIRCUIT (FOR REV. SEE ASSEMBLY)
-1	ITEM	DWG. OR PART NO.

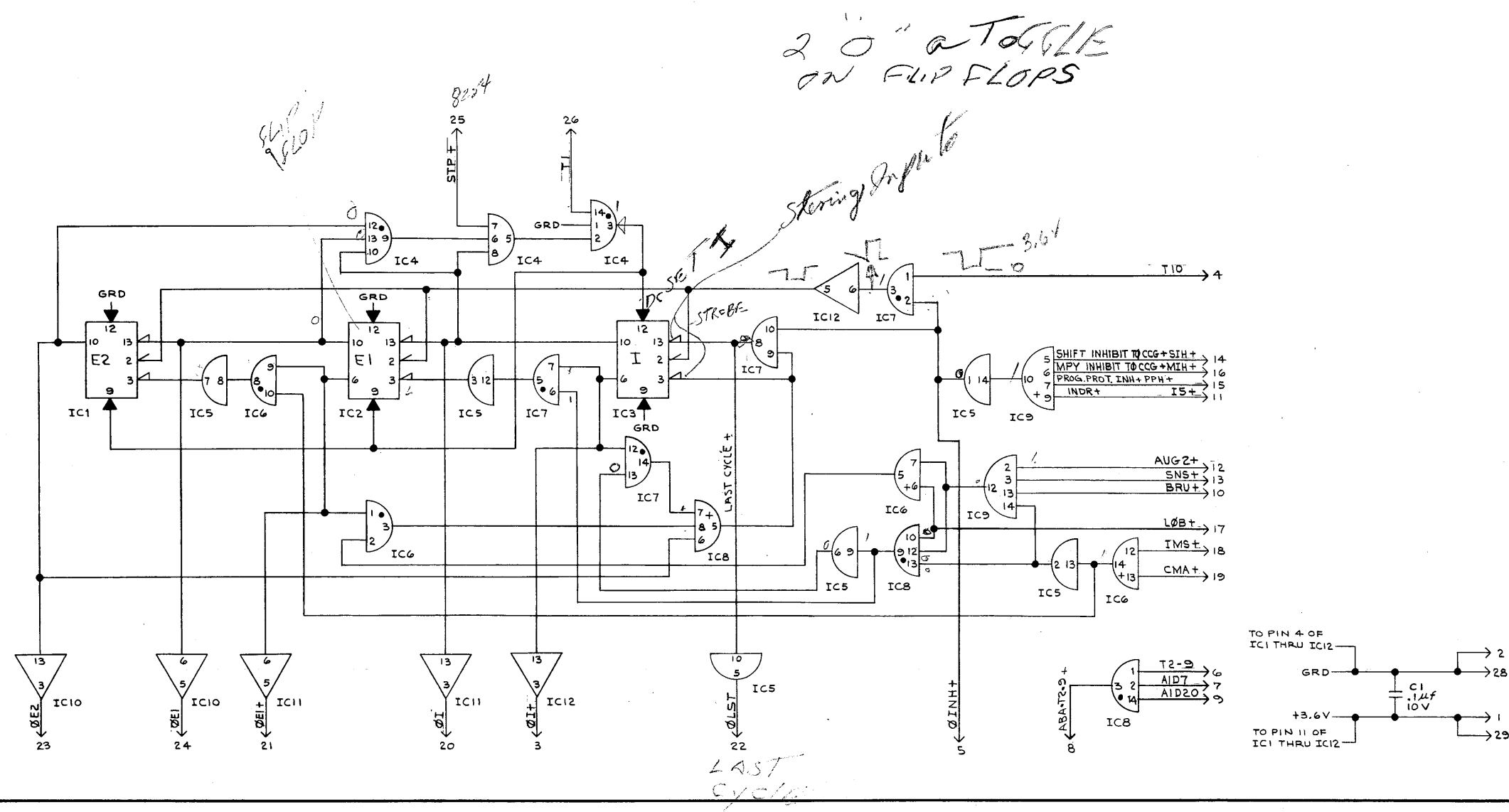
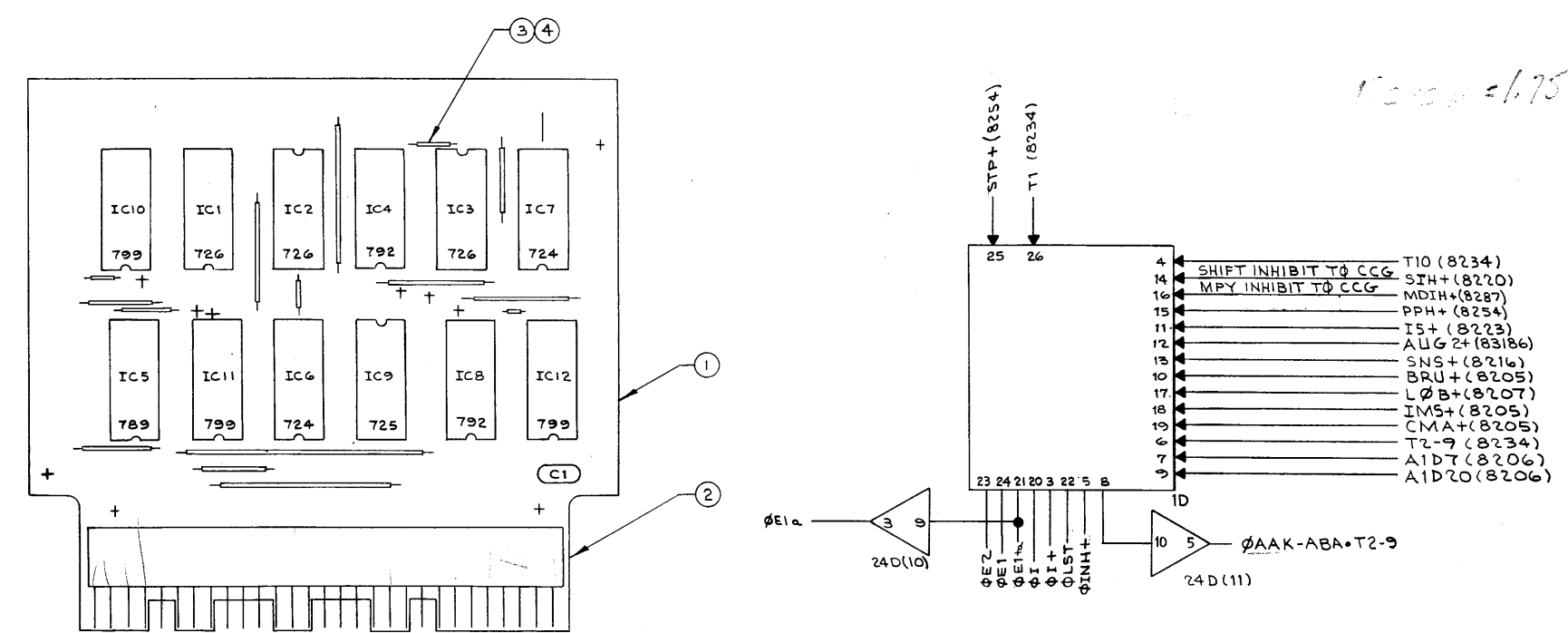
  

DR	RKM	12-15-66	SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
CR	WC	2-22-67	
DR	RKM	5-31-67	
DR	RKM	5/31/67	SCHEMATIC & ASSEMBLY RTL AUGMENTED OPERATION DECODER - 2
REV	BY	DATE	REV
D	B207		B

CODE IDENT NO.  
20886

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB600-BB6. FOR DIMENSIONAL DWG. SEE CB600.

REV	DESCRIPTION	DATE	APP'D
D	8208		C
A	67-940; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 5/7/67	5/2/67	
B	67-445; ADDED 24D(10), ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10/24/67	10/30/67	
C	68-199; DESTINATION OF PIN 12 WAS AUG+(8205). <i>W. H. H. 4-18-68</i> RKM	4/18/68	



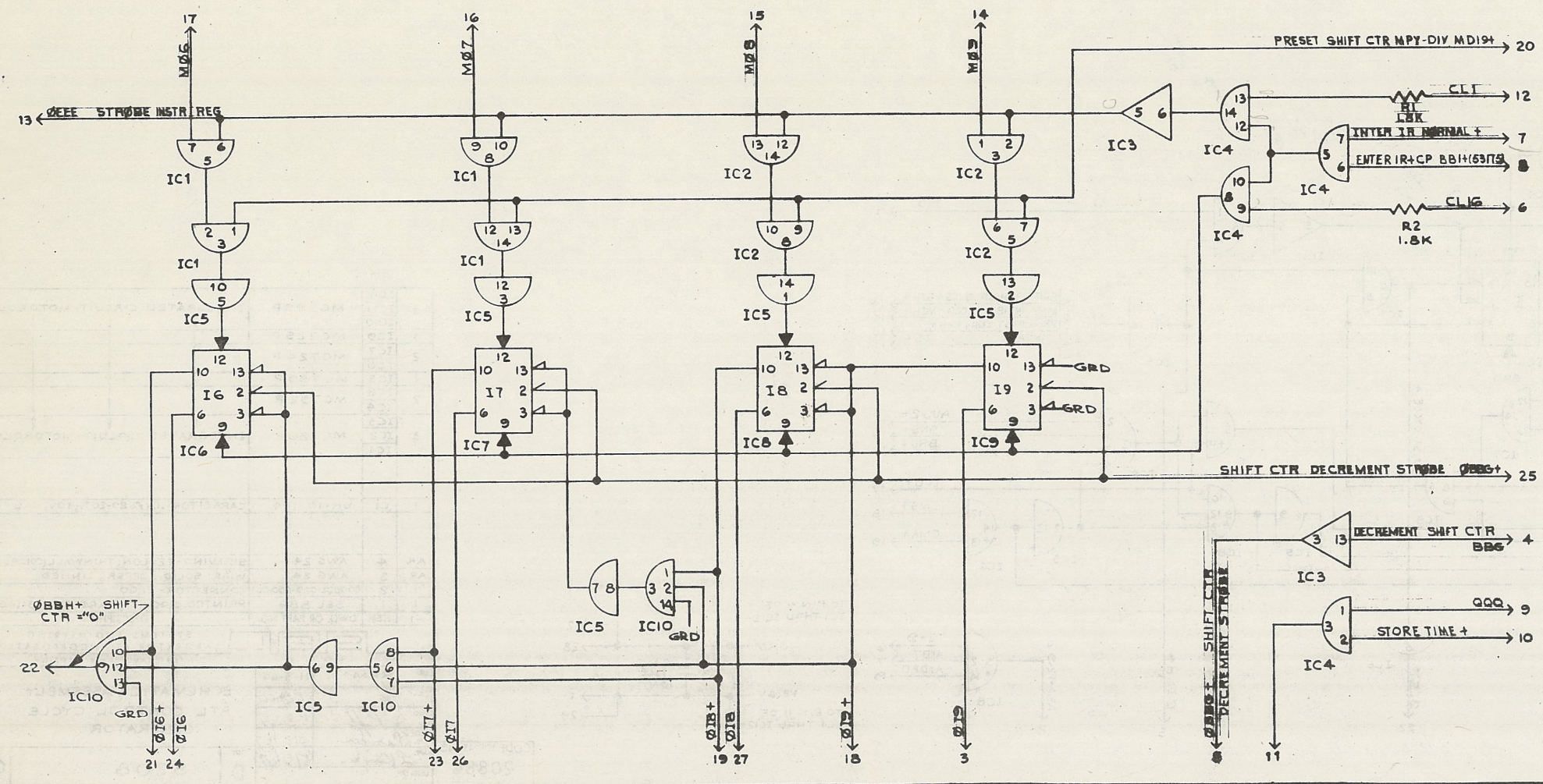
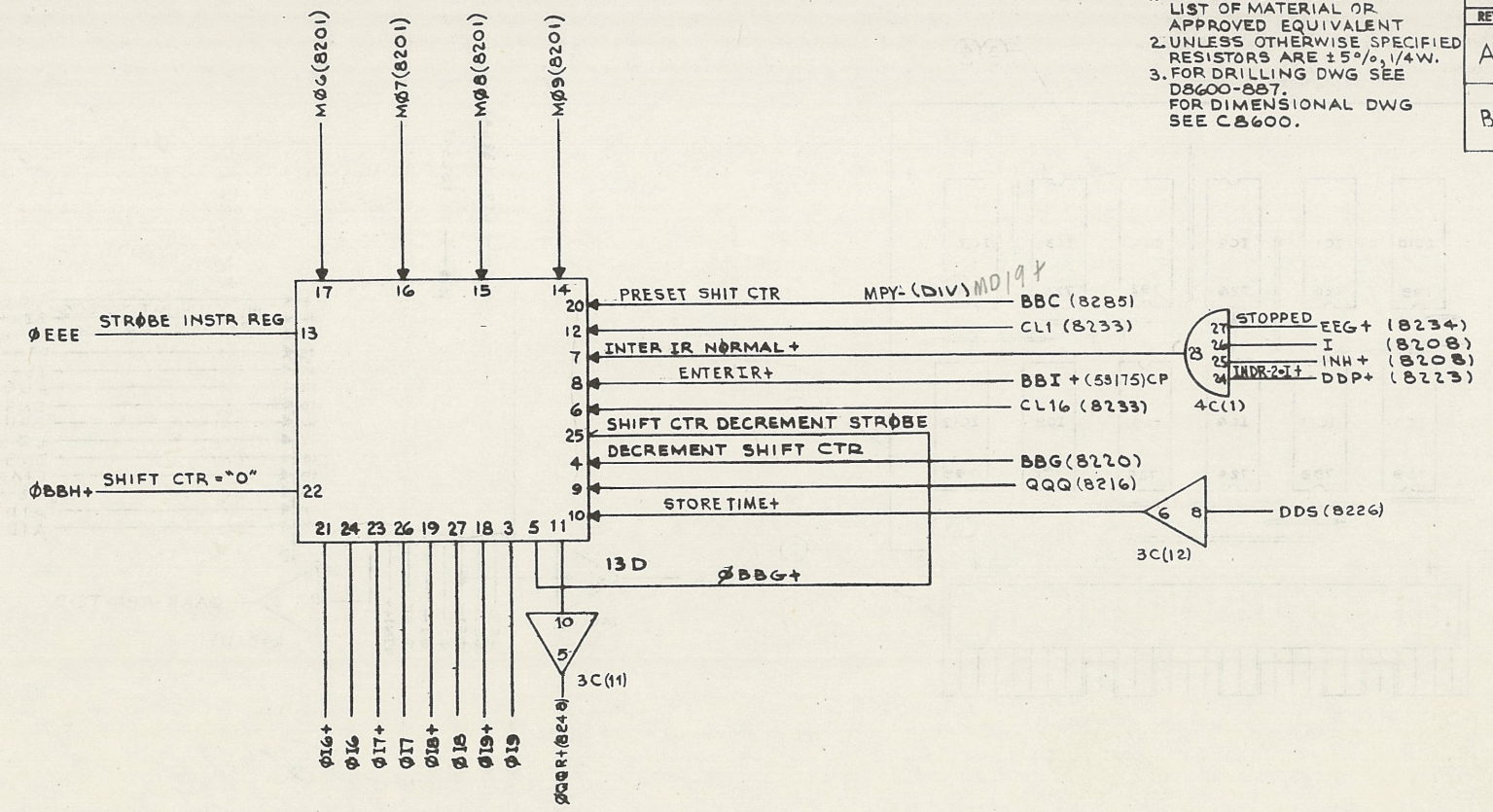
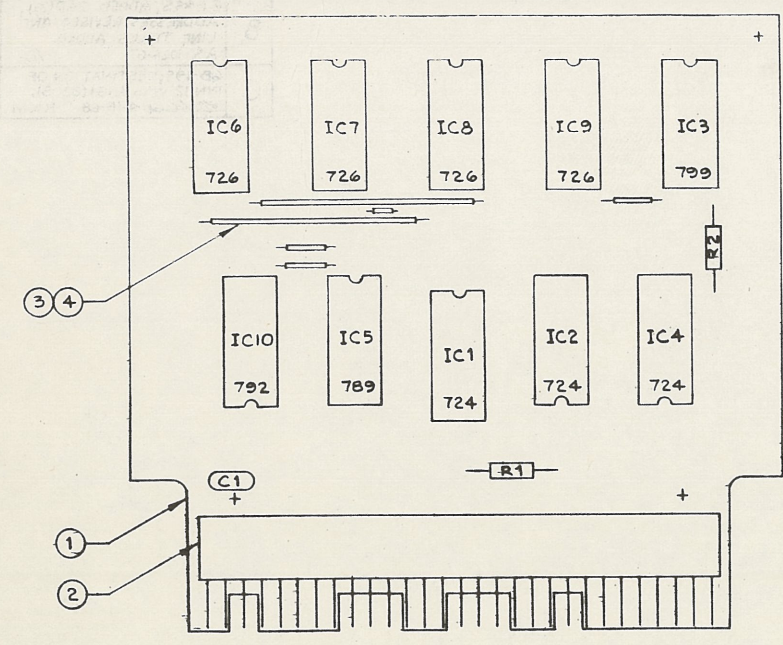
ITEM	DWG. OR PART NO.	DESCRIPTION
3	IC12, IC11, IC10	MC799P INTEGRATED CIRCUIT-MOTOROLA
1	IC9, IC6	MC725P INTEGRATED CIRCUIT-MOTOROLA
2	IC7, IC8	MC724P INTEGRATED CIRCUIT-MOTOROLA
1	IC5, IC4	MC789P INTEGRATED CIRCUIT-MOTOROLA
2	IC3, IC2, IC1	MC726P INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104 CAPACITOR-.1µf±80-20%, 10V, CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL (COLOR OPT)
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1 2	00-7022-029-000-001	CONNECTOR-ELCO
1	SEL 886	PRINTED CIRCUIT-(FOR REV. SEE A51140)
-1	ITEM DWG. OR PART NO.	DESCRIPTION
DR	RKM	11-3-66
CK	uc	12-29-66
ENG.	<i>J. Riff</i>	5-31-67
PROJ. APP.	<i>W. H. H.</i>	5/31/67
USED ON		5/31/67

CODE IDENT NO. 20886

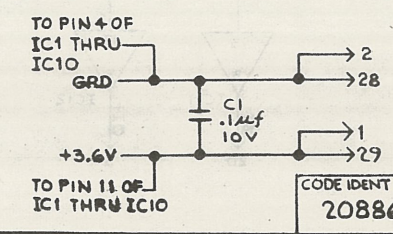
SCHEMATIC & ASSEMBLY  
 RTL CONTROL CYCLE  
 GENERATOR

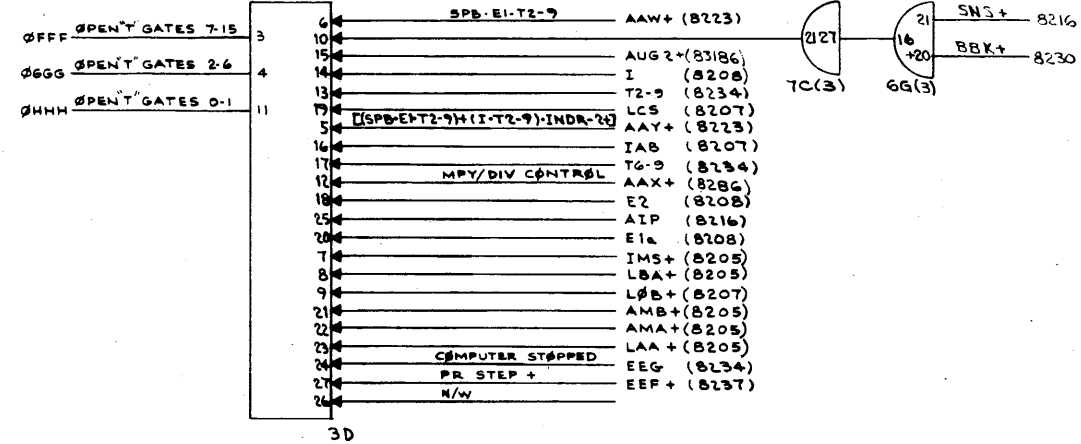
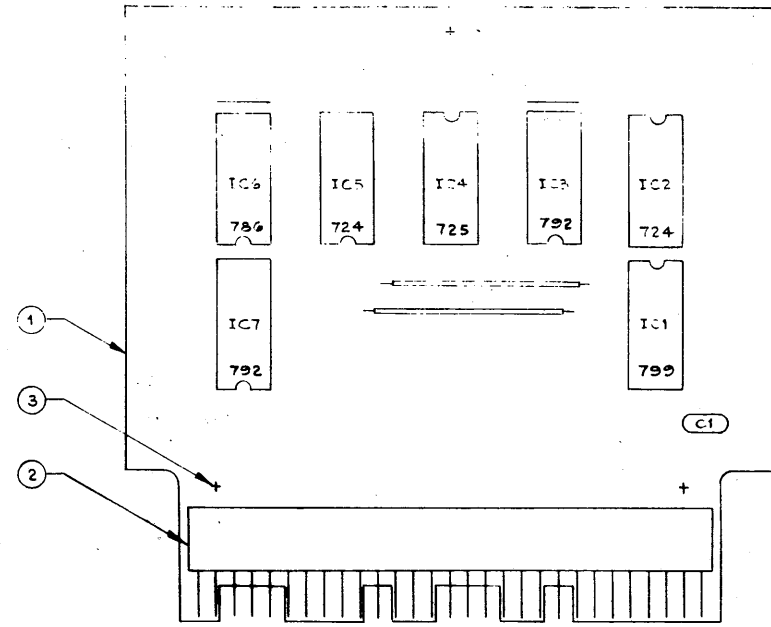
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE ±5%, 1/4W.  
 3. FOR DRILLING DWG SEE DB600-887.  
 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	8209		
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 3/7/67 RKM	9/12/67	AK
B	67-445; ADDRESSES REVISED. ADDED 3C(11) & 3C(12) AND LINE TITLES ADDED. E.P.C. 10-24-67. AS.	10/30/67	AK



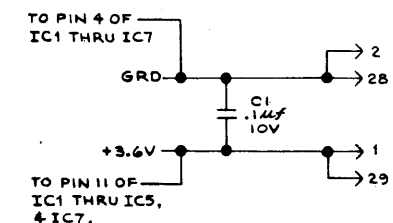
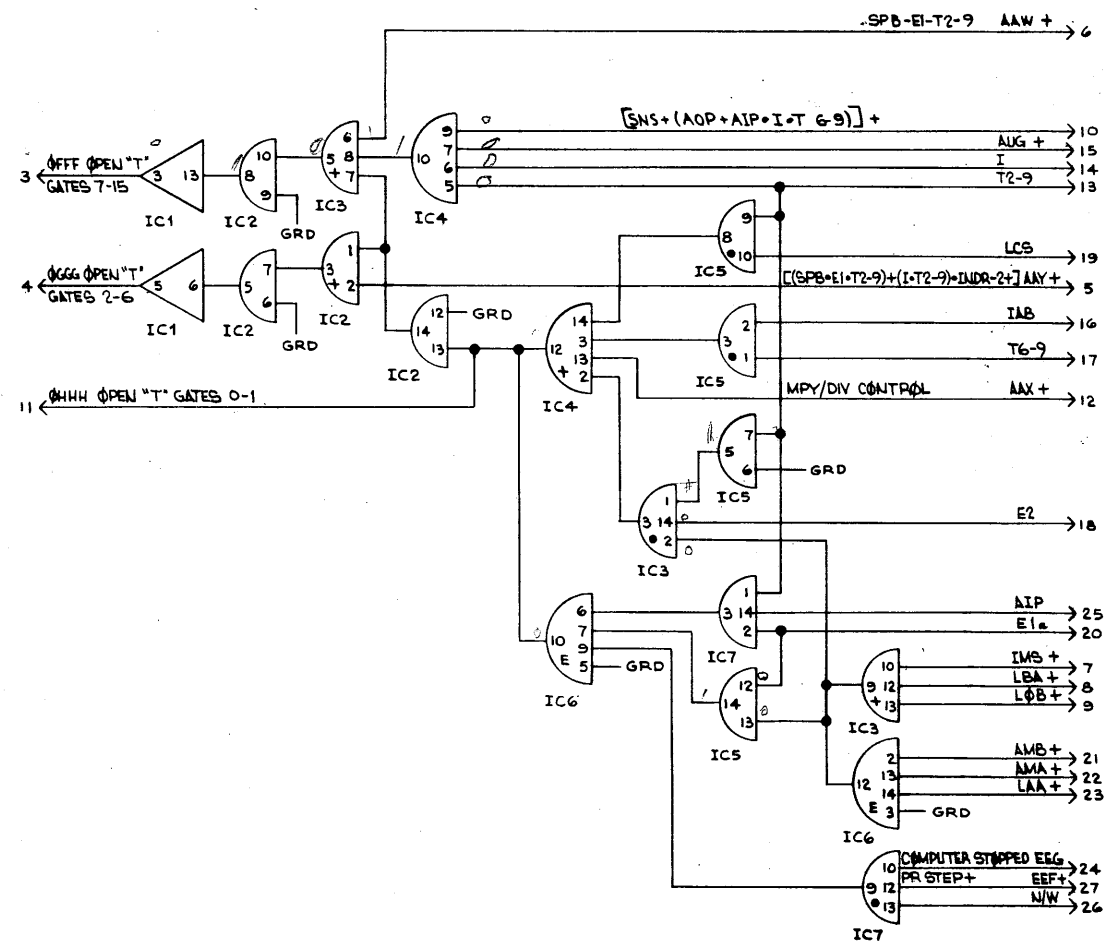
ITEM	DWG. OR PART NO.	DESCRIPTION
2	R2 R1	RC07GF182J RESISTOR-1.8K, ALLEN BRADLEY
1	IC10	MC792P
4	IC8 IC9 IC7 IC6	MC726P
1	IC5	MC789P
1	IC3	MC799P
3	IC4 IC2 IC1	MC724P
1	C1	UK 10-104 CAPACITOR-.1μf±80-20%, 10V, CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	007022-029-000-001 CONNECTOR- ELCO
1	1	SEL 887 PRINTED CIRCUIT-(REV. SEE A51140)
DESCRIPTION		
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA		
DR	RKM	2-1-67
CC	WC	2-20-67
ENGR.	J. L. P.	5-31-67
PROJ. MGR.	R. K. P.	5/1/67
APP.	R. K. P.	5/1/67
USED ON		
CODE IDENT NO. 20886		SIZE D 8209
		REV B





NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB600-890.  
 FOR DIMENSIONAL DWG. SEE CB600.

REV	DESCRIPTION	DATE	APPD
D	8210		B
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. 9/7/67 RKM	9/12/67	[Signature]
B	67-445; ADDED 6G(3), ADDRESSES REVISED AND LINE TITLES ADDED. A.S. 10/24/67	10/30/67	[Signature]



ITEM	DWG. OR PART NO.	DESCRIPTION
1	IC6	MC786P INTEGRATED CIRCUIT-MOTOROLA
1	IC4	MC725P
2	IC7	MC792P
2	IC5	MC724P
2	IC3	MC799P INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC799P INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104 CAPACITOR-.1uF±0-20%, 10V, CRL
AR	3	AWG 24 WIRE-SOLID COPPER, TINNED
1	2	90-7022-029-000-001 CONNECTOR-ELCO
1	1	SEL 890 PRINTED CIRCUIT(FOR REV.SEE A51140)
-1	ITEM	DWG. OR PART NO. DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR	RKM	12-17-66
CL	WC	2-22-67
ENG.	[Signature]	5-31-67
APP.	[Signature]	5-12-67
APR.	[Signature]	5/11/67
USED ON		

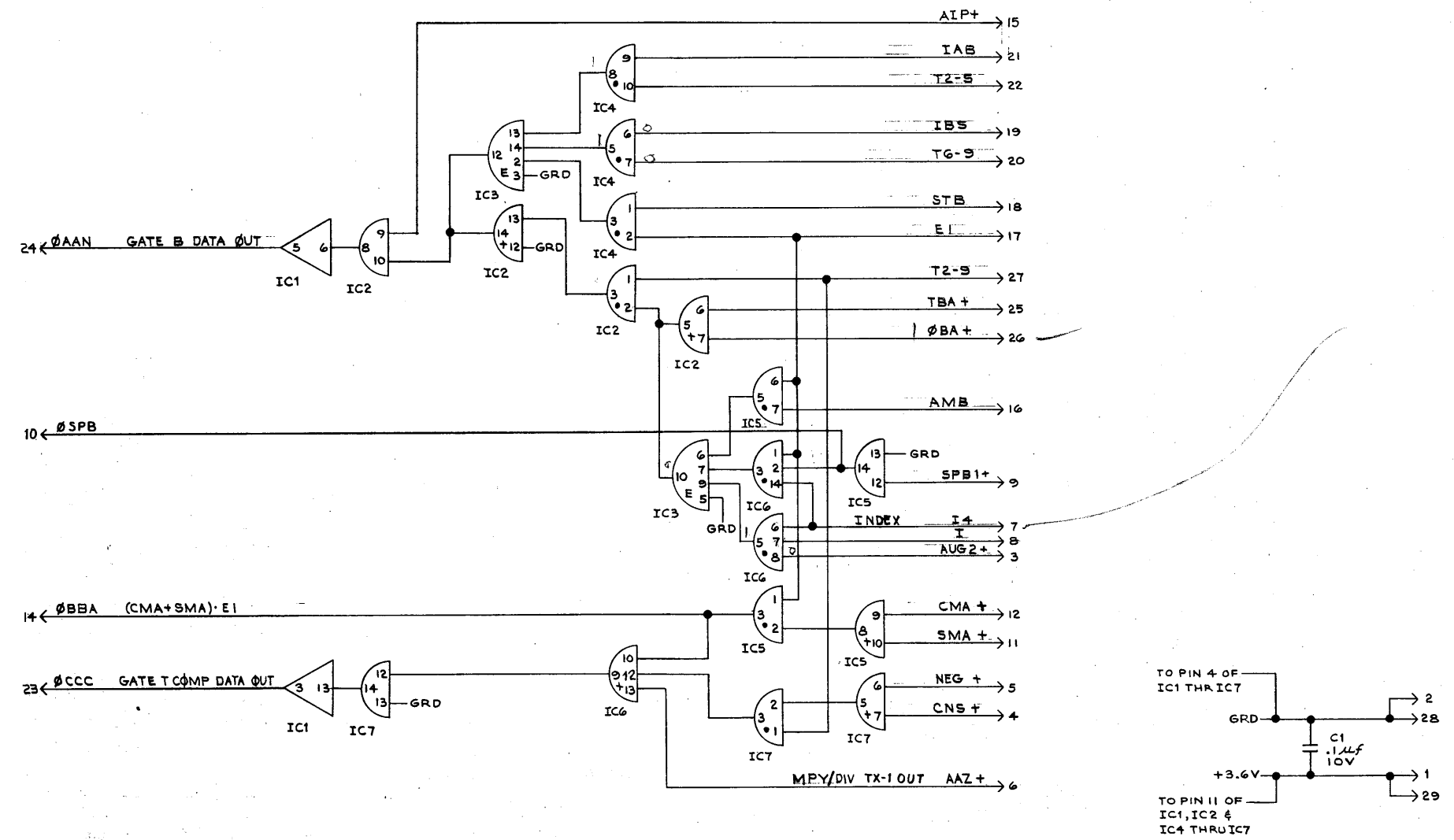
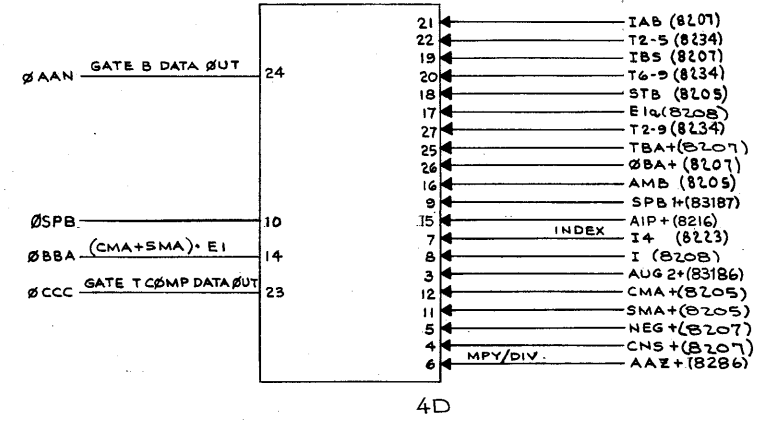
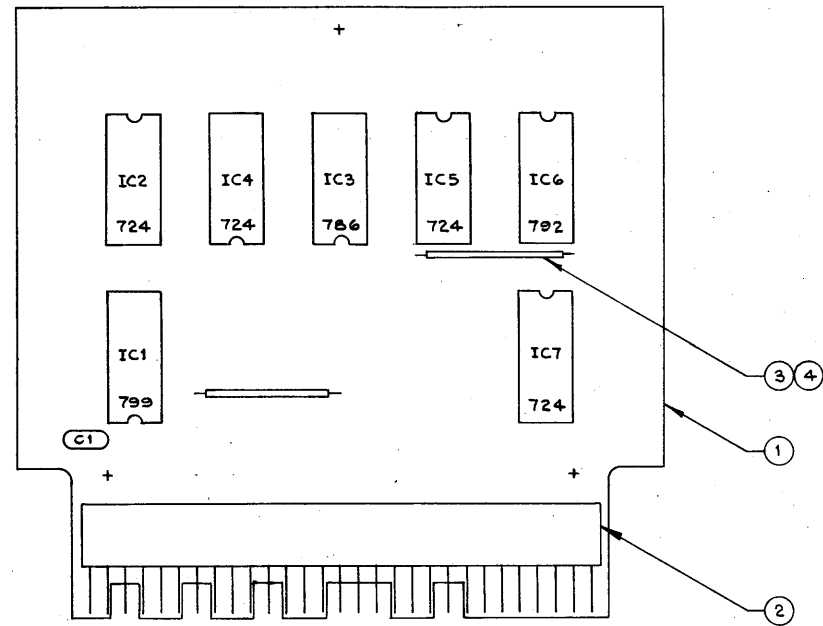
CODE IDENT NO.  
20886

SCHMATIC & ASSEMBLY  
RTL  
"T" OUTPUT GATE CONTROL

SIZE	D	8210
REV	B	

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-889 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	8211		C
A	GT-3401 DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMI 5/11/67 RKM	5/11/67	ON
B	67-445; ADDRESSES REVISED & LINE TITLES ADDED. C.THEW 10-24-67	10/20/67	ON
C	GB-269; PIN 9 IC2 WENT TO GRD. JWM 5-7-68	5/7/68	ON



*Scaling*

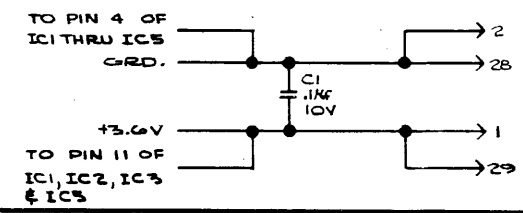
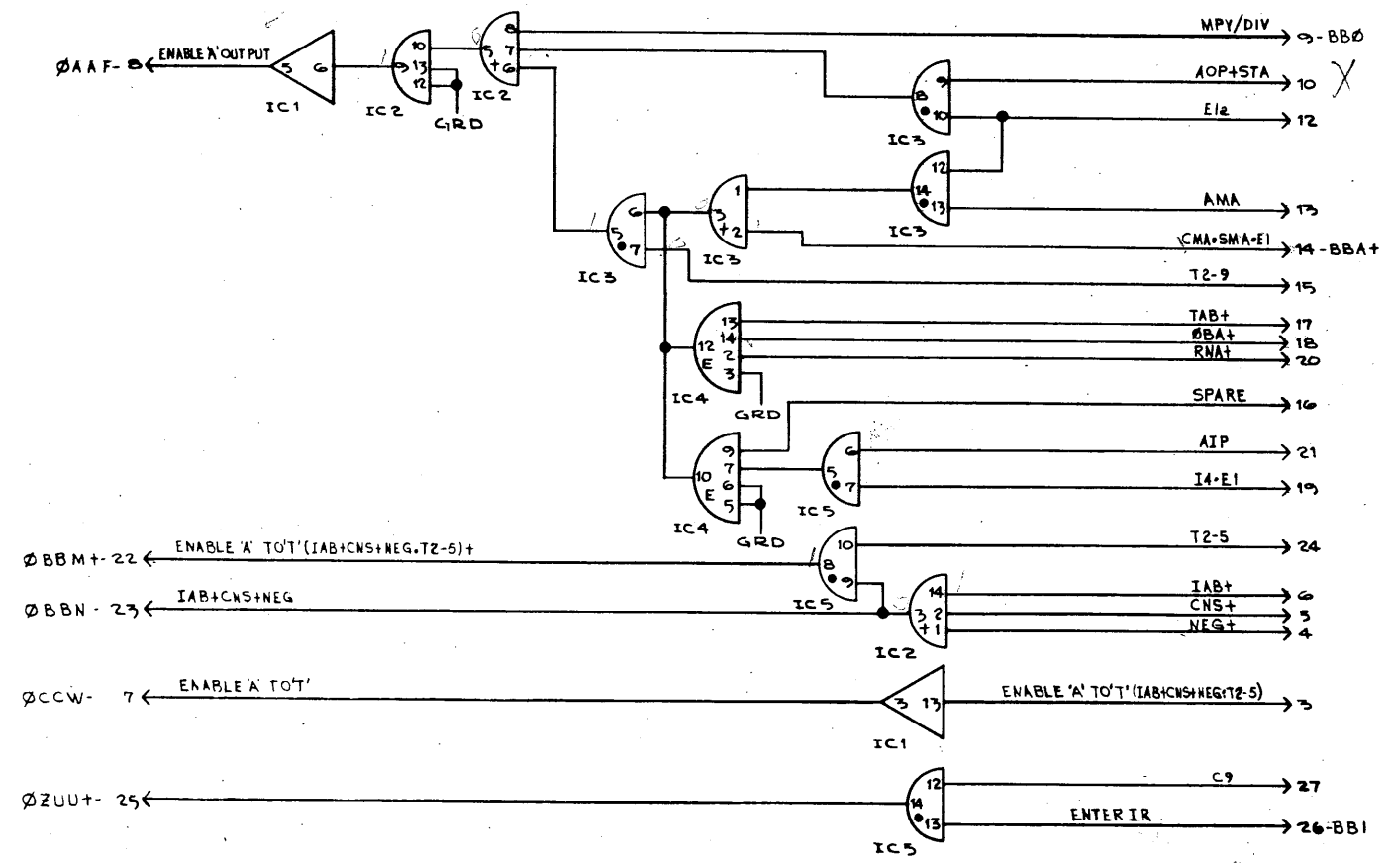
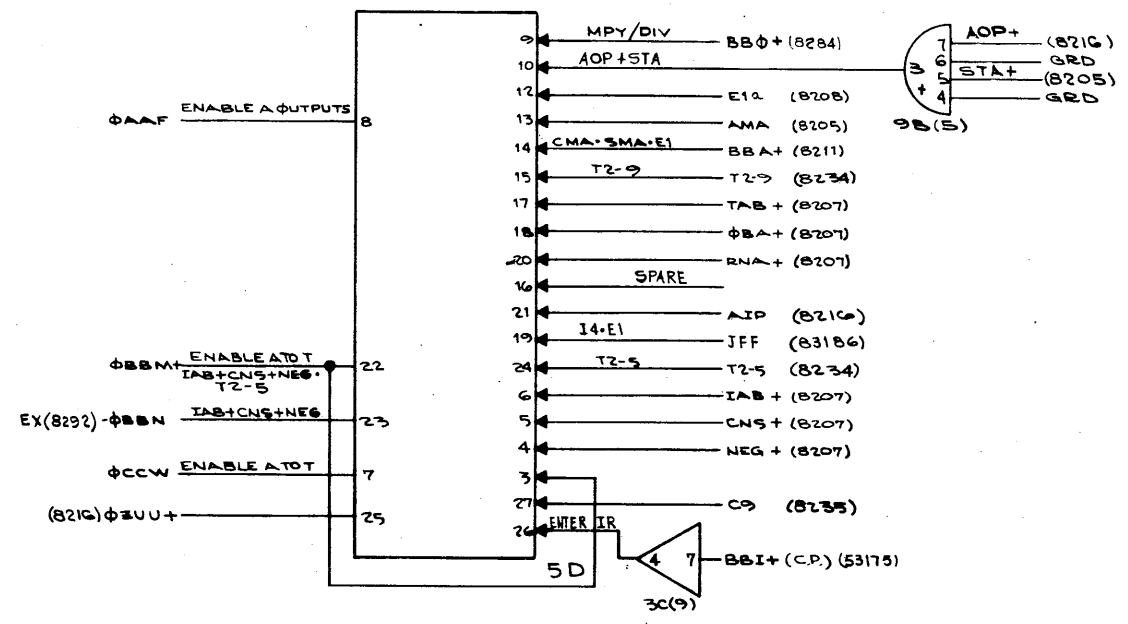
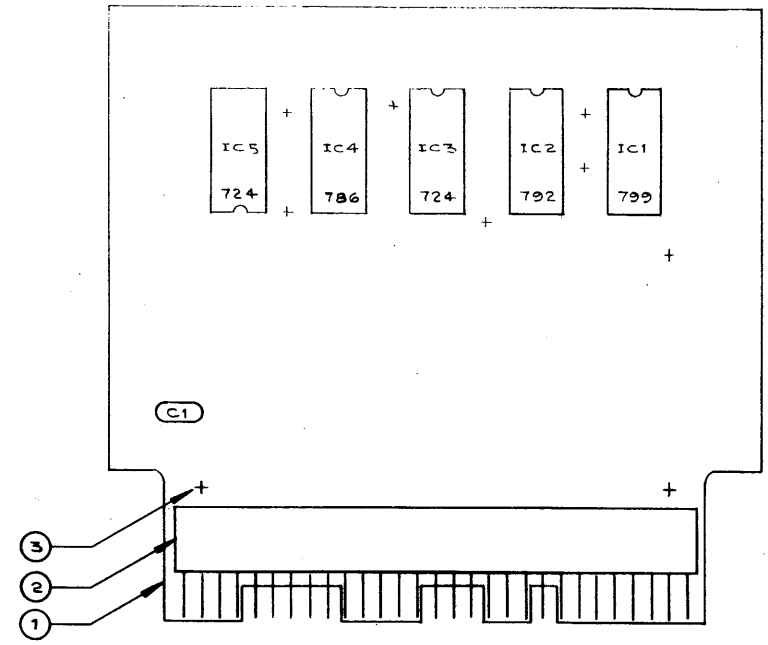
QTY	REF	DESCRIPTION
1	IC6	MCT792P INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC786P
4	IC5, IC4, IC2	MCT24P
1	IC1	MC799P INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104 CAPACITOR, 10UF+80-20%, 10V, CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL (COLOR OPT.)
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001 CONNECTOR-ELCO
1	1	SEL 889 PRINTED CIRCUIT-(FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO. DESCRIPTION

DR	DATE	DESCRIPTION
RKM	12-17-66	SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
WC	2-20-67	SCHMATIC & ASSEMBLY
ENG.	5-31-67	RTL "B" OUTPUT & "T" COMP OUTPUT GATE CONTROL
PROF. APP.	5/31/67	
APP.	6/2/67	

CODE IDENT NO. 20886	SIZE D	REV C
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS OR APPROVED EQUIVALENT. FOR DRILLING DWG. SEE DB600-891 FOR DIMENSIONAL DWG. SEE C 8600

REV	DESCRIPTION	DATE	APP'D
D	8212		
A	67-204; ADDED BBK+ TO PIN 16 OF LOGIC BB 6-21-67	7/2/67	RKM
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-24-67.	10/30/67	AS



1	IC4	MC786P	
2	IC5	MC724P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC792P	
1	IC1	MC799P	
1	C1	UK.10-104	CAPACITOR-.1uF+80-20%10V,CRL
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 891	PRINTED CIRCUIT (FOR REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. b. BOYD 1-24-67  
 CC RKM 1-31-67

ENG. [Signature] 5-31-67  
 PROJ. [Signature] 5-31-67  
 APP. [Signature] 5/1/67  
 USED ON

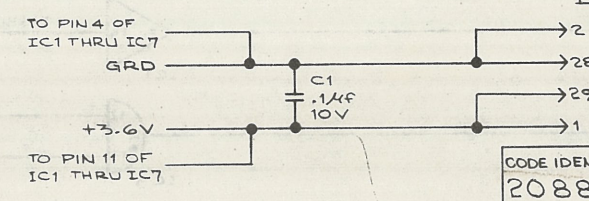
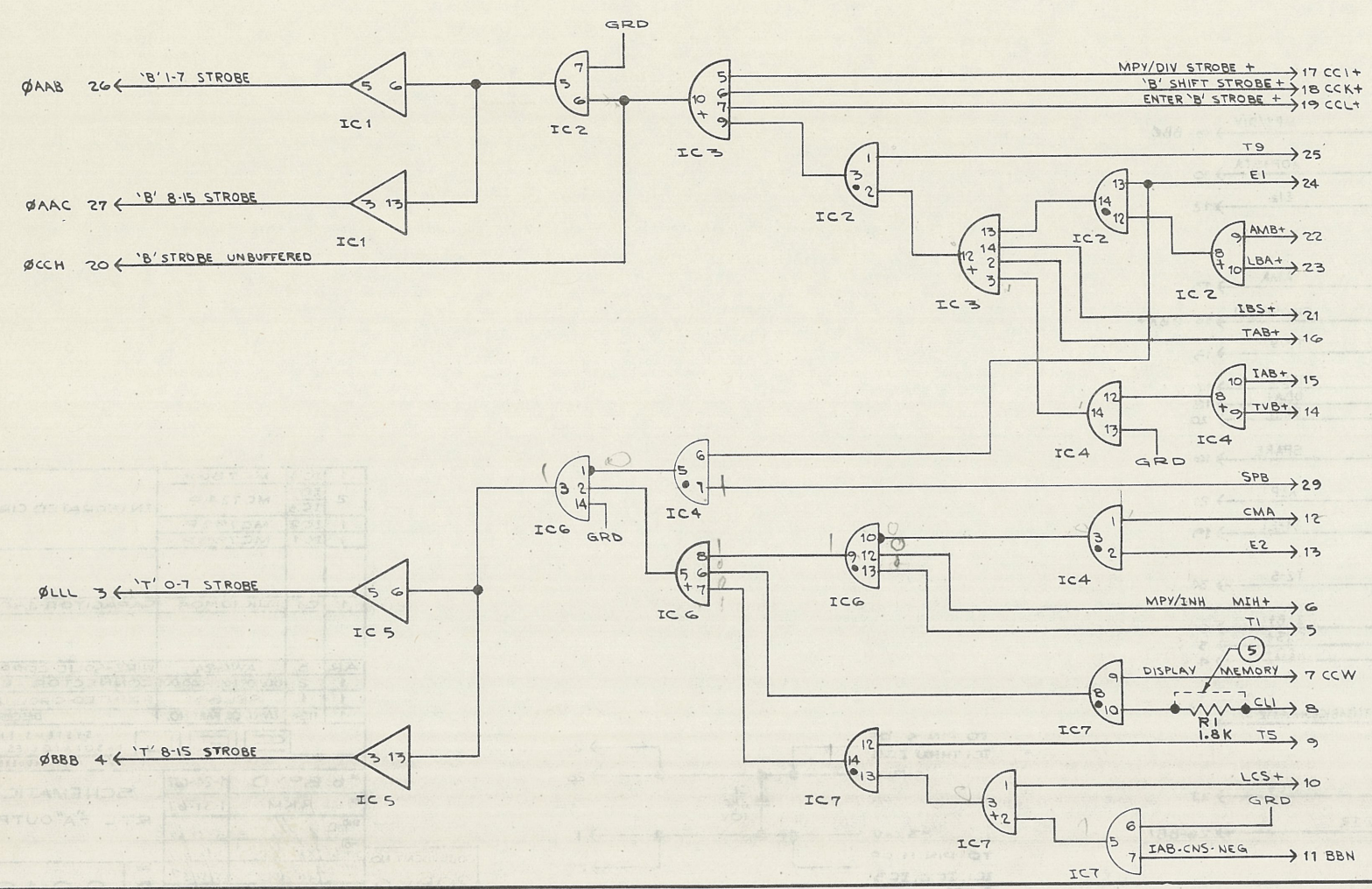
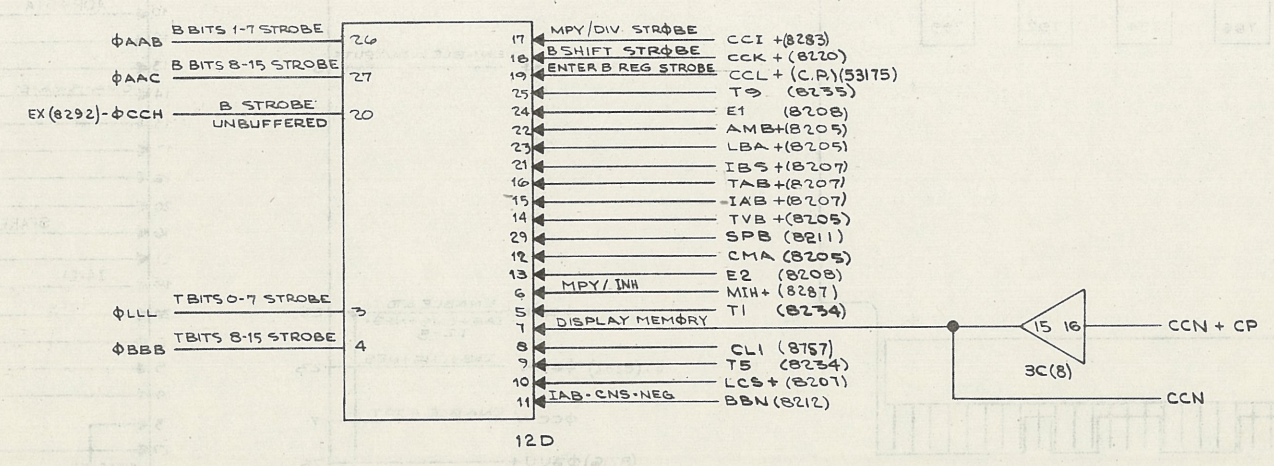
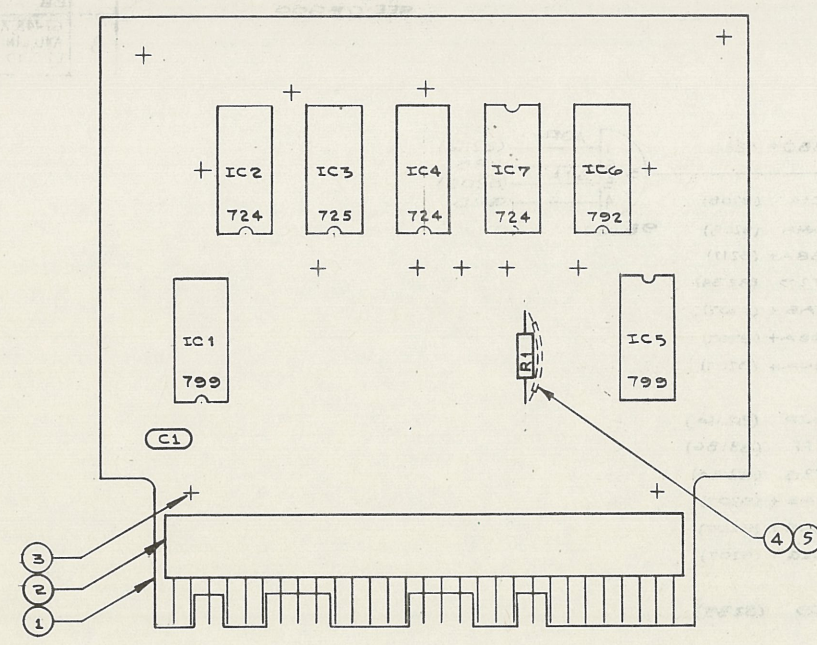
CODE IDENT NO. 20886

SIZE	D	8212	REV	B
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D 8600-892 FOR DIMENSIONAL DWG. SEE C 8600  
 3. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5% 1/4W.

SIZE	D	8213	REV	C
REV	A	DESCRIPTION	DATE	APP'D
	A	GT-299; ADDED DASH 2. G7WOLF 8/21/67 uc	8/21/67	[Signature]
	B	GT-445; ADDED 3C(8) ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-24-67	10/30/67	[Signature]
	C	GB-199; ADDED (53175) TO PIN 19. Will. Howard 4-18-68 RKM	4/18/68	[Signature]

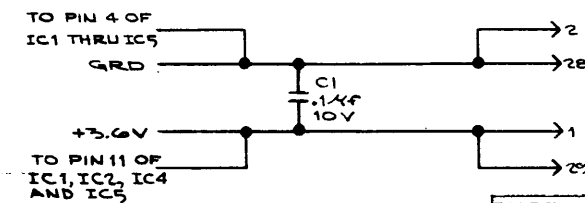
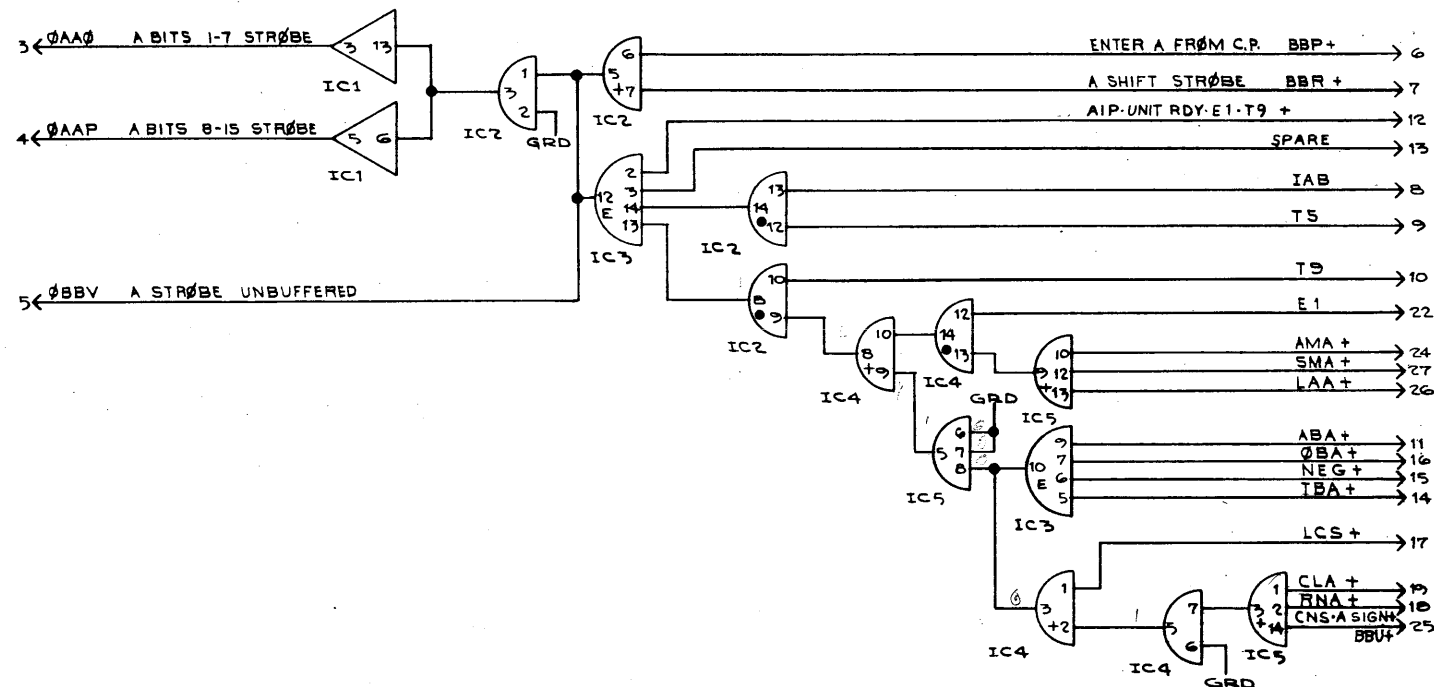
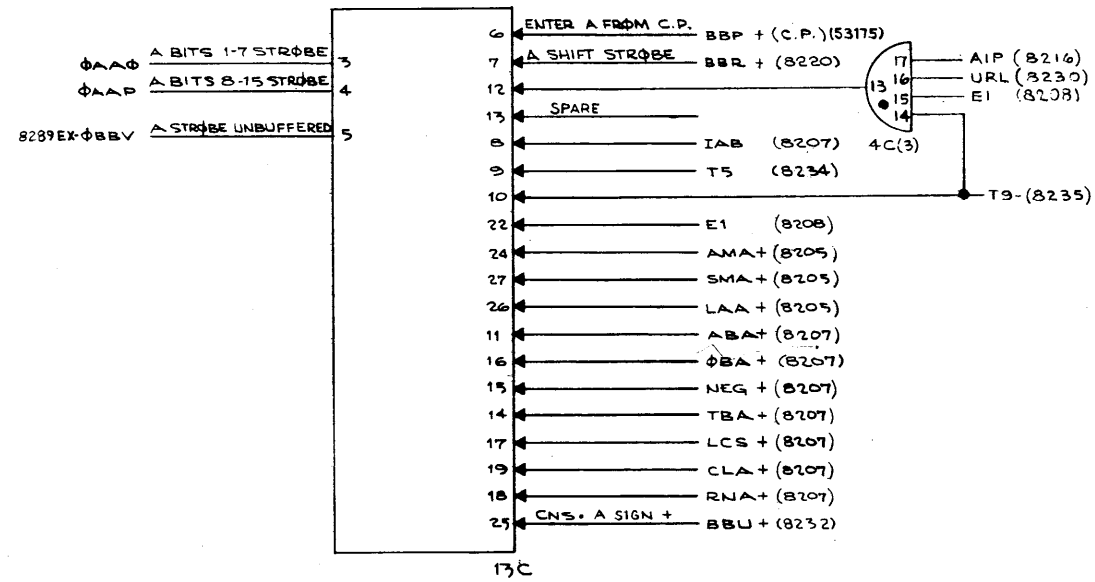
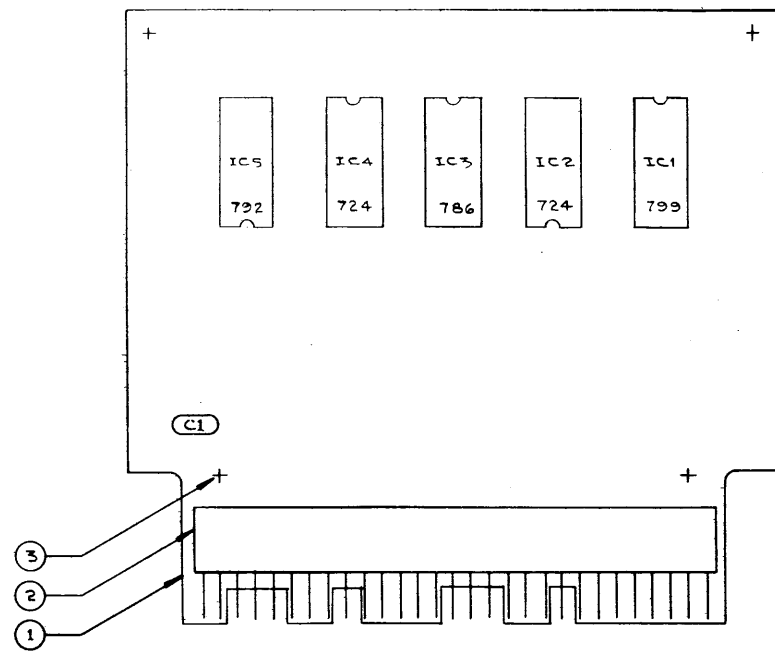


1	R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
1	IC6	MCT92P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MCT25P	
3	IC7	MC724P	
2	IC4	MC725P	
2	IC5	MC799P	
1	C1	UK 10-104	CAPACITOR-.14UF 80-20% 10V, CRL
1	5		JUMPER
AR	AR 4	AWG 24	SLEEVING - TEFLON, THIN WALL
AR	AR 3	AWG 24	WIRE - SOLID COPPER, TINNED
1	1	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 892	PRINTED CIRCUIT (FOR REV. SEE AS144D)
-2	-1	ITEM	DWG. OR PART NO. DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	D. BOYD	1-26-67	SCHEMATIC & ASSEMBLY RTL "B" REGISTER AND "T" REGISTER STROBE
CK.	RKM	1-28-67	
ENG.	[Signature]	5-31-67	
APP.	[Signature]	5/31/67	
CODE IDENT NO.	20886	USED ON	
SIZE	D	8213	REV
			C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE DB600-837 FOR DIMENSIONAL DWG SEE CB600.

REV	DESCRIPTION	DATE	APPD
B	67-445; ADDRESSES REVISED & LINE TITLES ADDED. C.THEW 10-24-67	10/23/67	[Signature]
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMIT 9/7/67	9/7/67	[Signature]
D	8214		

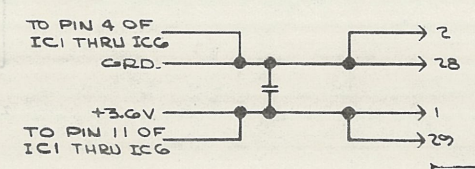
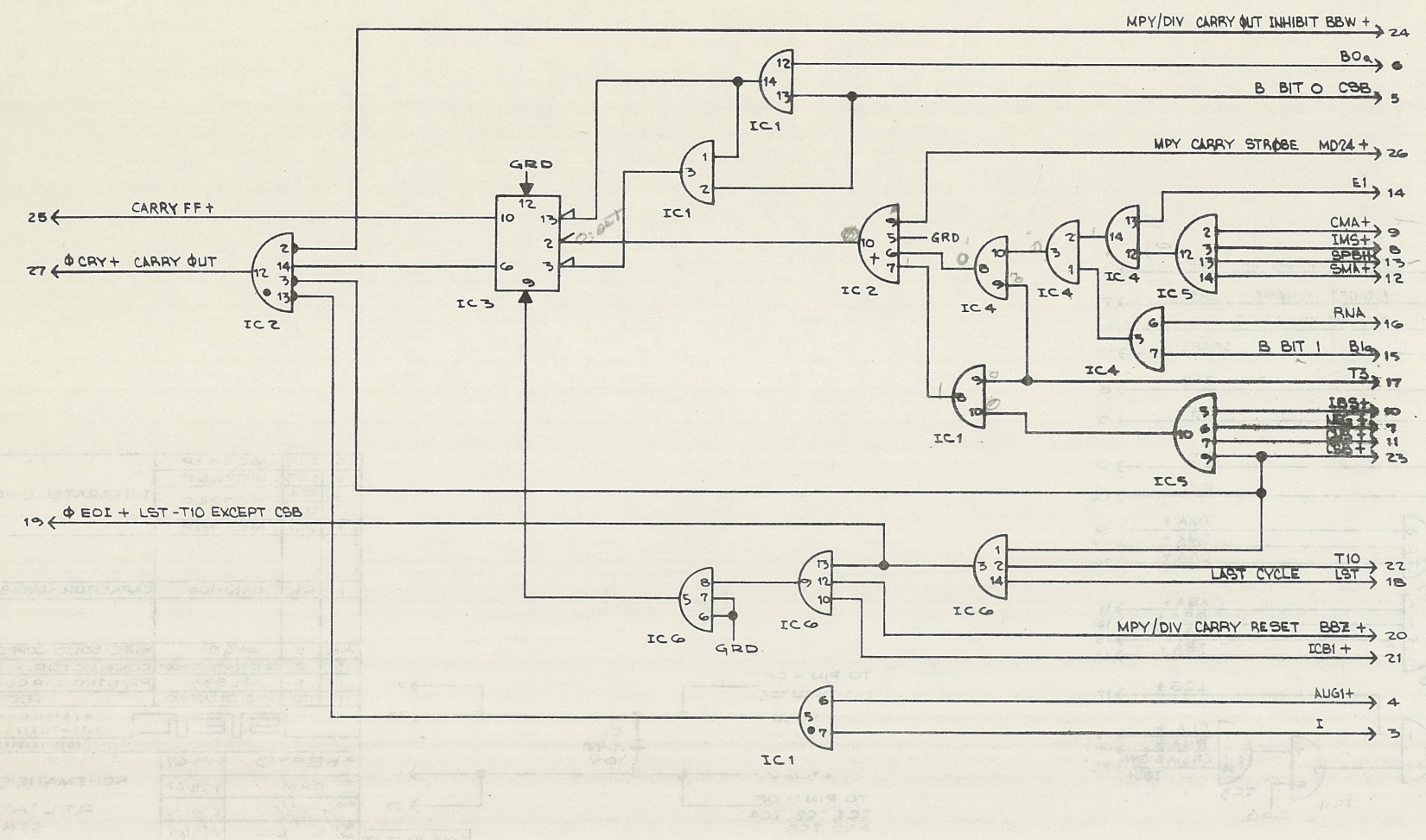
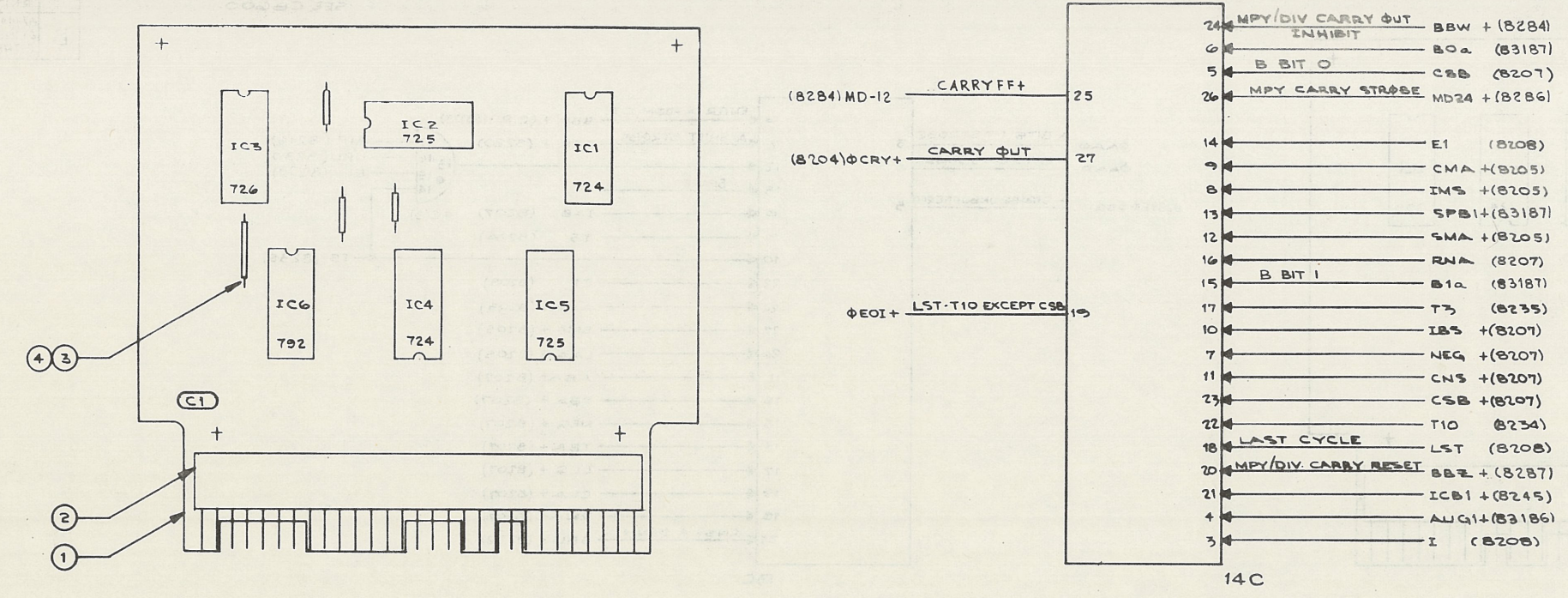


CODE IDENT NO  
20886

1	IC5	MC792P		
1	IC3	MC786P		
2	IC4	MC724P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC2	MC724P		
1	IC1	MC799P		
1	C1	UK10-104	CAPACITOR-.1μF±20%,10V,CRL	
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED	
1	2	00-7022-029-000-001	CONNECTOR - ELCO	
1	1	SEL 893	PRINTED CIRCUIT (FOR REV. SEE ASIMO)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	b BOYD	1-23-67	SCHEMATIC & ASSEMBLY RTL "A" REGISTER STROBE	
CC	RKM	1-18-67		
ENGR	[Signature]	5-31-67		
APP	[Signature]	5/31/67		
USED ON	[Signature]	5/31/67		
SIZE	D	8214	REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB600-894 FOR DIMENSIONAL DWG. SEE C8600

REV	DESCRIPTION	DATE	BY
D	8215		B
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. R 9/7/67	9/7/67	RKM
B	67-445; ADDRESSES REVISED AND LINE TITLE ADDED E.P.C. 10-24-67.	10/29/67	AS

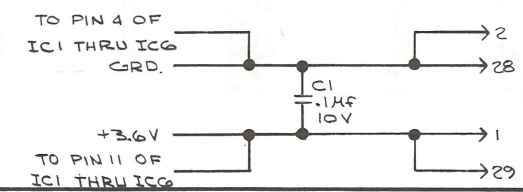
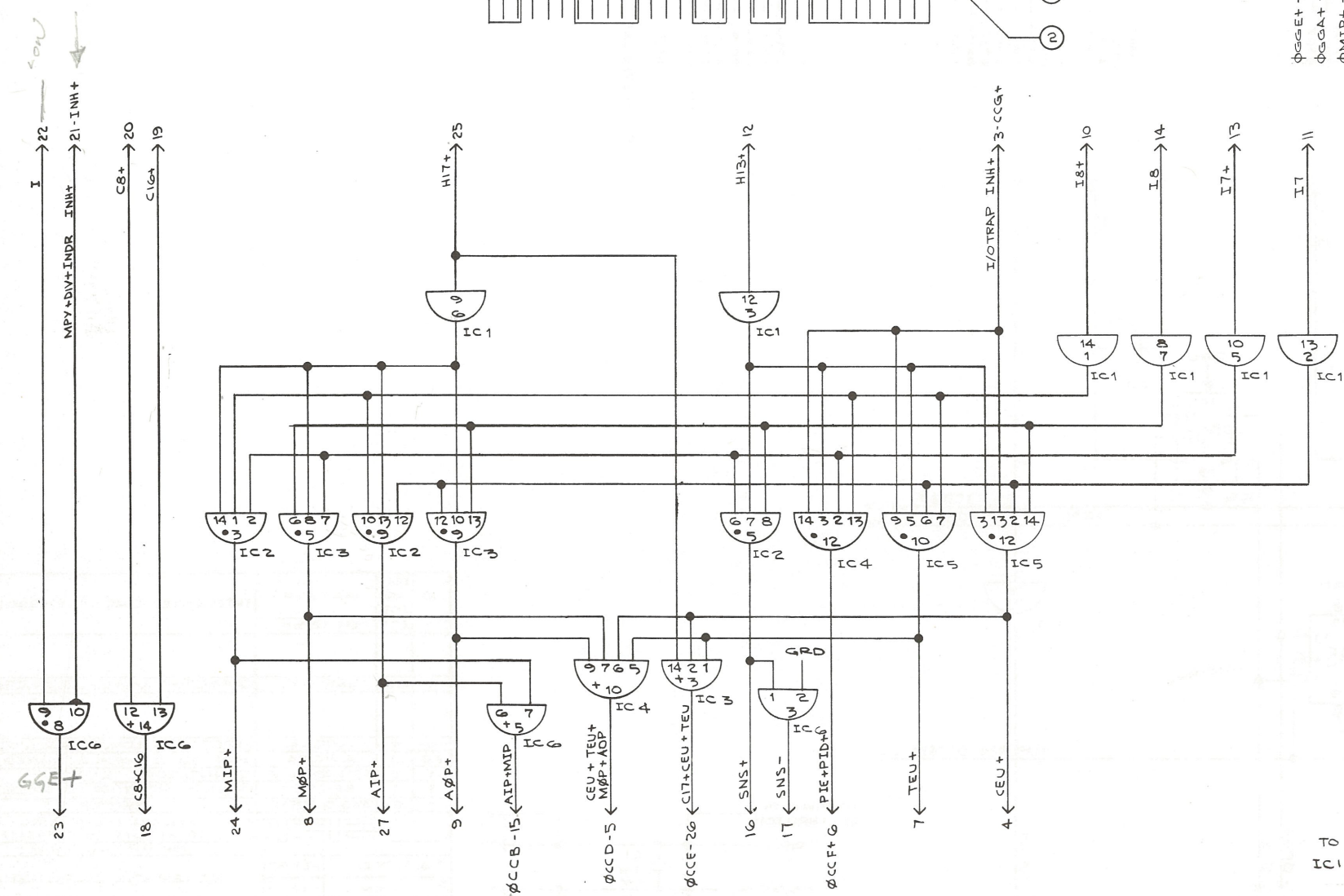
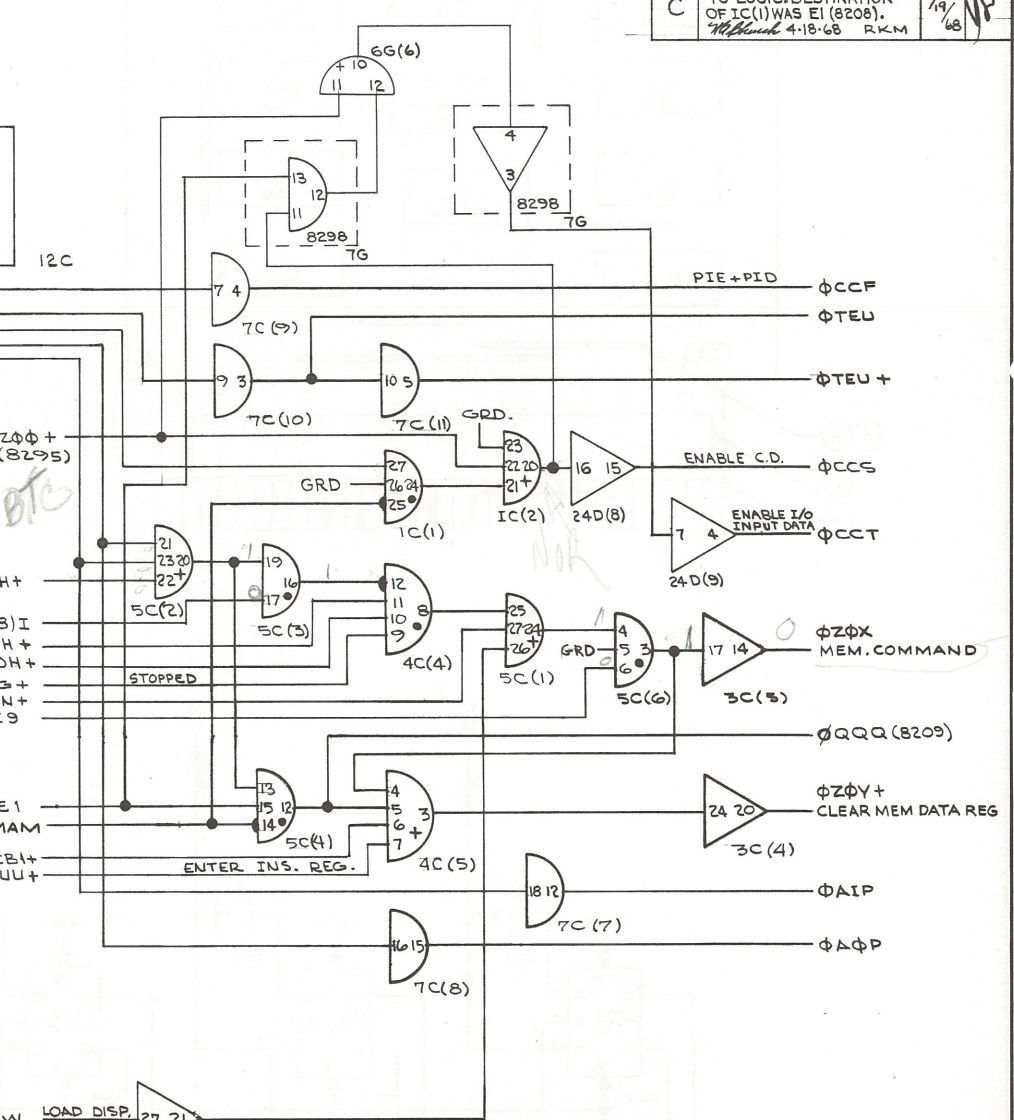
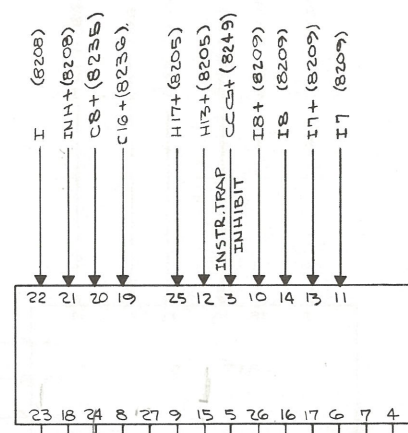


1	IC6	MC792P	
1	IC3	MC726P	
2	IC5	MC725P	INTEGRATED CIRCUIT-MOTOROLA
2	IC4	MC724P	
1	IC1		
1	C1	UK10-104	CAPACITOR-.1XFT+80-20%,10V,CRL.
AR	4	AWG 24	SLEEVING-TIFLON,THINWALL(COLOR OPT)
AR	3	AWG 24	WIRE-SOLID COPPER,TINNED
1	2	00-7022-029-000-001	CONNECTOR - E L C O
1	1	SEL 894	PRINTED CIRCUIT.(FOR REVSEEAS1140
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SEL		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. B. BOYD	1-25-67	SCHEMATIC & ASSEMBLY RTL CARRY LOGIC	
CC. RKM	1-27-67		
ENG. J. R. RAY	3-31-67		
PROJ. MGR. J. R. RAY	5-31-67		
APP. R. W. RAY	5-31-67	CODE IDENT NO. 20886	USED ON
REV	D	8215	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE D 8600-888 FOR DIMENSIONAL DWG SEE C 8600

REV	DESCRIPTION	DATE	APPD
D	8216		
A	G7-204; ADDED ADDRESS $\phi Z\Phi X$ & $\phi Z\Phi Y$ + BB G27-67	7/12/67	RKM
B	G7-445; ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-25-67	10/30/67	RKM
C	G8-199; ADDED GG(6) & TG TO LOGIC. DESTINATION OF IC(1) WAS EI (8208). <i>Revised</i> 4-18-68 RKM	4/19/68	RKM

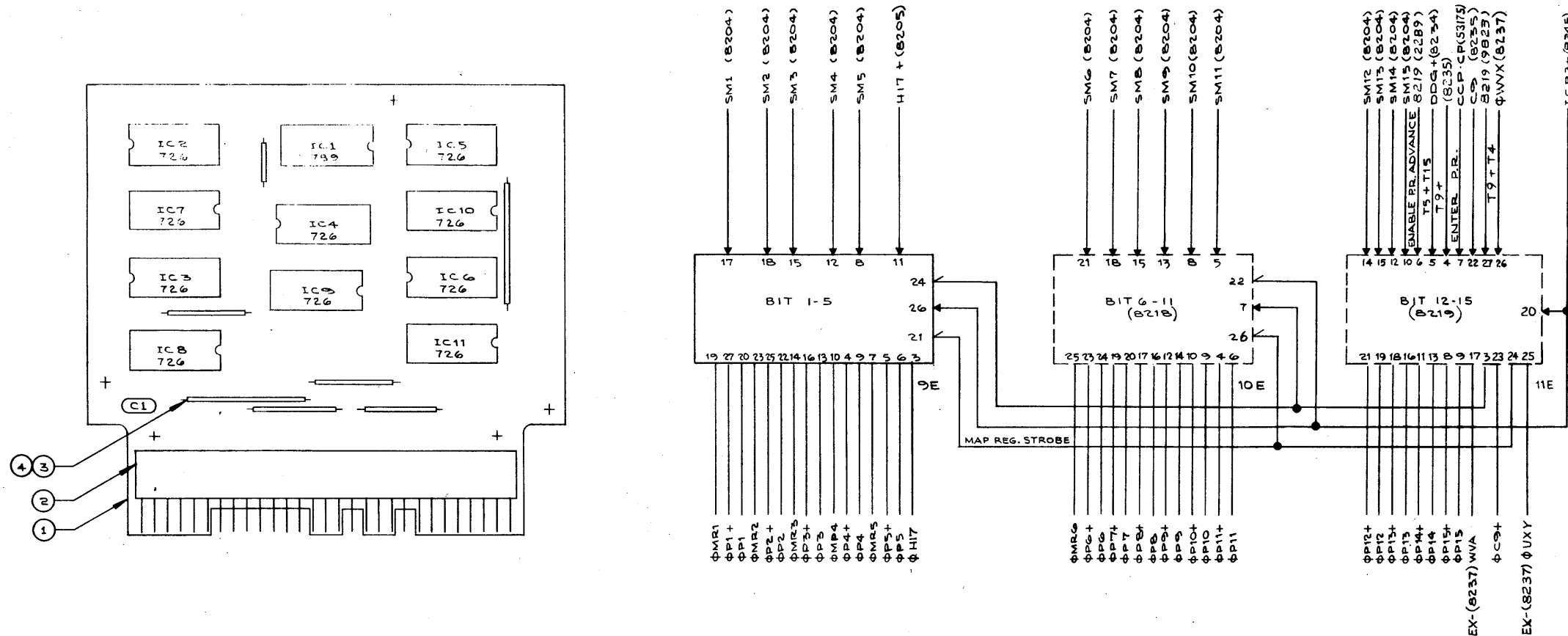


ITEM	DWG. OR PART NO.	DESCRIPTION
1	IC6	MC724P
2	IC5	MC725P
	IC4	MC725P
	IC3	MC725P
	IC2	MC725P
1	IC1	MC785P
1	C1	UK10-104 CAPACITOR-.1uF+80-20%OV,CRL
AR	4	AWG 24 SLEEVING-TIFLON, THIN WALL (COLORS)
AR	3	AWG 24 WIRE-SOLID COPPER, TINNED
1	2	00-7012-029,000-001 CONNECTOR - E LCO
1	1	SEL8899 PRINTED CIRCUIT (FOR REV. SEE AS144)
-1	ITEM	DWG. OR PART NO. DESCRIPTION

DE	DATE	DESCRIPTION
b. BOYD	1-17-67	SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
CC	RKM	1-20-67
ENG.	J. R. Kelly	5-21-67
APP.	E. Kelly	5/11/67

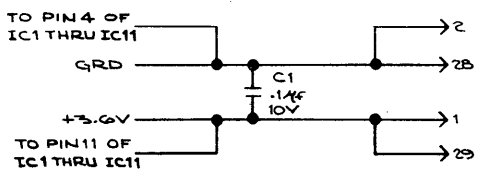
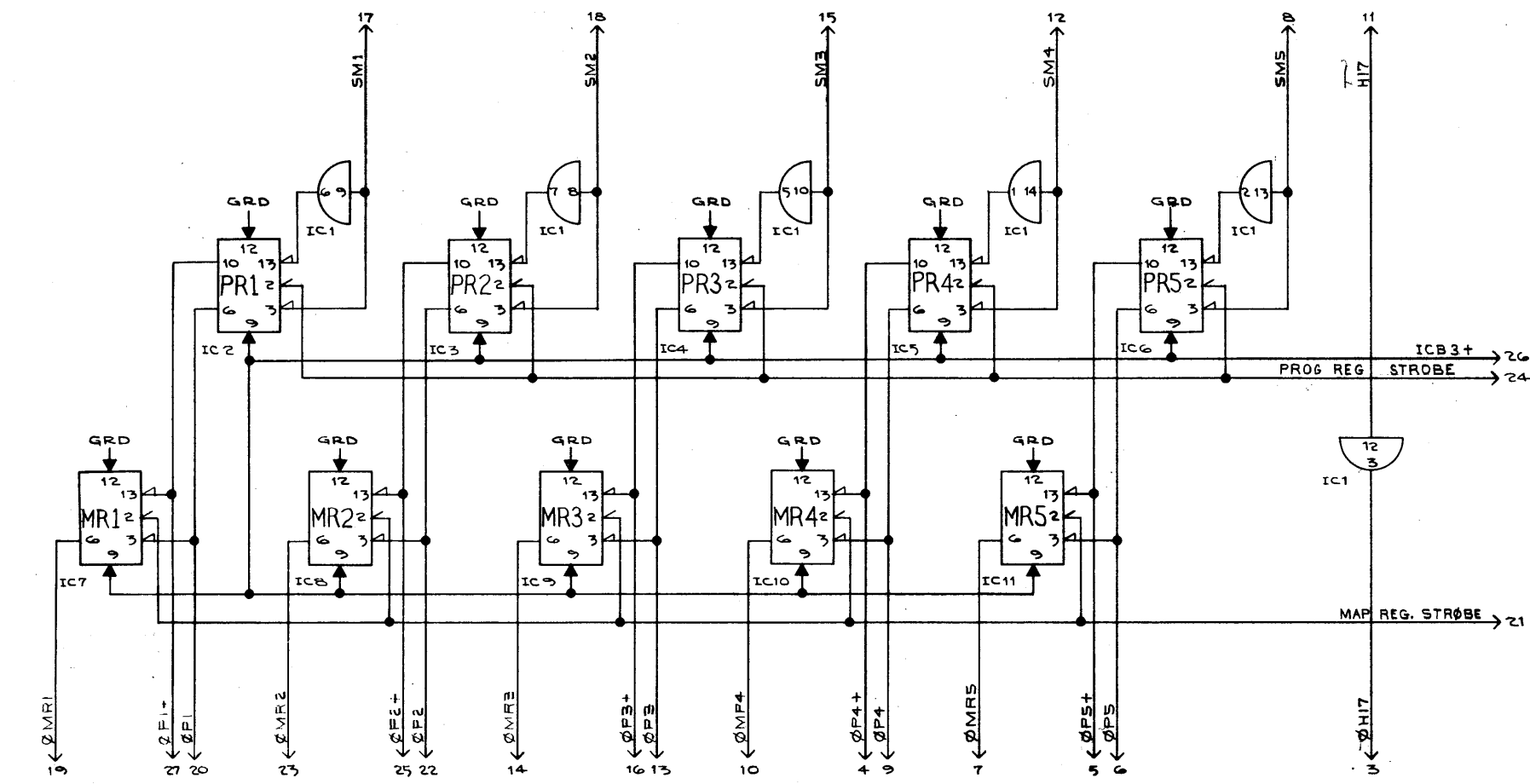
CODE IDENT NO  
 20886

REV	DESCRIPTION	DATE	APPD
D	8216		



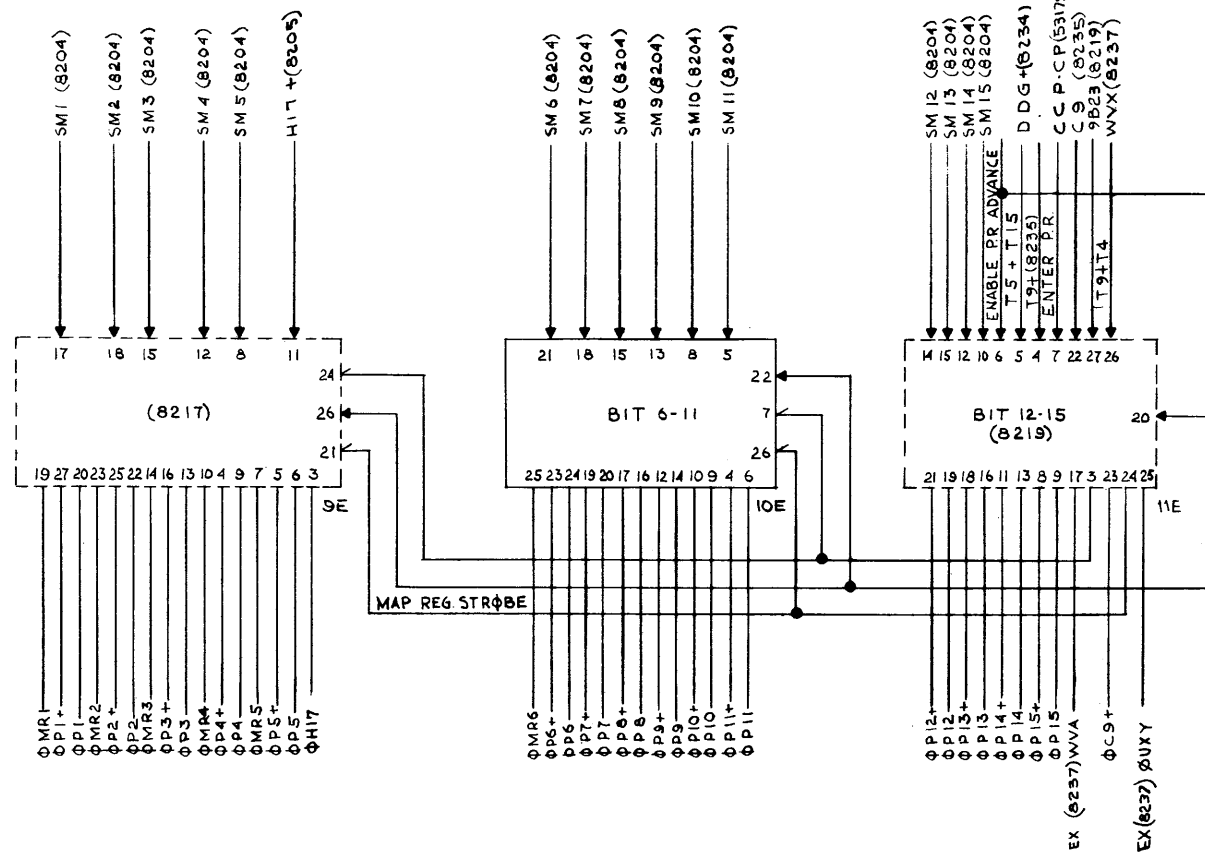
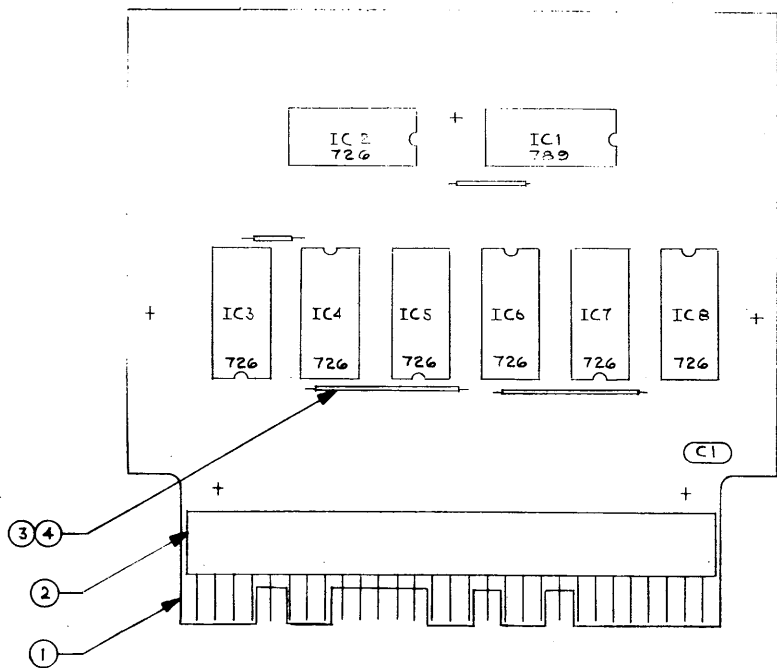
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-895 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	8217		
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/7/67 RKM	9/12/67	
B	67-445; DELETED 8G(7), 1C(4), 8G(6), 8G(2), 8G(8), ADDRESSES REVISED & LINE TITLES ADDED C.THEW 10-25-67	10/30/67	



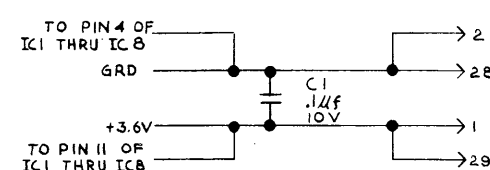
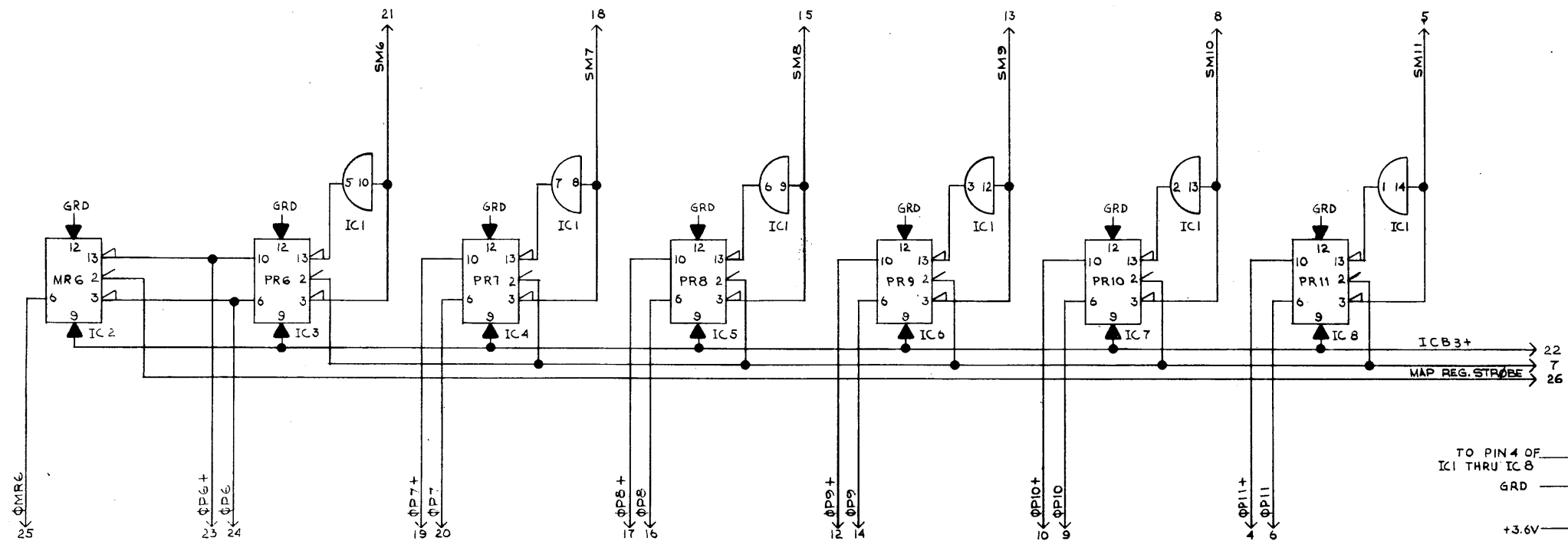
ITEM	DWG. OR PART NO.	DESCRIPTION
10	IC11 THRU IC2	MC726P INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC7805P
1	C1	UK10-104 CAPACITOR-1/4"+80-20%,10V,CRL
AR 4	AWG 24	SLEEVING TIFLON, THINWALL (C8108)
AR 3	AWG 24	WIRE SOLID COPPER, TINNED
1 2	DD-7022029-000-001	CONNECTOR - ELCO
1 1	SEL 895	PRINTED CIRCUIT (FOR REV. SEE A514D)
-1	ITEM	DWG. OR PART NO. DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR	b. BOYD	1-24-67
CC	RKM	1-28-67
ENG.	J. P. H.	5-31-67
PROJ. APP.	W. H. G.	5/1/67
APV.	W. H. G.	5/1/67
USED ON		

CODE IDENT NO	SIZE	REV
20886	D	8217
		B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE D8600-896 FOR DIMENSIONAL DWG SEE C8600

REV	DESCRIPTION	DATE	APPD
D	8218		
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. R-HIGHER 9/7/67 RKM	9/12/67	
B	67-445; DELETED 8G(7), 1C(4), 8G(6), 8G(2) AG(8) ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-25-67	9/30/67	



ITEM	DWG. OR PART NO.	DESCRIPTION
7	IC8 THRU IC2	MC 726 P INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC 789 P
1	C1	UK 10-104 CAPACITOR-100pf+80-20%/10V/CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-025-000-000 CONNECTOR-ELCO
1	1	SEL 896 PRINTED CIRCUIT (FOR REV SEE ASI40)

DR. R.H.S.	2-7-67
CC RKM	2-28-67
ENG. [Signature]	5-31-67
APP. [Signature]	5-31-67

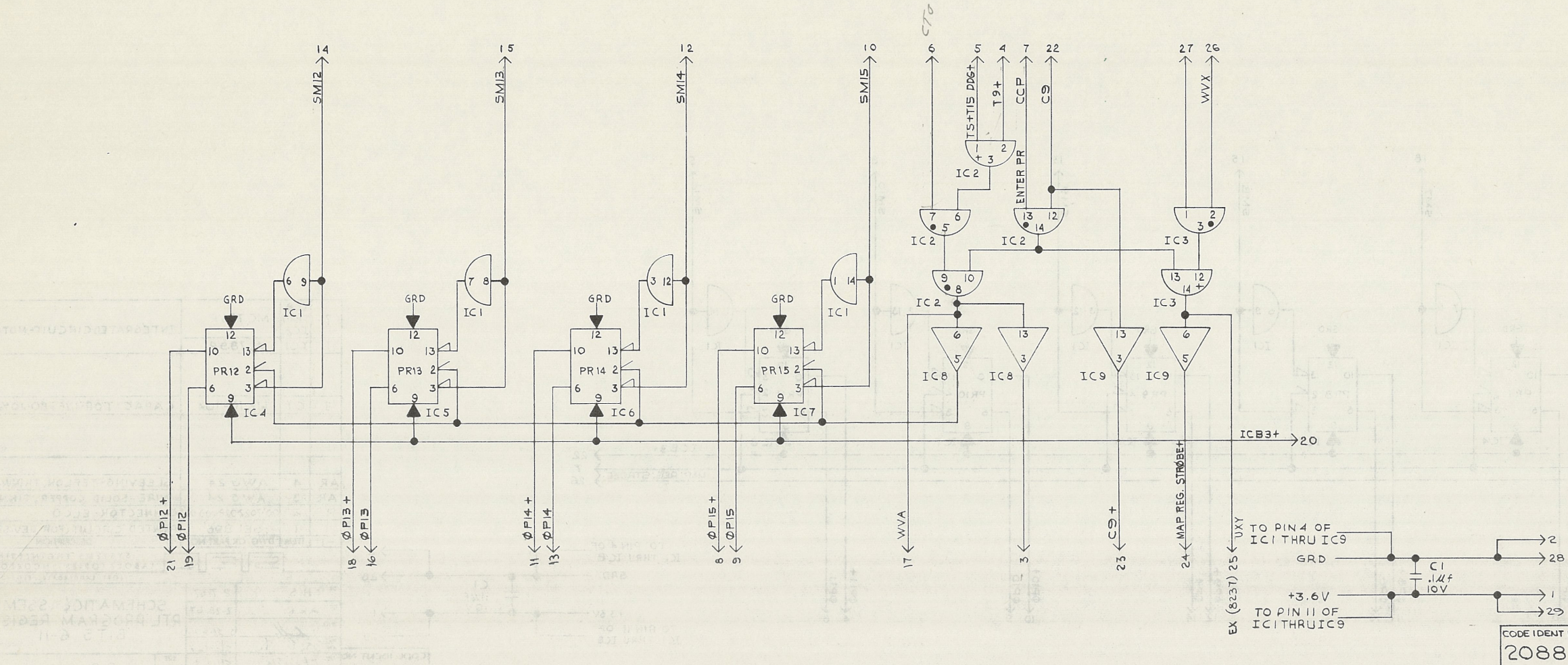
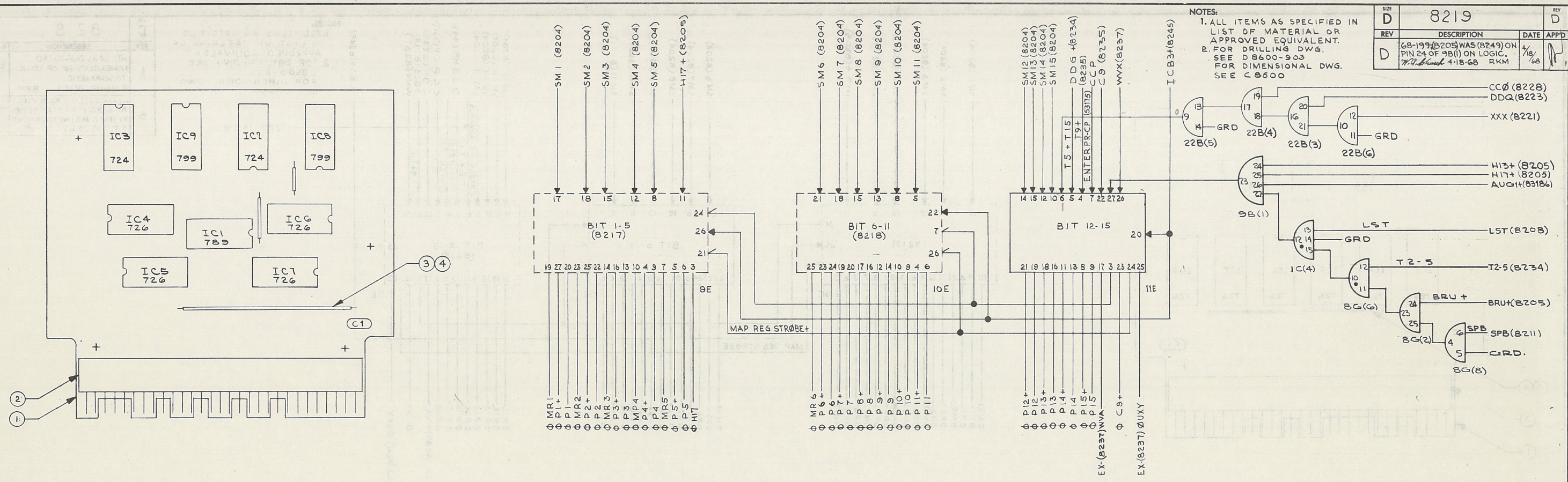
CODE IDENT NO	20886
USED ON	

SIZE	D	8218	REV	B
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SIZE	D	8219	REV	D
REV		DESCRIPTION	DATE	APP'D
D	68-199	(8205) WAS (8249) ON PIN 24 OF 9B(1) ON LOGIC.	4/18/68	RKM
		7/1/68		

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-903 FOR DIMENSIONAL DWG. SEE C0500



2	IC9	MC 799 P	INTEGRATED CIRCUIT-MOTOROLA
	IC8	MC 799 P	
4	IC7 THRU IC4	MC 726 P	
	IC3	MC 724 P	
1	IC1	MC 789 P	

1	C1	UK10-104	CAPACITOR-.1uF+80-20% .0V, CRL
---	----	----------	--------------------------------

AR	4	AWG 24	SLEEVING-TEFLON-THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-028-000-001	CONNECTOR - ELCO
1	1	SEL 903	PRINTED CIRCUIT(FOR REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

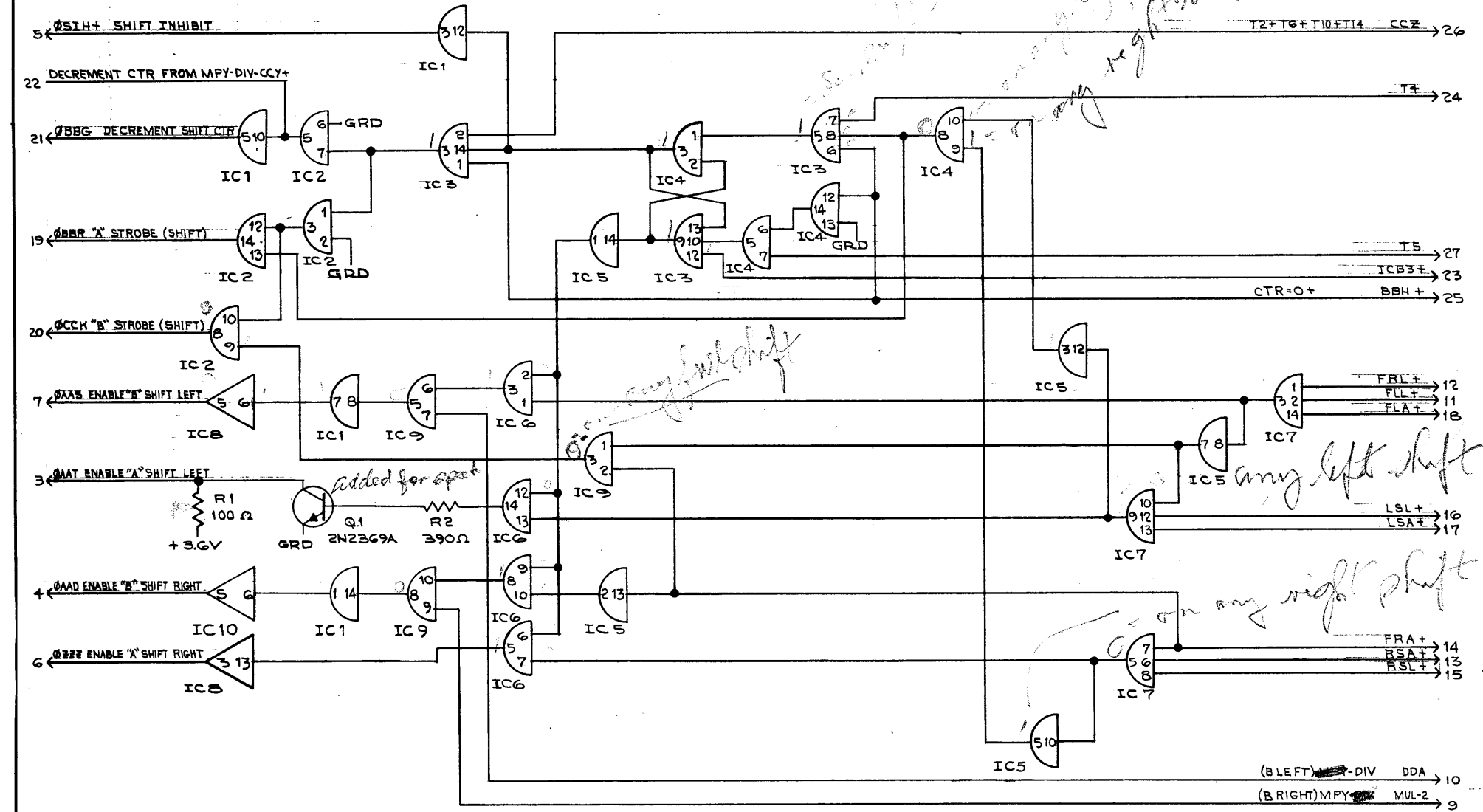
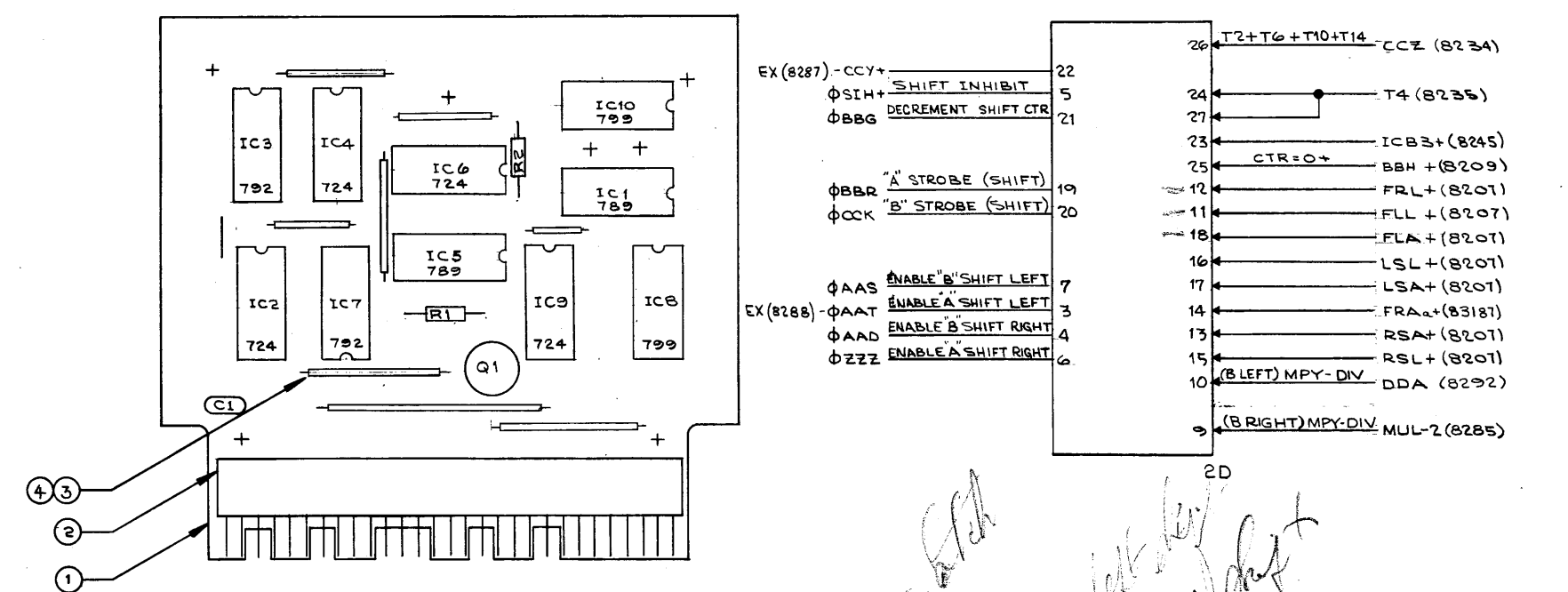
SEL SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	R. SANBORNE	2-12-67	SCHEMATIC & ASSEMBLY RTL PROGRAM REGISTER BITS 12-15
CC	RKM	2-23-67	
ENG.	J. [Signature]	5-31-67	
PROJ. APP.	[Signature]	5/31/67	
USED ON	[Signature]	5/31/67	

CODE IDENT NO  
20886

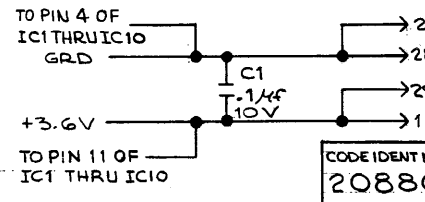
SIZE D 8219 REV D

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4W$ .  
 3. FOR DRILLING DWG SEE D8600-898.  
 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	8220		
A	GT-204; REVISED LOGIC ON PINS 8, 9 & 10. BB 6-27-67 RKM	7/12/67	
B	GT-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67 RKM	9/12/67	
C	GT-445; ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-25-67 RKM	10/25/67	
D	68-199; DESTINATION OF PIN 21 ON LOGIC NOW SAME AS PIN 24. <del>11/18/68</del> 4-18-68 RKM	4/18/68	



QTY	PART NO.	DESCRIPTION
1	Q1 2N2369A	TRANSISTOR-FAIRCHILD
1	R2 RC07GF391J	RESISTOR-390 $\Omega$ , ALLEN BRADLEY
1	R1 RC07GF101J	RESISTOR-100 $\Omega$ , ALLEN BRADLEY
2	IC10 MC799P	INTEGRATED CIRCUIT MOTOROLA
2	IC7 MC792P	
4	IC9 MC724P	
2	IC1 MC789P	
1	C1 UK10-104	CAPACITOR-1/4 $\times$ 1/8-20%10V.CRL
AR 4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	00-7022-029-000-000	CONNECTOR-ELCO
1	1 SEL898	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM DWG. OR PART NO.	DESCRIPTION



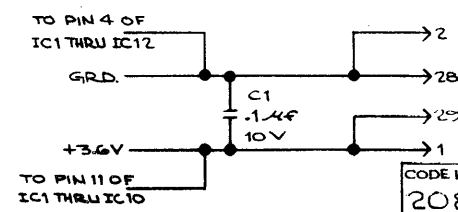
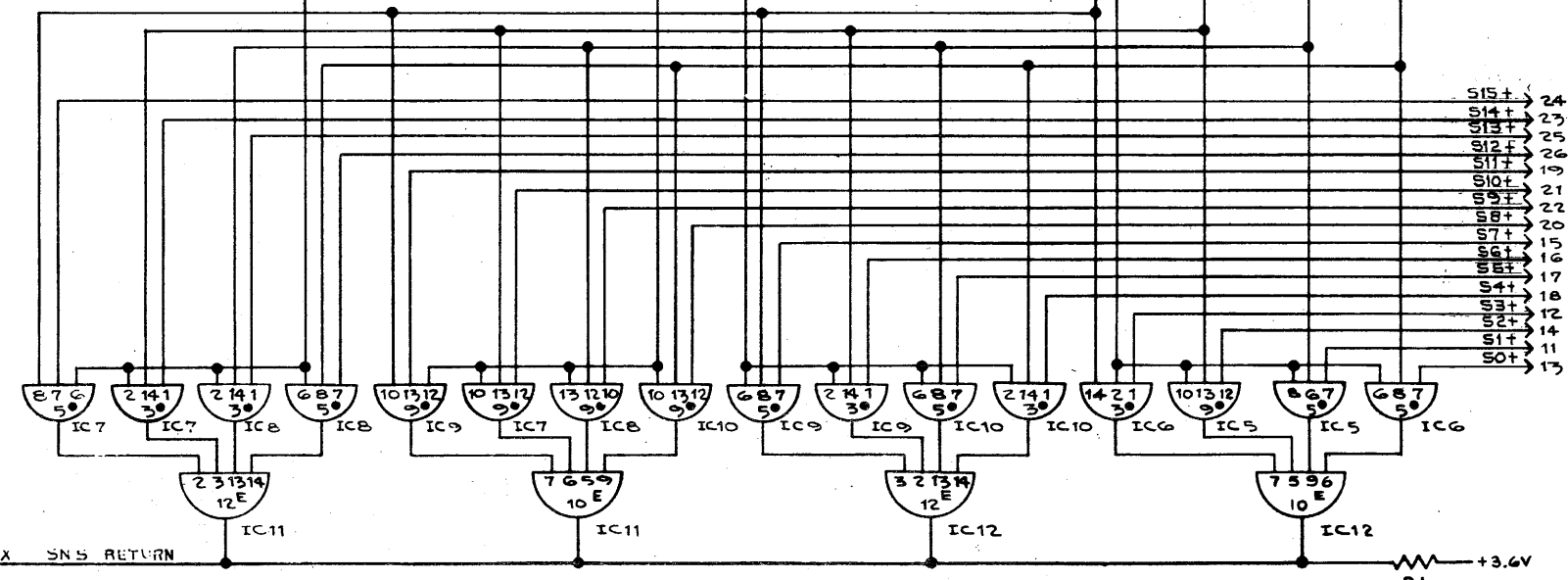
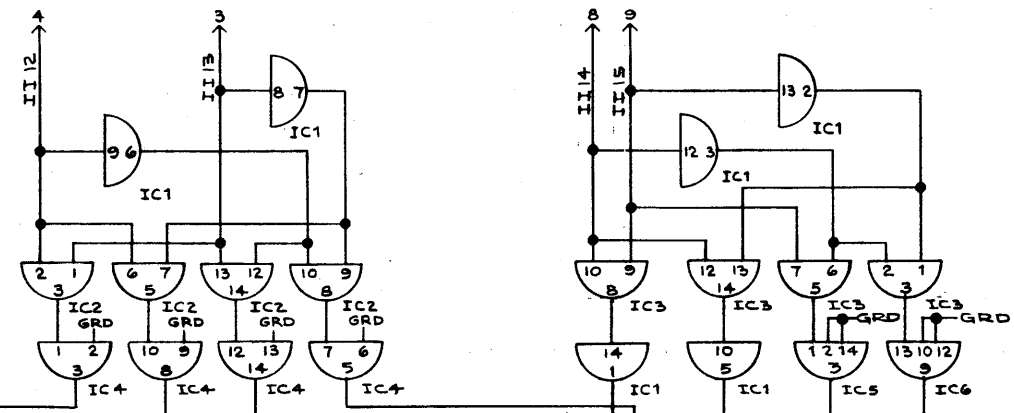
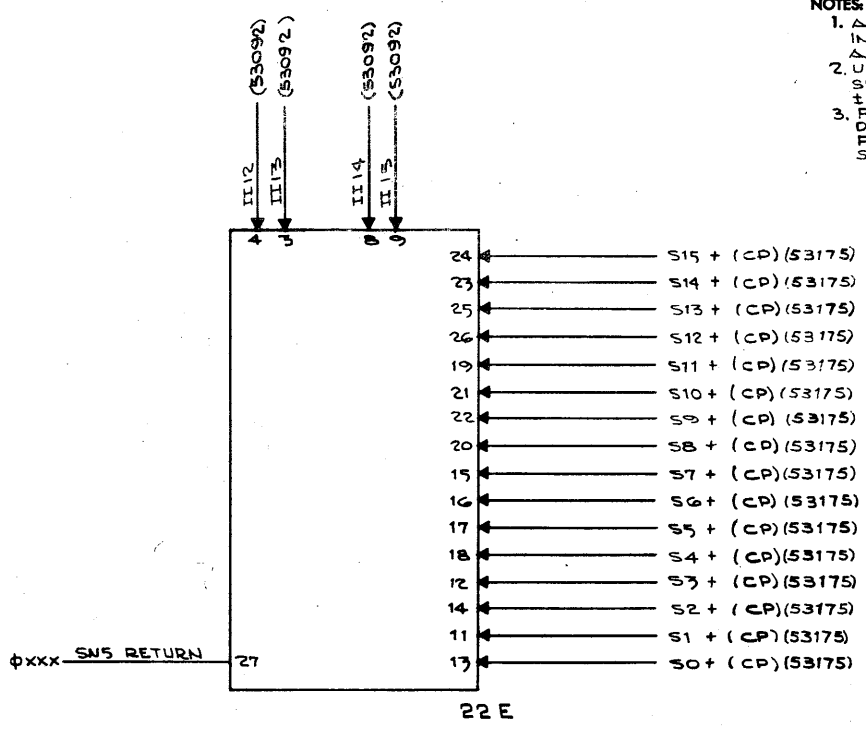
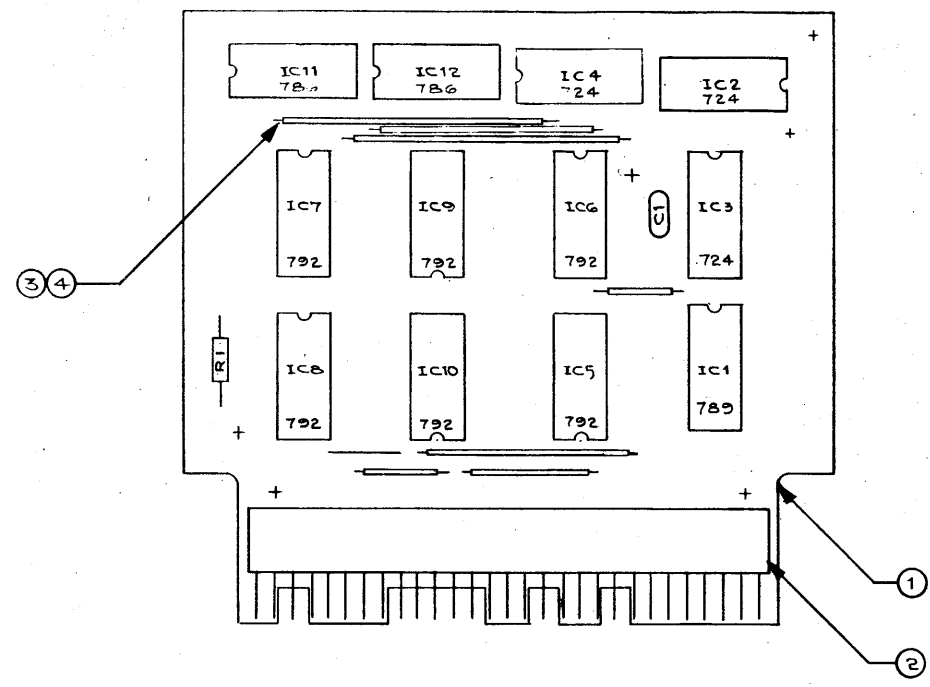
REV	DATE	DESCRIPTION
DR	D. BOYD 1-30-67	SCHEMATIC & ASSEMBLY
CK	RKM 2-2-67	
ENG	5-31-67	RTL - SHIFT CONTROL
PROJ	5/31/67	
APP	5/11/67	

CODE IDENT NO: 20886



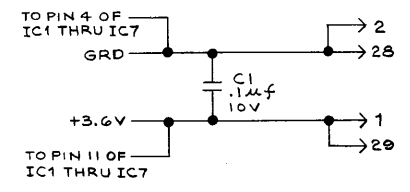
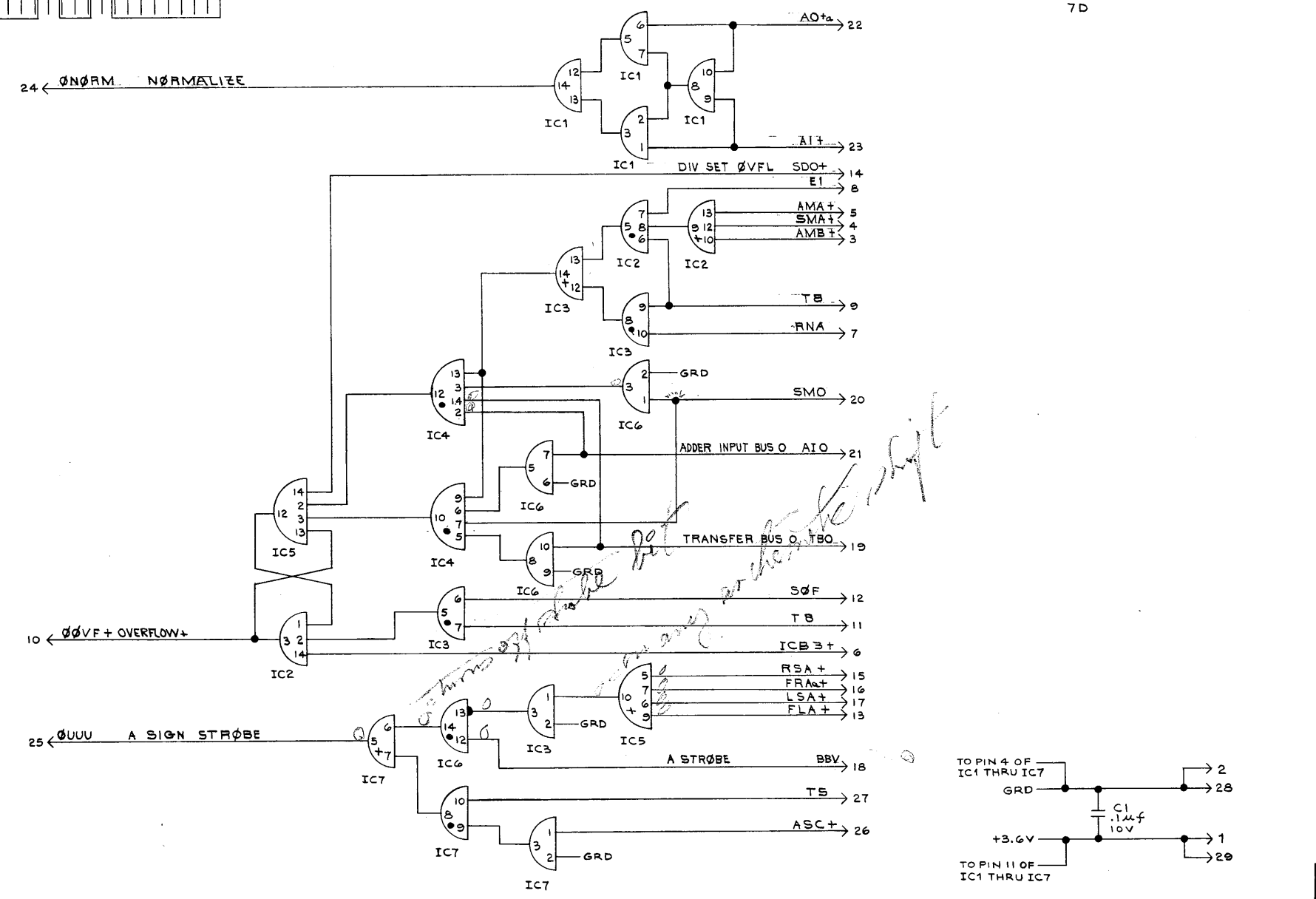
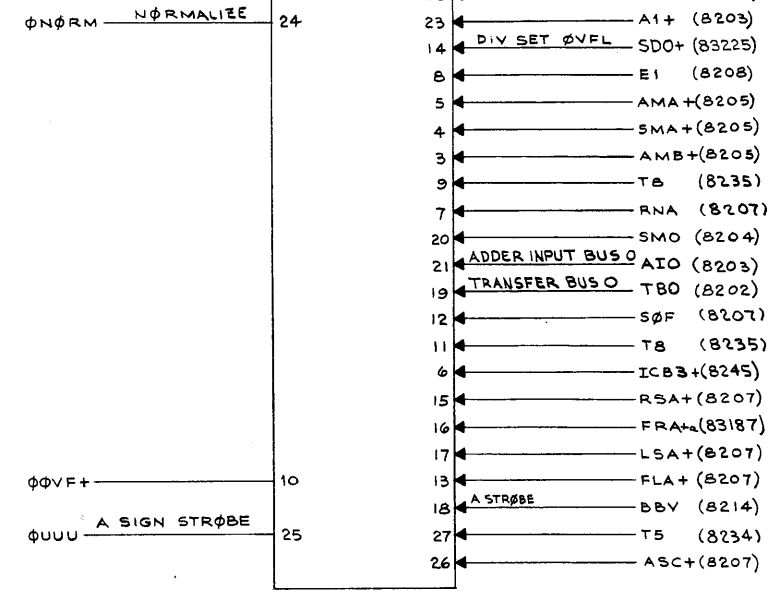
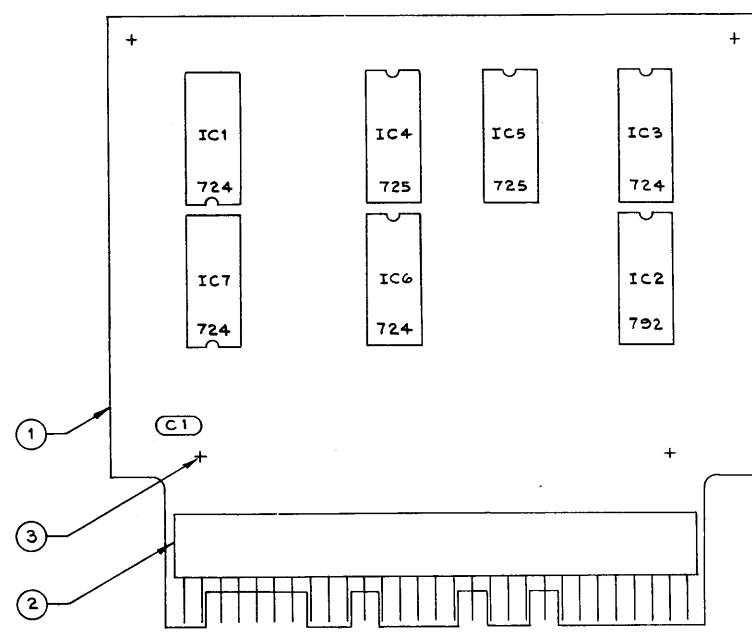
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT UNLESS OTHERWISE SPECIFIED. RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 2. FOR DRILLING DWG SEE DB600-237.  
 3. FOR DIMENSIONAL DWG SEE CB600.

REV	DESCRIPTION	DATE	APPD
D	8221		B
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/8/67 RKM	9/12/67	AW
B	67-445; ADDRESSES REVISED C. THEW 10-25-67	10/15/67	AW



1	R1	RC07GF561J	RESISTOR-560Ω, ALLEN BRADLEY
2	IC12 IC11	MC786P	
6	IC10 THRU IC5	MC792P	INTEGRATED CIRCUIT-MOTOROLA
3	IC3 IC2	MC724P	
1	IC1	MC789P	
1	C1	UK10-104	CAPACITOR-.14F±20%, 10V, CRL
AR 4	AWG 24		SLEEVING-TIFLON, THINWALL, CONDUCTIVE
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1 2	DD-1072-079-000-001		CONNECTOR-ELCO
1 1	SEL-897		PRINTED CIRCUIT (FOR REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SEI		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR	b. BOYD	1-19-67	
CR	RKM	1-23-67	
ENG.	J. J. J.	5-31-67	
PROJ. APP. U.S. AIR FORCE		5/31/67	
APR. U.S. AIR FORCE		5/31/67	
USED ON			
CODE IDENT NO	20886	SIZE	D
SCHEMATIC & ASSEMBLY		RTL SENSE SWITCH DECODE	
REV	B	SIZE	D



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE DB600-908.  
 FOR DIMENSIONAL DWG SEE CB600.

REV	DESCRIPTION	DATE	APPD
D	8222		C
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT. 9/7/67 RKM	9/16/67	
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED AS. 10-25-67	10/30/67	
C	68-199; DESTINATION OF PIN 14 WAS CCK+(8288) RMT. 4-18-68 RKM	4/18/68	

2	IC5 IC4	MC725P	INTEGRATED CIRCUIT-MOTOROLA
1	IC2 IC7	MC792P	
4	IC6 IC3 IC1	MC724P	
1	C1	UK10-104	
AR	3	AWG 24	WIRE, SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 908	PRINTED CIRCUIT (FOR REV SEE A5114-0)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
			SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR	RKM	1-23-67	SCHEMATIC & ASSEMBLY RTL OVERFLOW & A SIGN STROBE & NORMALIZE
CC	WC	2-20-67	
ENG.	J. R. H.	5-2-67	
PROJ. APP.	J. R. H.	5/31/67	
APPROVED	J. R. H.	5/31/67	
USED ON			

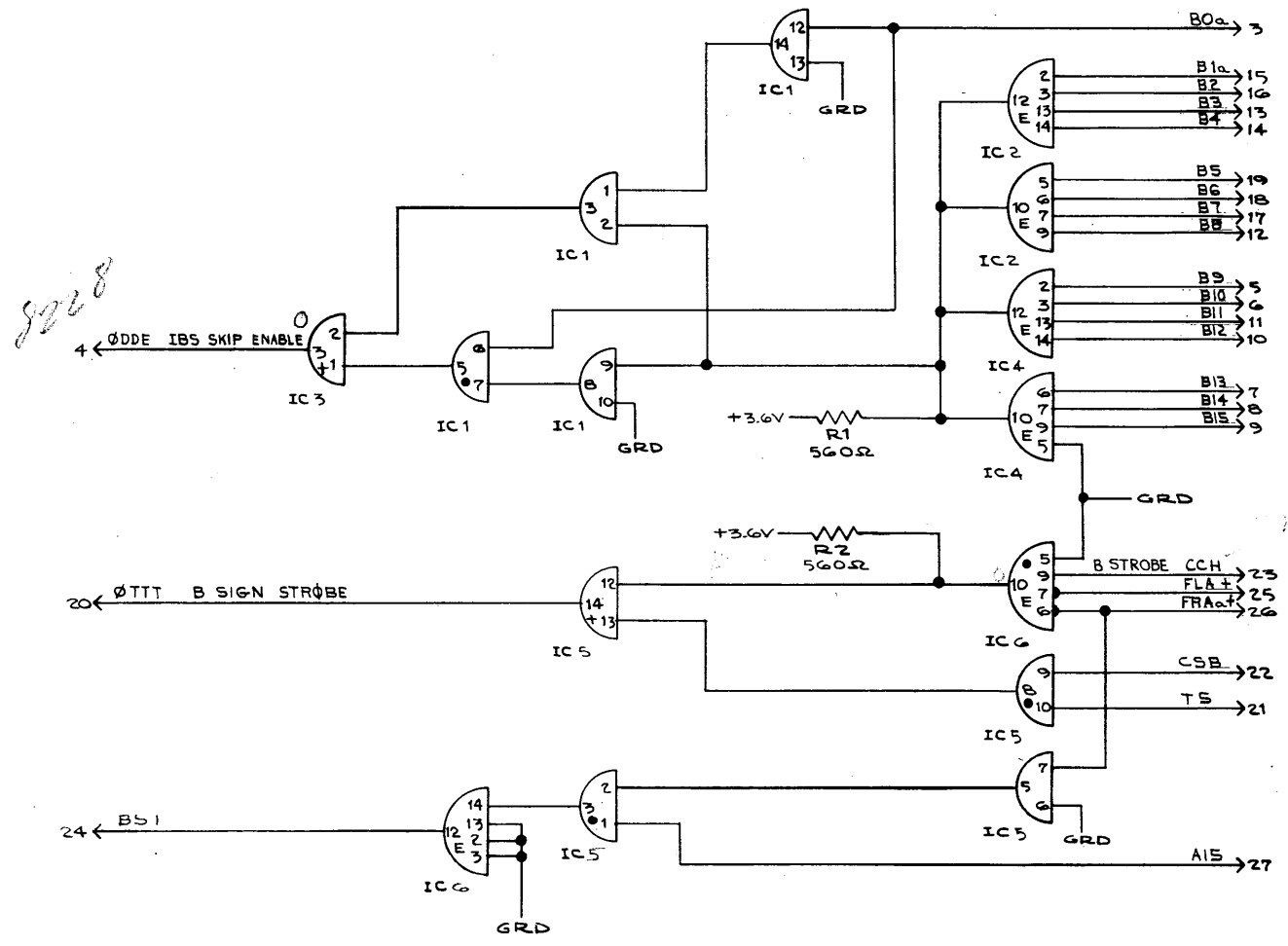
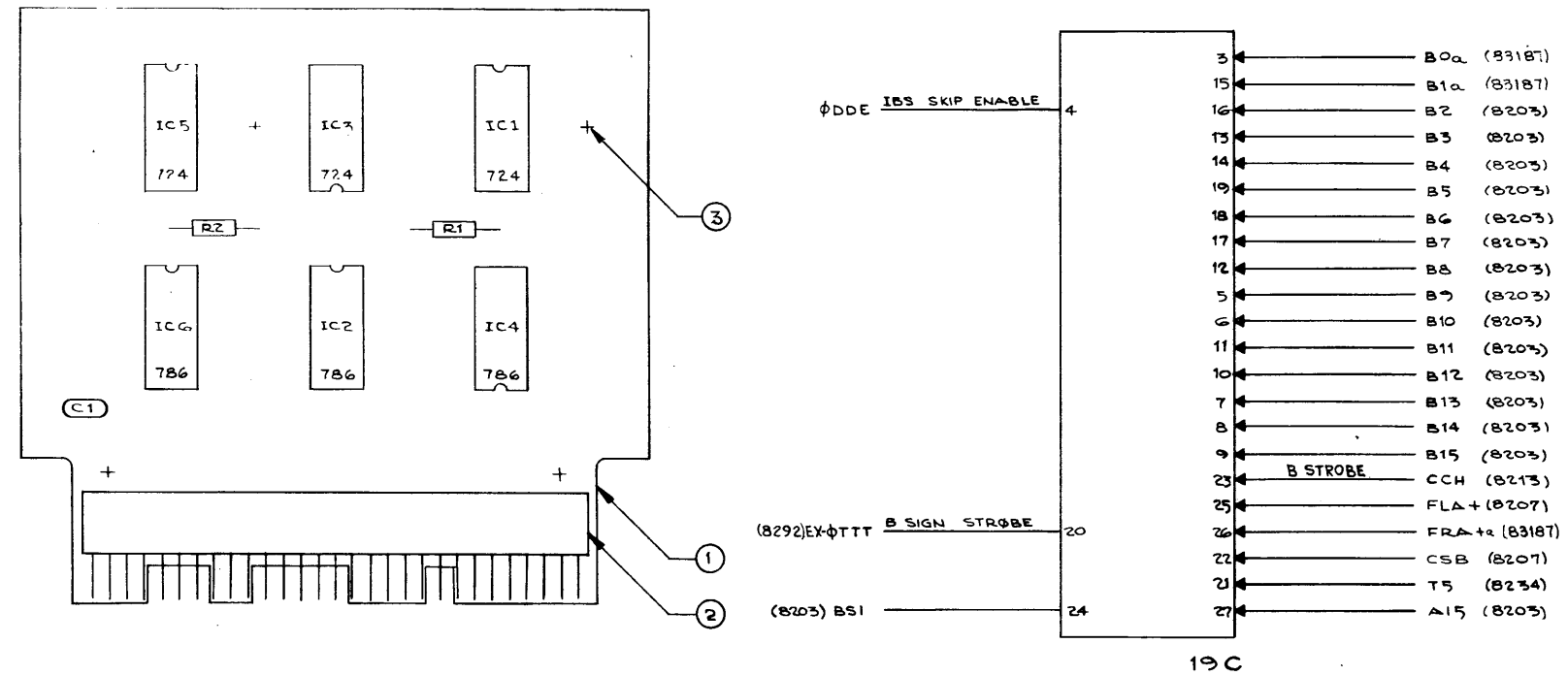
CODE IDENT NO.  
20886

SIZE	REV
D	C
8222	

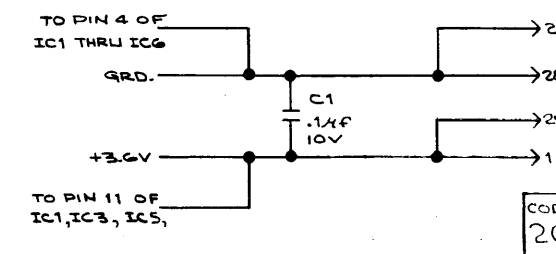


NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4W$ .  
 3. FOR DRILLING DWG. SEE D 8600-912 FOR DIMENSIONAL DWG. SEE C 8600.

SIZE	D	8 2 2 4	REV	B
REV	A	DESCRIPTION	DATE	APPD
		67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67	9/11/67	RKM
	B	67-446; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-26-67	10/30/67	RKM



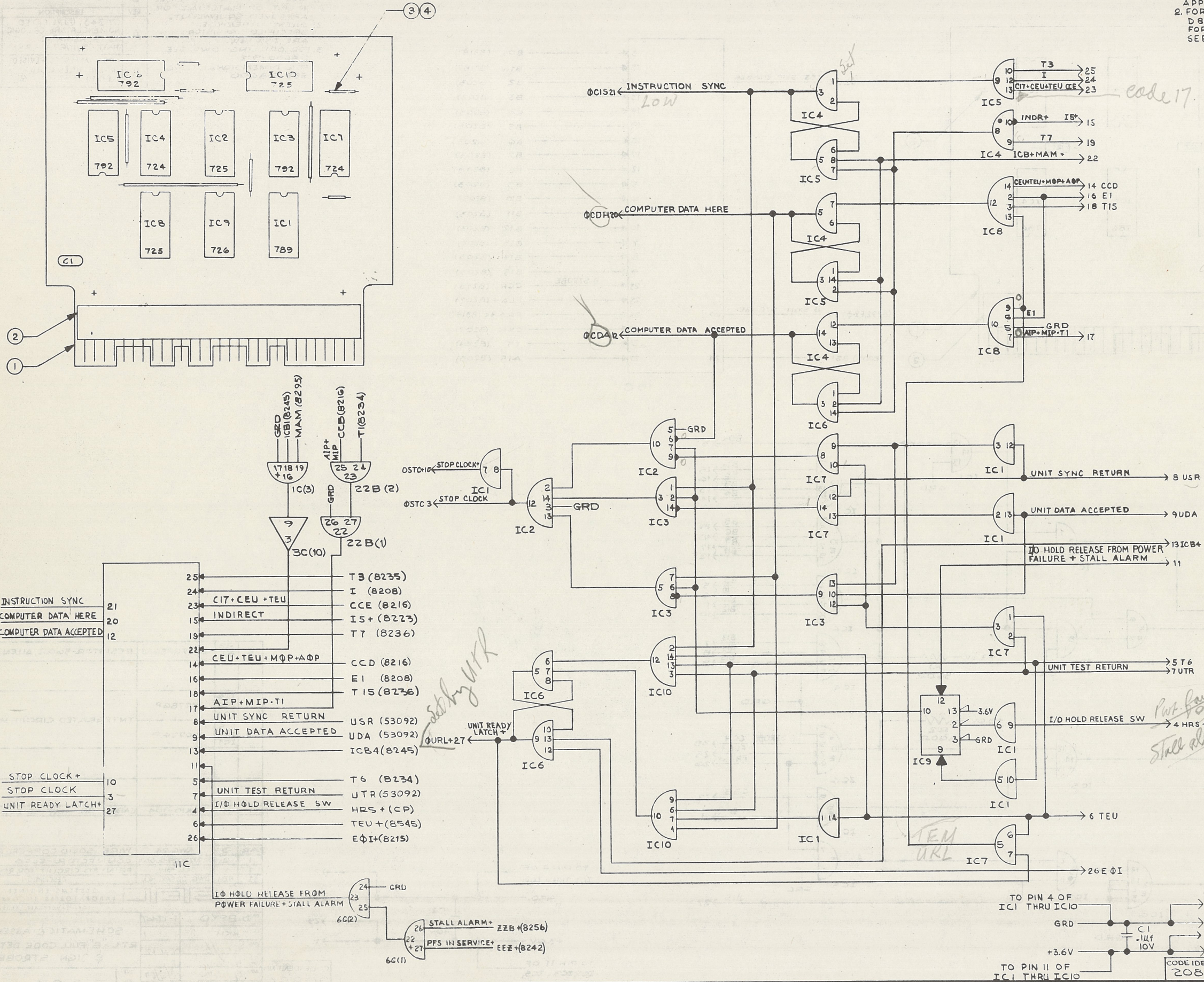
*Handwritten note:* B STROBE timing per pin 23.



2	R2 R1	RC07GF561J	RESISTOR-560Ω, ALLEN BRADLEY	
3	IC6 IC4 IC2	MCT86P	INTEGRATED CIRCUIT-MOTOROLA	
3	IC5 IC3 IC1	MCT74P	INTEGRATED CIRCUIT-MOTOROLA	
1	C1	UK10-104	CAPACITOR - .14F+80-20%, 10V CRL	
AR 3	AWG 24		WIRE SOLID COPPER, TINNED.	
1	2	00-7072-029-000-001	CONNECTOR - ELCO	
1	1	SEL 912	PRINTED CIRCUIT (FOR REV. SEE AS146)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	b. BOYD	1-17-67	SCHEMATIC & ASSEMBLY RTL "B" FULL CODE DETECTOR & SIGN STROBE	
CE	RKM	1-21-67		
ENGR	J. J. J.	5-31-67		
APP.	J. J. J.	5-31-67		
CODE IDENT NO.	20886	USED ON	SIZE	D 8 2 2 4
			REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-888.  
 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8225		
A	GT-190; PIN 3 OF ICB WAS CONNECTED TO PIN 5 OF ICB. DC 2-21-67 UC	2/21/67	[Signature]
B	67-445; ADDED 6G(2) & 6G(1) ADDRESSES REVISED & LINE TITLES ADDED. C.THEW 10-25-67 AS	10/25/67	[Signature]



*code 17 any 1/8 inch*

*70. Cable drivers & commutators loc. on 53092*

CIS	INSTRUCTION SYNC	21
CDH	COMPUTER DATA HERE	20
CDA	COMPUTER DATA ACCEPTED	12

25	T3 (8235)
24	I (8208)
23	CIT+CEU+TEU CCE (8216)
15	INDIRECT IS+ (8223)
19	T7 (8236)
22	CEU+TEU+MOP+AOP CCD (8216)
14	E1 (8208)
16	T15 (8236)
18	AIP+MIP+TI T15 (8236)
17	UNIT SYNC RETURN USR (53092)
8	UNIT DATA ACCEPTED UDA (53092)
9	ICB4 (8245)
13	ICB4 (8245)
11	T6 (8234)
5	UNIT TEST RETURN UTR (53092)
7	I/O HOLD RELEASE SW HRS+(CP)
4	TEU+(8545)
6	TEU+(8545)
26	EPhi (8215)

1	IC9	MC 726P	INTEGRATED CIRCUIT-MOTOROLA
2	IC7	MC 724P	
3	IC6	MC 792P	
	IC3		
	IC10		
	IC8	MC 725P	
	IC2		
1	IC1	MC 789P	

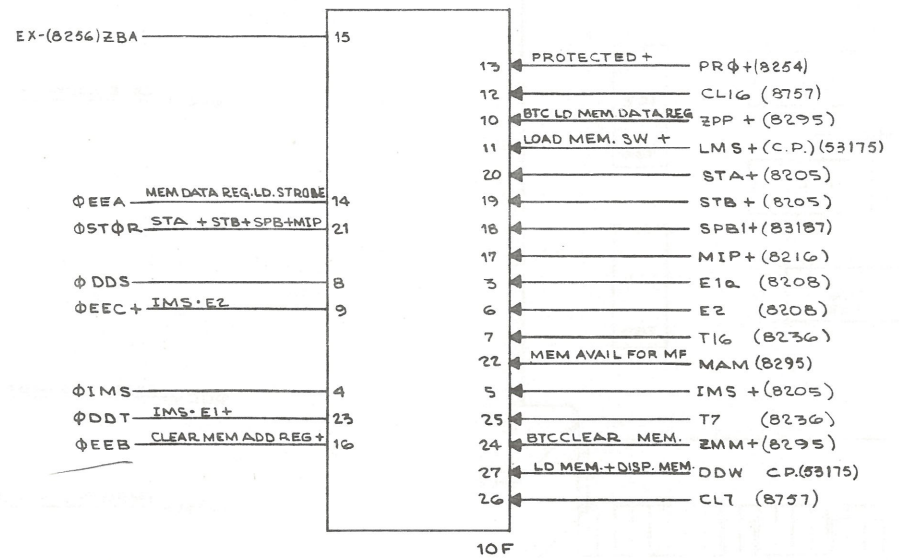
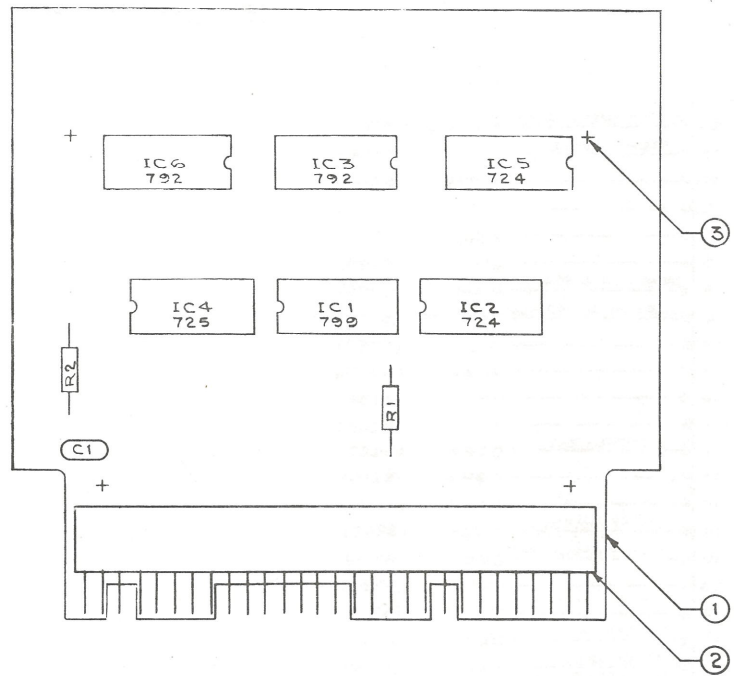
1	CI	UK-10-104	CAPACITOR-.1uF+80-20%,10V,CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-OLID COPPER, TINNED
1	2	00-7022-029-100-001	CONNECTOR-ELCO
1	1	SEL 888	PRINTED CIRCUIT (REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SEI SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA

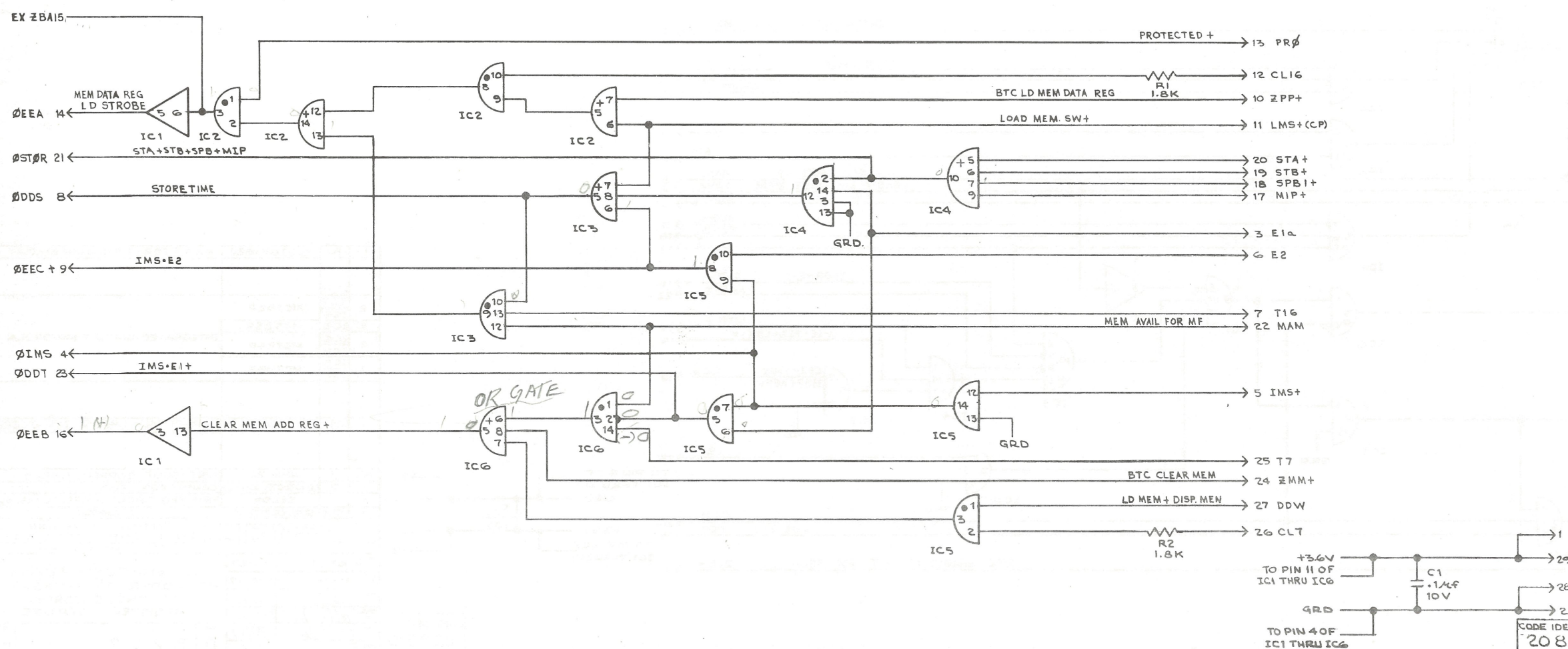
DR	R.SANBORNE	2-17-67
CC	RKM	2-24-67
ENG.	[Signature]	3-31-67
PROJ. APP.	[Signature]	5/31/67
APP.	[Signature]	5/11/67
USED ON	CODE IDENT NO. 20886	
REV	B	

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4$  W.  
 3. FOR DRILLING DIMS SEE DB 600-311.  
 FOR DIMENSIONAL DIMS SEE CB 600.

REV	DESCRIPTION	DATE	APPD
A	67-2G3; ADDED PIN 15. LG 8/3/67 uc	8/3/67	[Signature]
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. EPC. 10-25 67	10/25/67	[Signature]



52993



2	R2 R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
1	IC4 IC6 IC3	MC725P	INTEGRATED CKT.-MOTOROLA
2	IC5 IC2	MC724P	
1	IC1	MC799P	
1	C1	UK-10-104	CAPACITOR-.1uF+80-20%10V, CRL.
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	007022-029-000001	CONNECTOR - ELCO
1	1	SEL 11	PRINTED CIRCUIT, (FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING  
 LABORATORIES, INCORPORATED  
 FORT LAUDERDALE, FLORIDA

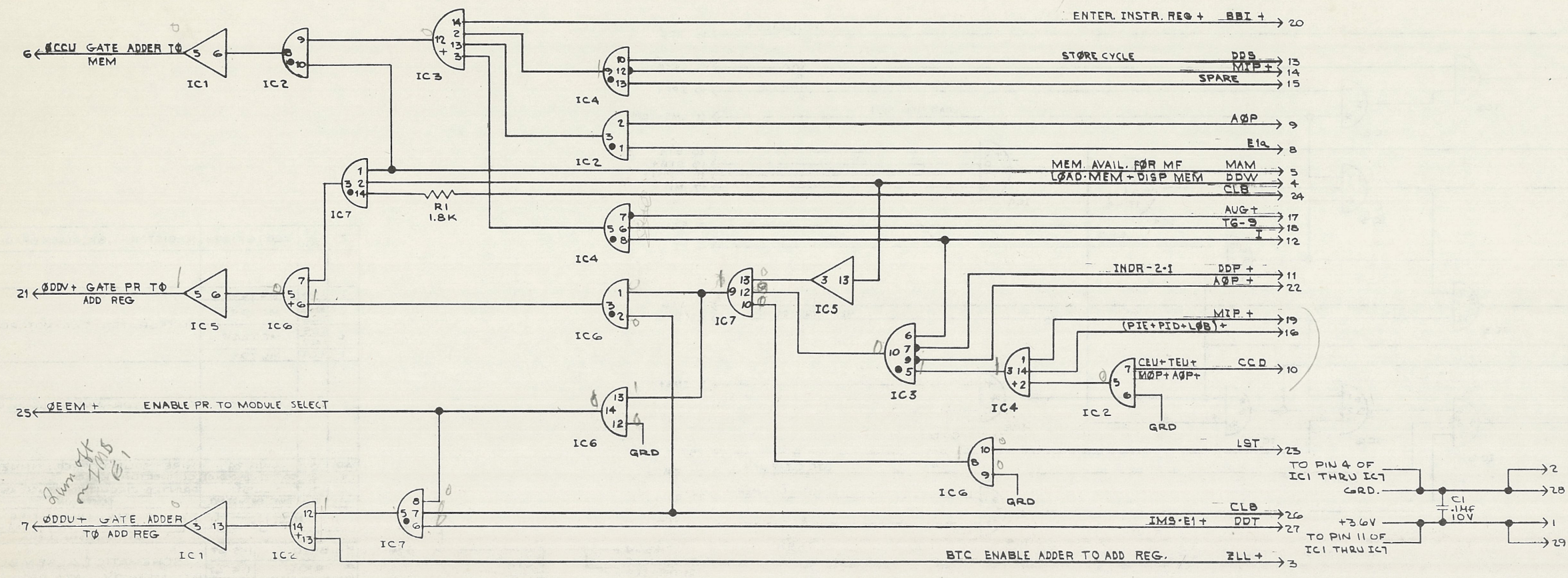
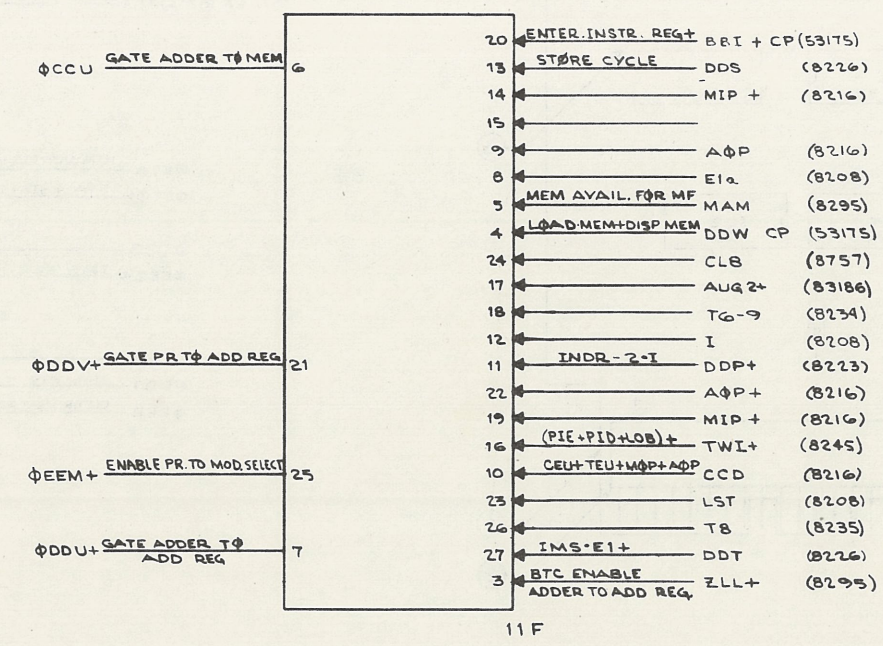
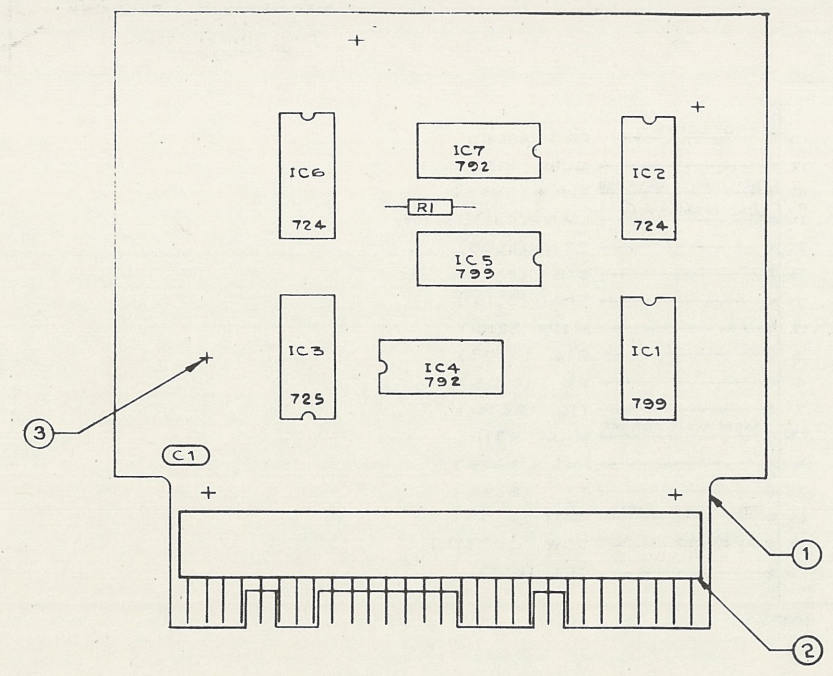
DE B. BOYD 1-3-67  
 CC RKM 1-4-67  
 ENG. [Signature] 5-31-67  
 PROJ. APP. [Signature] 5/31/67

CODE IDENT NO. 20886

REV	DESCRIPTION	DATE	APPD
D	8226		

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4W, 1/4V.  
 3. FOR DRILLING DIMS SEE DB400-210.  
 FOR DIMENSIONAL DWGS SEE CS600.

REV	DESCRIPTION	DATE	APPD
D	8227		
A	G7-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67 RYM	9/11/67	RYM
B	G7-445; DELETED 10G(6), 8G(1), ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10/25/67	10/30/67	AS



QTY	REF	DESCRIPTION	MANUFACTURER
1	R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
2	IC7	MC792P	INTEGRATED CIRCUIT-MOTOROLA
1	IC4	MC725P	
2	IC6	MC724P	
2	IC2	MC724P	
2	IC5	MC799P	
1	C1	UK-10-104	CAPACITOR-.14UF+80-20%, 10V, CRL
AR 3		AWG 24	WIRE-SOLID COPPER, TINNED
1	2	007022-029-000-001	CONNECTOR-ELCO
1	1	SEL910	PRINTED CIRCUIT (FOR REV. SEE A51140)

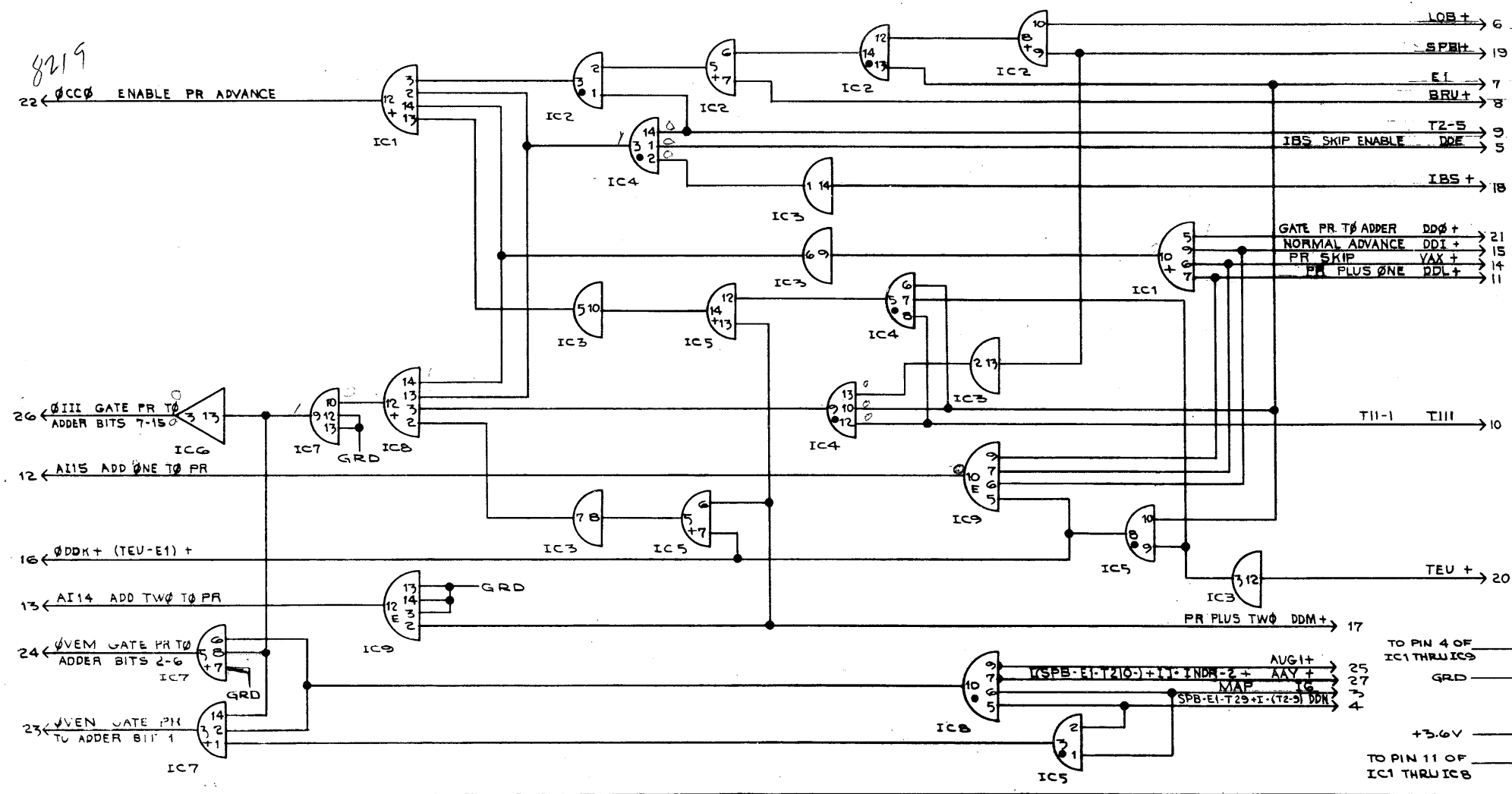
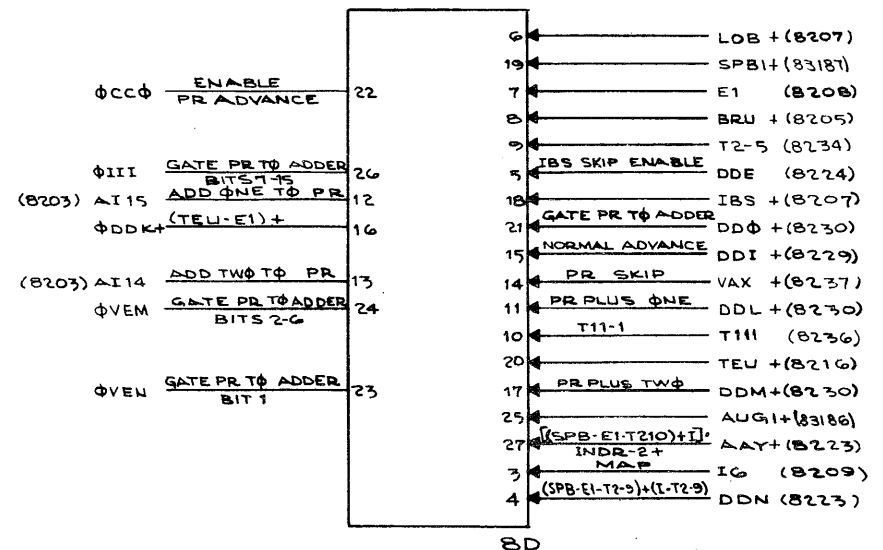
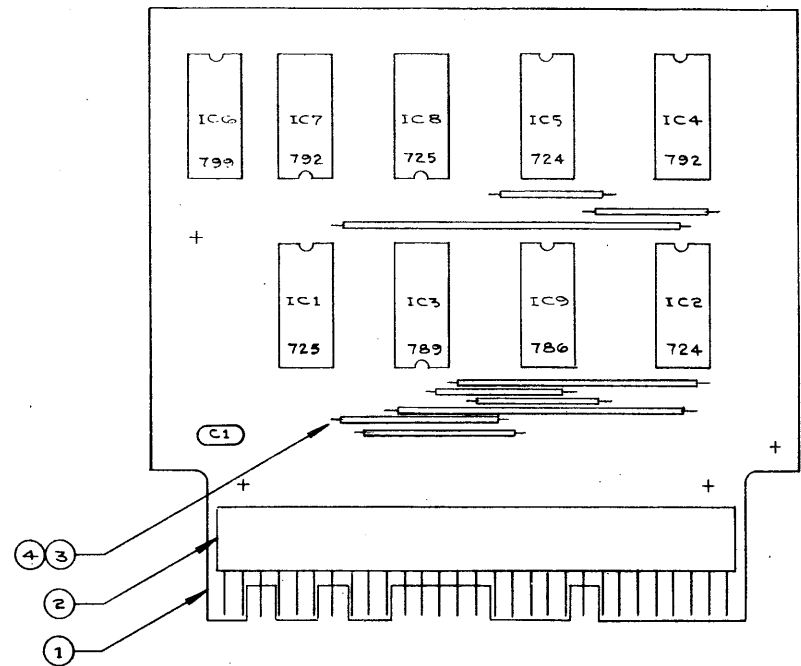
ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA		
DR	b. BOYD	1-5-67
CC	RKM	1-14-67
ENG.		5-21-67
PROJ. APP.		5/31/67
USED ON		5/31/67

CODE IDENT NO  
20866

SIZE	REV
D 8227	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB600-913 FOR DIMENSIONAL DWG. SEE C8600

REV	DESCRIPTION	DATE	APPD
D	8228		B
A	GT-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67 RKM	9/12/67	
B	GT-445; ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10/25/67	10/30/67	



1	IC9	MC786P	
1	IC6	MC795P	
2	IC7	MC792P	
1	IC3	MC789P	INTEGRATED CIRCUIT-MOTOROLA
2	IC5	MC724P	
2	IC8	MC724P	
2	IC1	MC725P	
1	C1	UK10-104	CAPACITOR-.1UF+80-20%10V,CRL
AR	4	AWG 24	SLEEVING-TIFLON THINWALL (SPT-7)
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	007022029-000-001	CONNECTOR-ELCO
1	1	SEL 913	PRINTED CIRCUIT (FOR REV SEE ASH)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

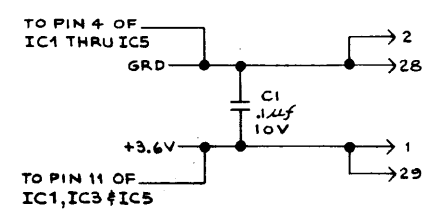
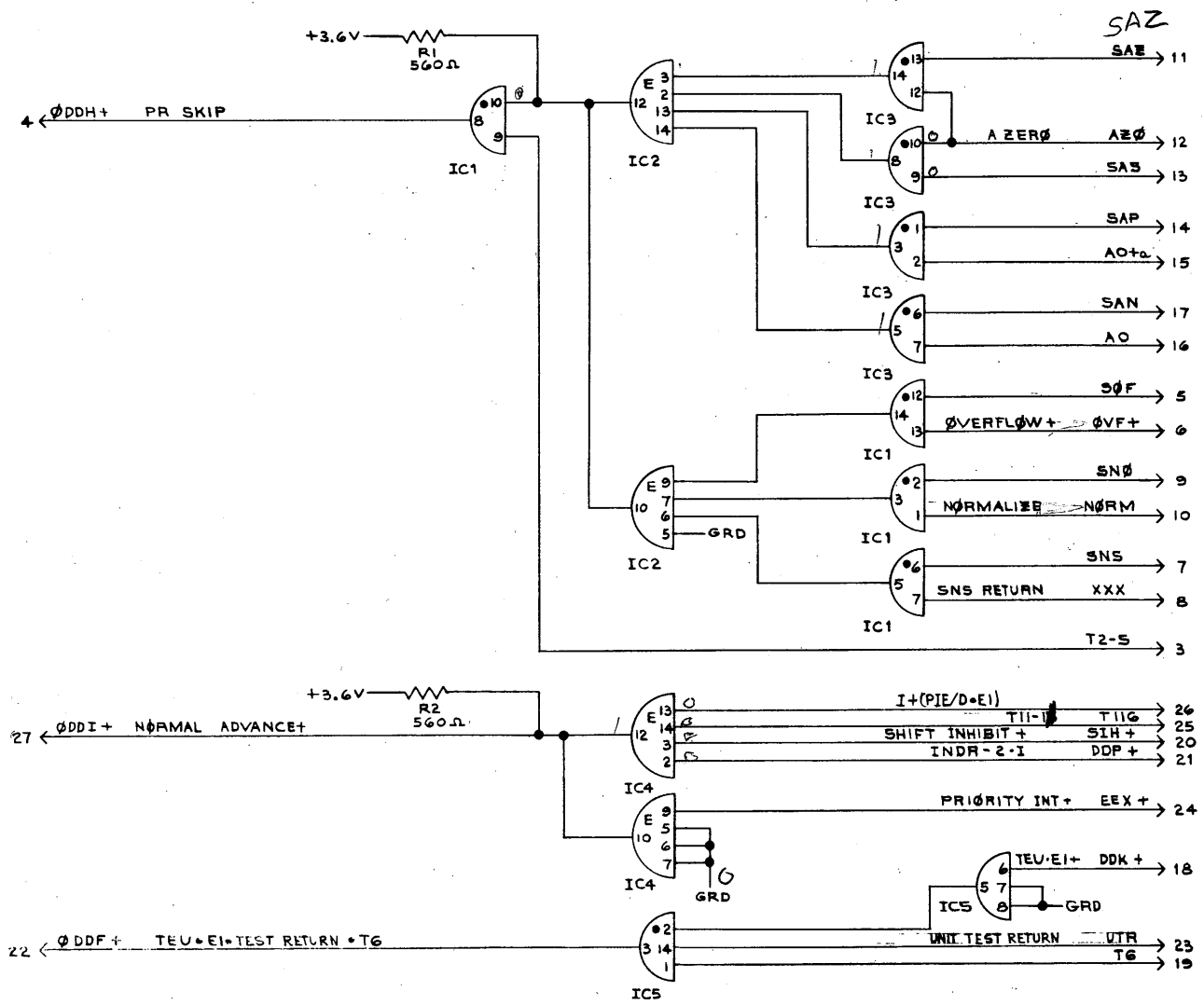
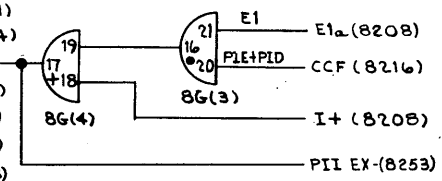
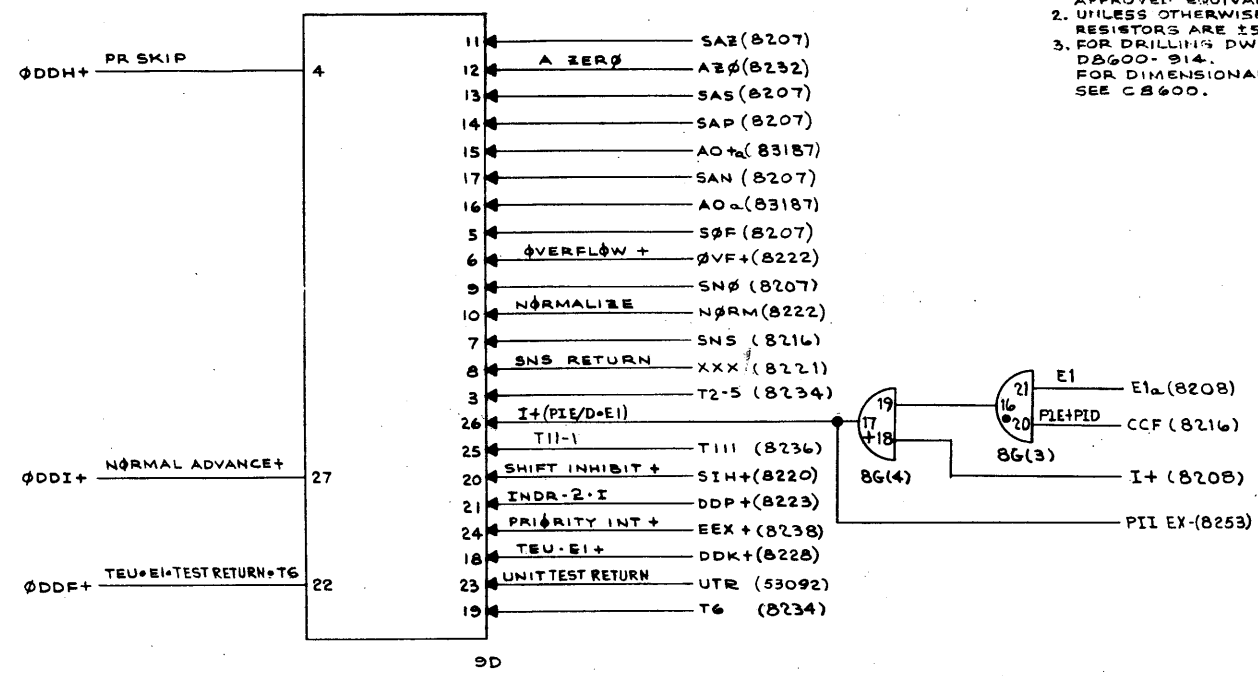
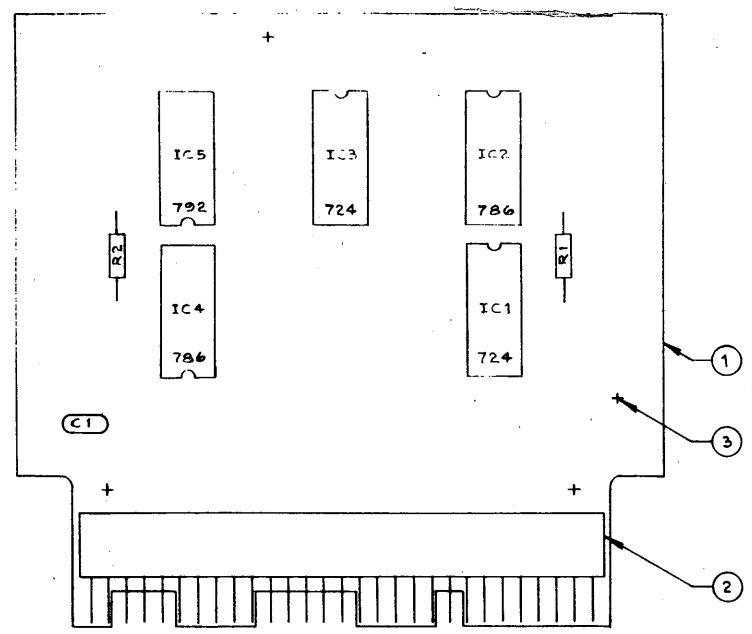
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. D. BOYD	1-23-67
CR. RKM	1-26-67
ENG. J. R. [Signature]	3-8-67
PROJ. [Signature]	5/2/67
APP. [Signature]	5/11/67
CODE IDENT NO. 20886	USED ON

REV	DESCRIPTION	DATE	APPD
D	8228		B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 15%, 1/4 W. FOR DRILLING DWG SEE DB600-914.  
 3. FOR DIMENSIONAL DWG SEE CB600.

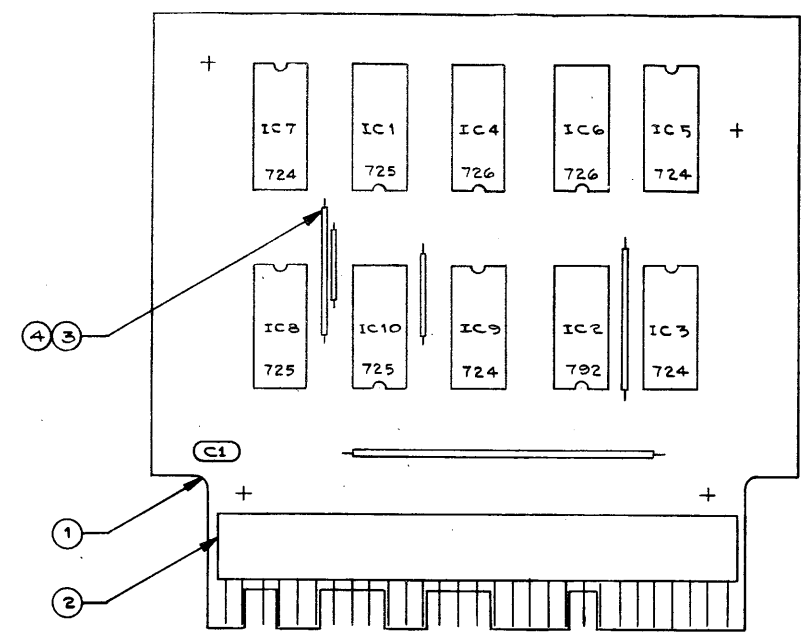
REV	DESCRIPTION	DATE	APP'D
D	8229		B
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 5/8/67 RKM	9/11/67	
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-25-67	9/15/67	



2	R2 R1	RC07GF561J	RESISTOR - 560Ω, ALLEN BRADLEY	
1	IC5 IC4 IC2 IC3 IC1	MC792P MC786P MC724P	INTEGRATED CIRCUIT-MOTOROLA	
1	C1	UK 10-104	CAPACITOR - 1µF ± 20%, 10V, CRL	
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED	
1	2	00-7022-329-000-001	CONNECTOR - ELCO	
1	1	SEL 914	PRINTED CIRCUIT (FOR REV. SEE AS1140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR.	RKM	1-21-67	SCHEMATIC & ASSEMBLY RTL PROGRAM REGISTER ADVANCE LOGIC II	
CK.	WC	2-20-67		
ENG.	RKM	5-31-67		
PRCH.	RKM	2-11-67		
APP.	RKM	5/31/67		
CODE IDENT. NO.	20886		SIZE	D
USED ON	8229		REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE DB600-915 FOR DIMENSIONAL DWG. SEE C06000.

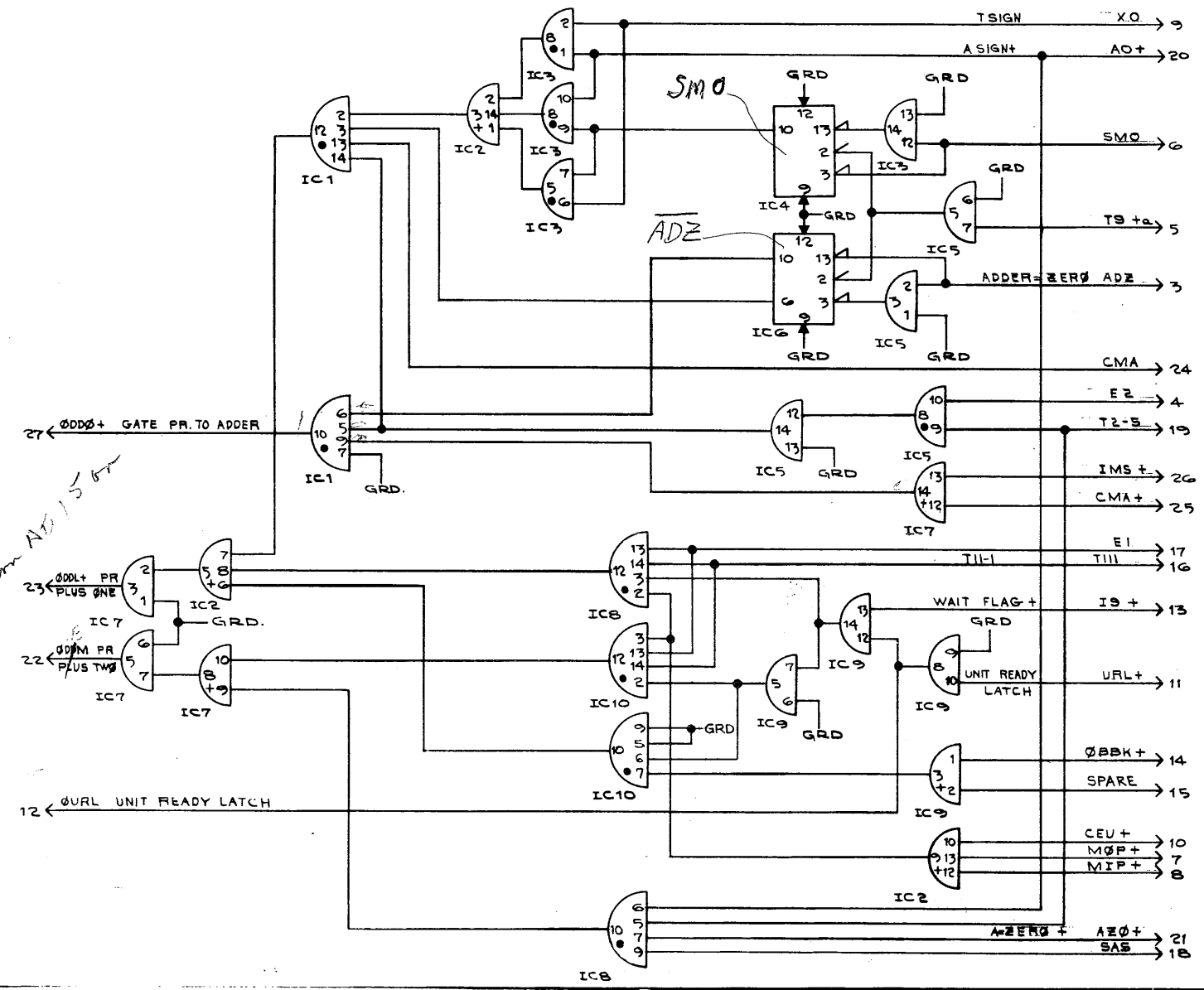
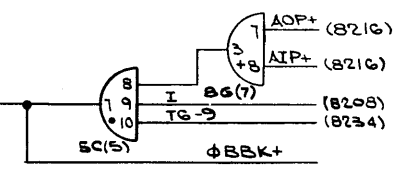
REV	DESCRIPTION	DATE	APP'D
D	8230		
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/8/67	9/12/67	
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-25-67	10/15/67	



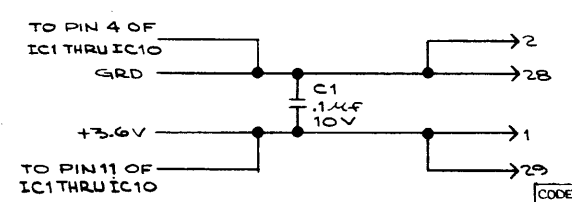
$\phi$ DD $\phi$ + GATE PR. TO ADDER 27  
 $\phi$ DDL+ PR PLUS ONE 23  
 $\phi$ DDM+ PR PLUS TWO 22  
 $\phi$ URL UNIT READY LATCH 12

9 T SIGN XO (8202)  
 20 A SIGN+ AO+ (8203)  
 6 SMO (8204)  
 5 TS+ (83137)  
 3 ADDER=ZERO ADZ  
 24 CMA (8205)  
 4 E2 (8208)  
 19 T2-S (8234)  
 26 IMS+ (8205)  
 25 CMA+ (8205)  
 17 E1 (8208)  
 16 TIII-1 TIII (8236)  
 13 WAIT FLAG+ I9+ (83187)  
 11 UNIT READY LATCH URL+ (8225)  
 14 SPARE  
 10 CEU+ (8216)  
 7 MOP+ (8216)  
 8 MIP+ (8216)  
 21 A=ZERO+ AZ $\phi$ + (8232)  
 18 SAS (8207)

10D



*1 of 2  
 Ball checked each  
 to time*



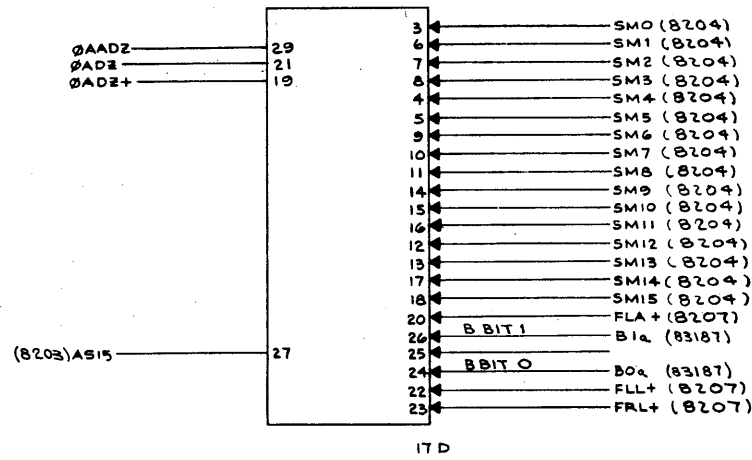
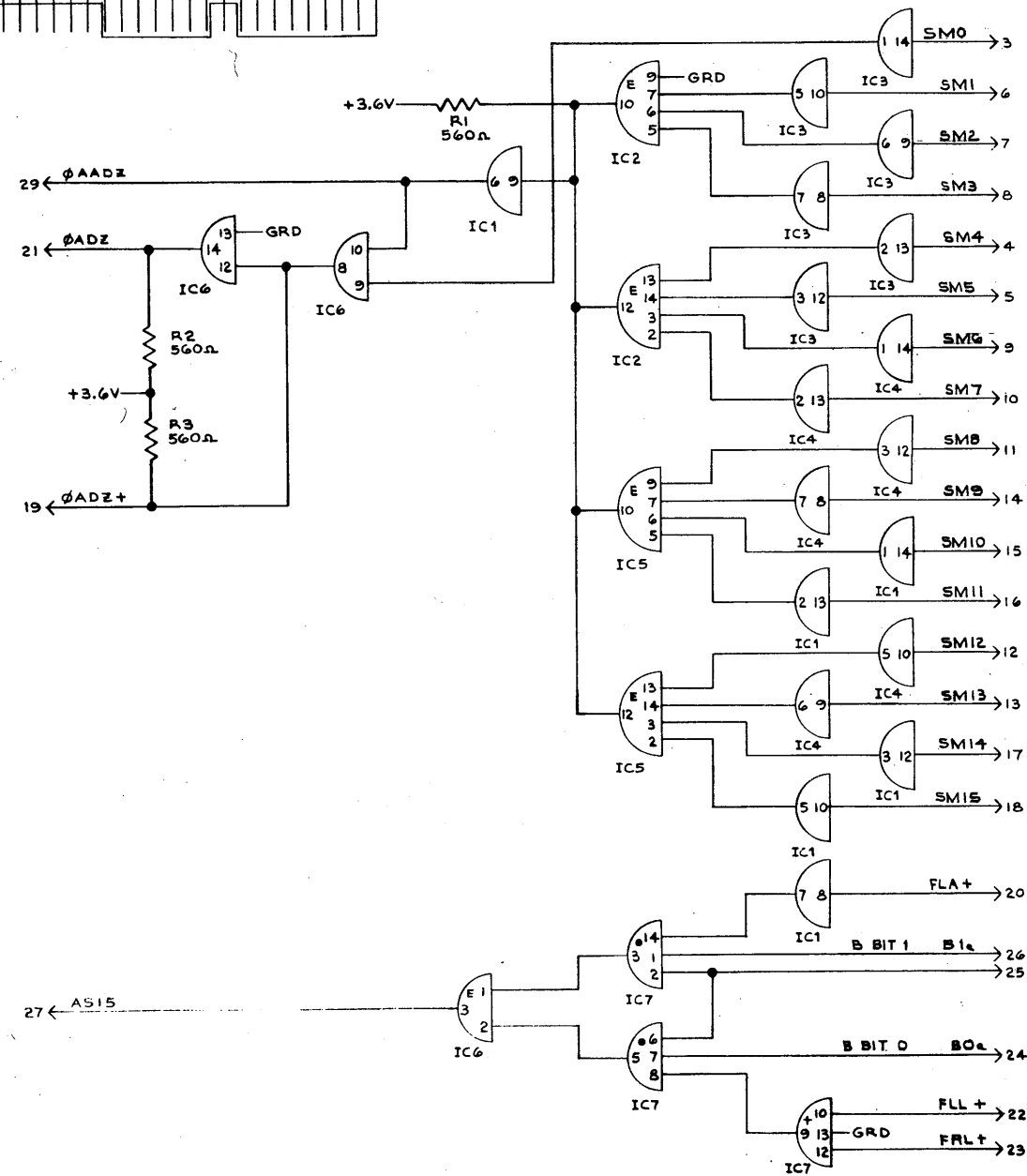
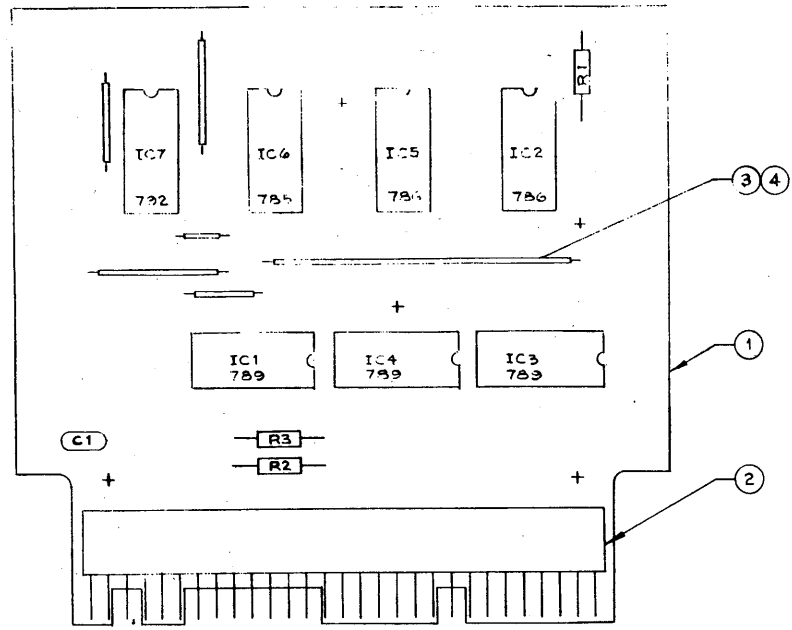
ITEM	DWG. OR PART NO.	DESCRIPTION
2	IC6 IC4	MC726P
4	IC7 IC5 IC3	MC724P
1	IC2	MC792P
3	IC8 IC1	MC725P
1	C1	UK10-104 CAPACITOR-.1uF+80-20%,10V,CRL
AR 4	AWG 24	SLEEVING-TEFLON THINWALL (8216)
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022079 000000 CONNECTOR ELCO
1	1	SEL915 PRINTED CIRCUIT-(FOR REV SEE A51140)
-1	ITEM	DWG. OR PART NO. DESCRIPTION

DR. B. BOYD 1-19-67  
 ENGR. RKN 1-23-67  
 5-21-67  
 5/1/67

SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

SCHEMATIC & ASSEMBLY  
 RTL-PROGRAM REGISTER  
 ADVANCE LOGIC III

CODE IDENT NO 20886  
 USED ON



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.  
 3. FOR DRILLING DWG SEE DB400-926 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APPD
D	8231		C
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/8/67 RKM	9/11/67	[Signature]
B	67-413; ADDED ITEM 4; R2, R3 & 2 MORE CIRCUITS OF IC6. PIN 29 WAS +3.6V. RKM 10-11-67 LC	10/11/67	[Signature]
C	67-445; ADDRESSES REVISED AS. 10-25-67	10/25/67	[Signature]

QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
3	R3 R2 R1	RC07GF561J	RESISTOR-560Ω, ALLEN BRADLEY
1	IC7	MC782P	INTEGRATED CIRCUIT-MOTOROLA
1	IC6	MC785P	INTEGRATED CIRCUIT-MOTOROLA
2	IC5 IC2	MC786P	INTEGRATED CIRCUIT-MOTOROLA
3	IC4 IC3 IC1	MC789P	INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104	CAPACITOR-.1μf+80-20%, 10V, CRL
AR	4	AWG	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 926	PRINTED CIRCUIT-FOR REVSEE A51140

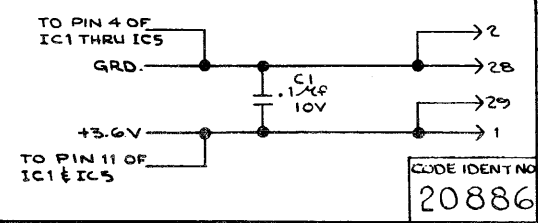
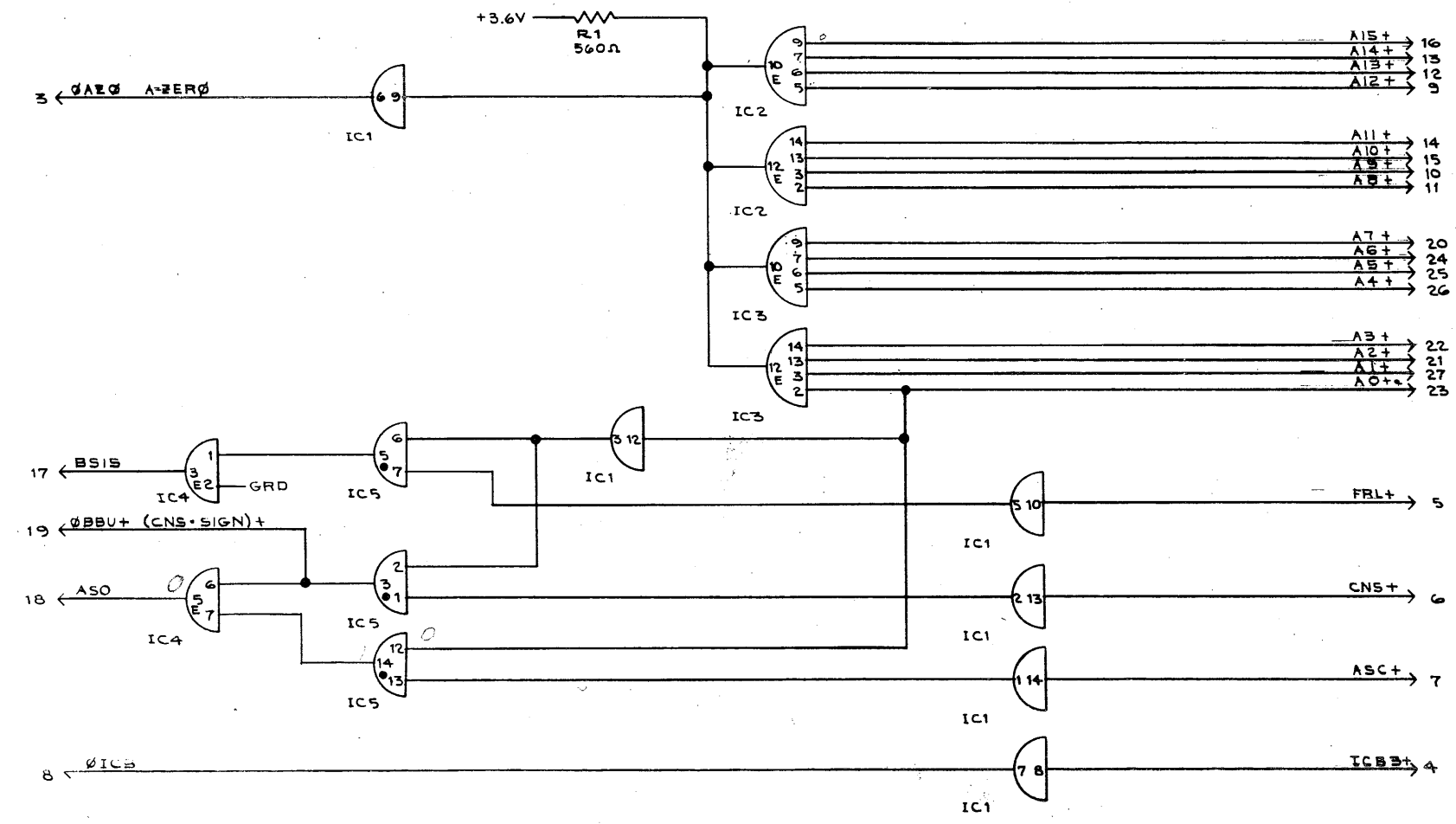
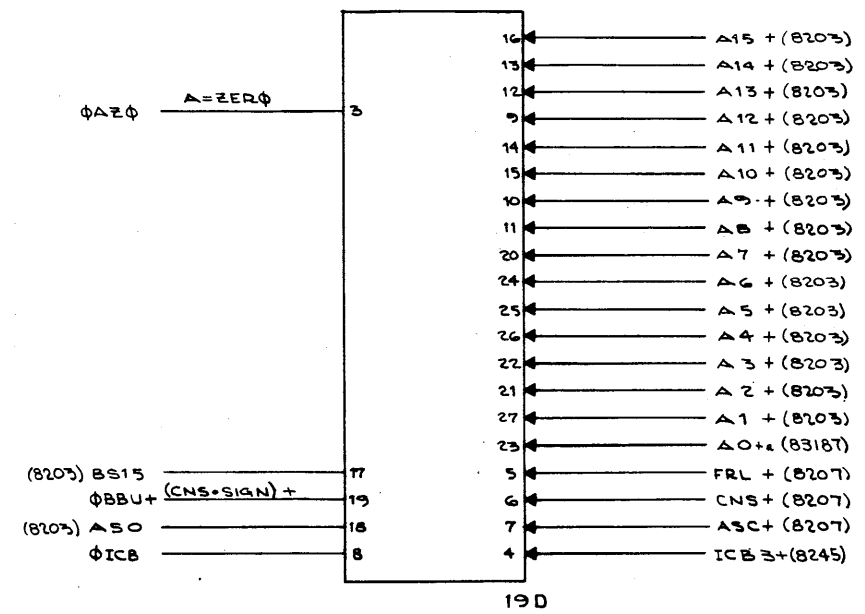
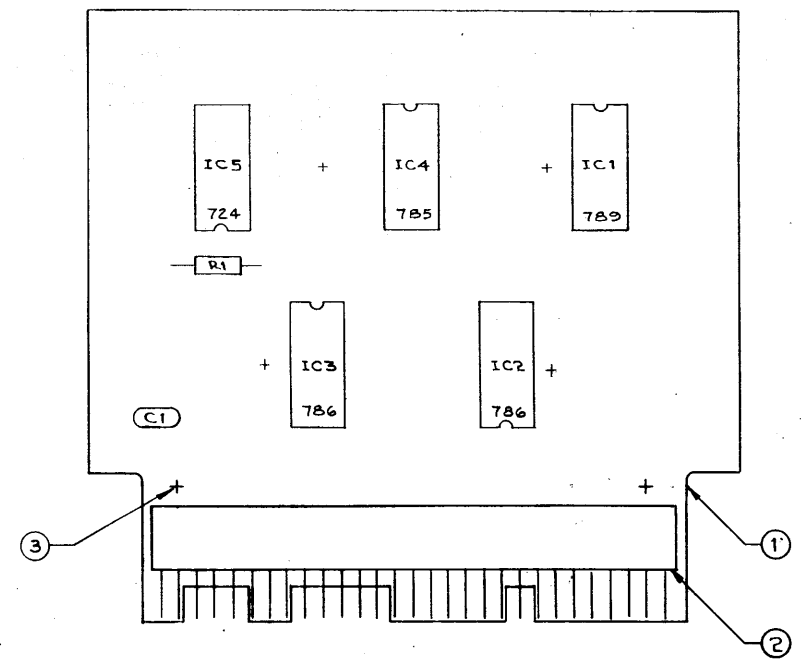
DR	DATE	REV	DESCRIPTION
RKM	1-5-67		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
WC	2-21-67		SCHMATIC & ASSEMBLY
ENG			RTL
APP			ADDER ZERO DET.
APP			
APP			

CODE IDENT NO. 20886

SIZE	D	8231	REV	C
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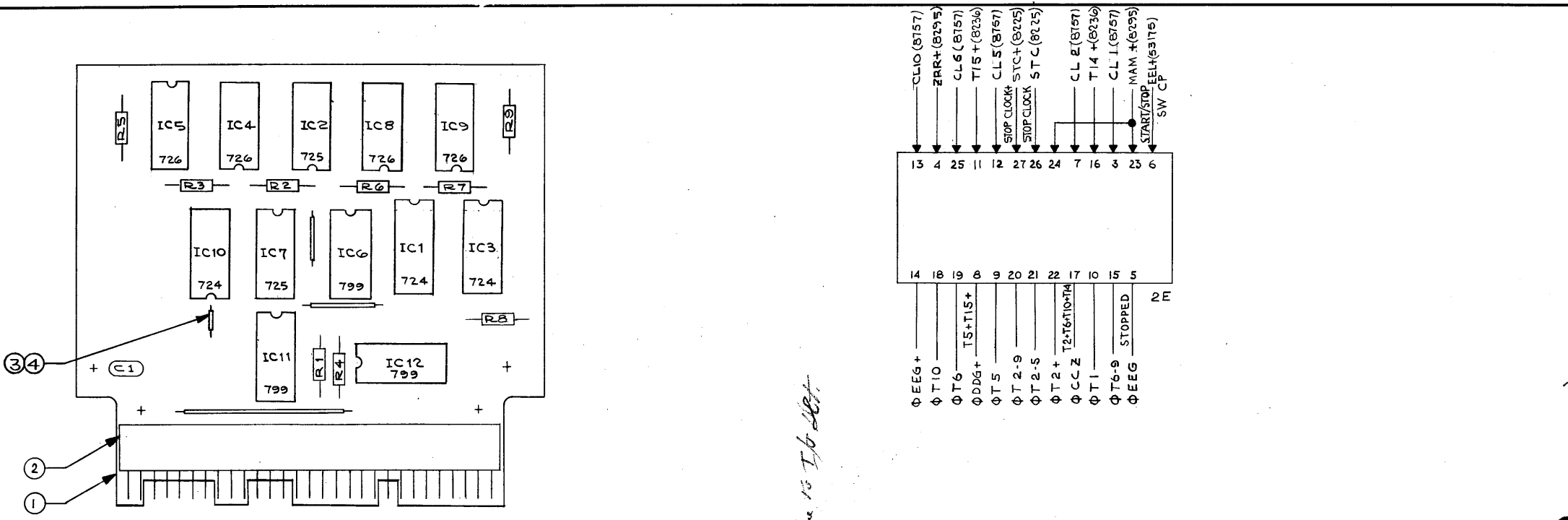
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING DWG SEE DB600-927 FOR DIMENSIONAL DWG SEE CB600

REV	DESCRIPTION	DATE	APPD
D	8232		B
A	GT-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 3/8/67 RKM	2/13/67	ON
B	GT-445; DELETED 24D(10), ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-25-67	10/30/67	AS



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
1	R1	RC07GF561J	RESISTOR - 560Ω, ALLEN BRADLEY
1	IC5	MC724P	INTEGRATED CIRCUIT - MOTOROLA
1	IC4	MC785P	
2	IC3	MC786P	
1	IC2	MC786P	
1	IC1	MC789P	
1	C1	UK-10-104	CAPACITOR .1μF±20%, 10V, CRL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	007021-023-000001	CONNECTOR - ELCO
1	1	SEL927	PRINTED CIRCUIT (FOR REV SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		DE	D. BOYD	1-5-67
		CC	RKM	1-13-67
SCHEMATIC & ASSEMBLY RTL "A" ZERO DET.		ENG.	RKM	5/21/67
		APP.	RKM	5/11/67
CODE IDENT NO.	20886	SIZE	D	8232
USED ON		REV		B

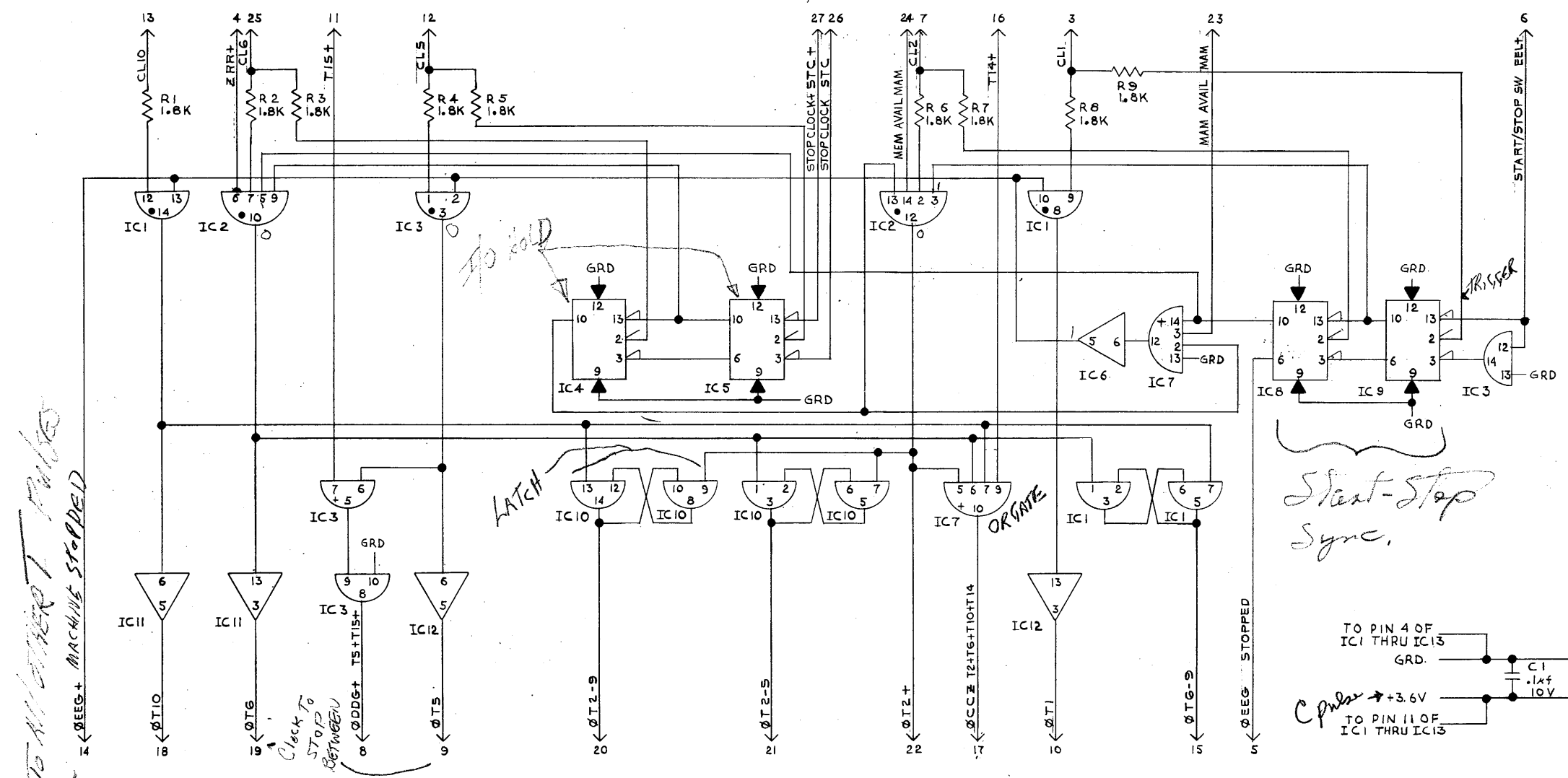


NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4W  
 3. FOR DRILLING DWG SEE DB600-928  
 4. FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8234		C
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/8/67 RKM	9/13/67	[Signature]
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-25-67. clw	10/19/67	[Signature]
C	68-82; REMOVED BUFFERED OUTPUTS ON PINS 15, 20, & 21. W.D. Shank 2-13-68 G.T.W.	2/14/68	[Signature]

*Stop due to I/O det.*

*RTL*  
*ground to keep computer running*



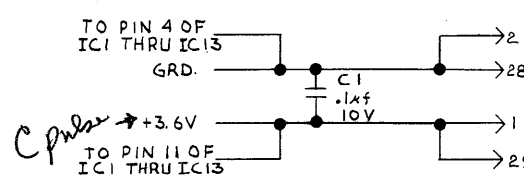
*To All other Pkgs  
 Machine Stopped*

*No hold*

*LATCH*

*OR GATE*

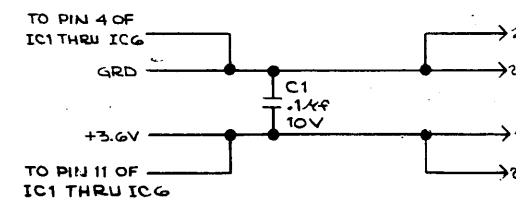
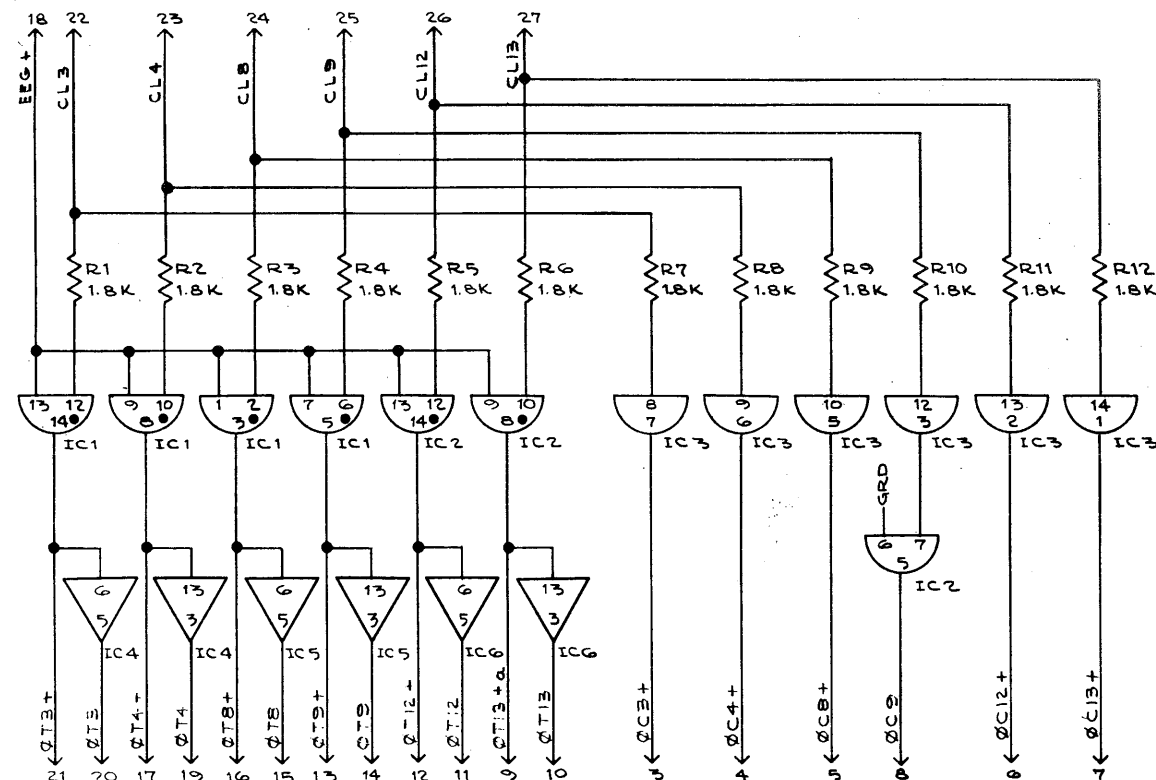
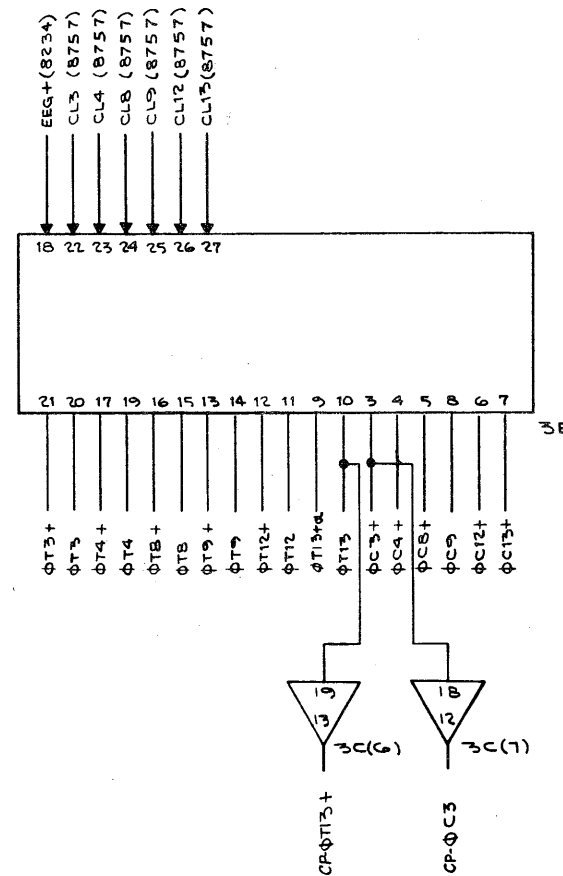
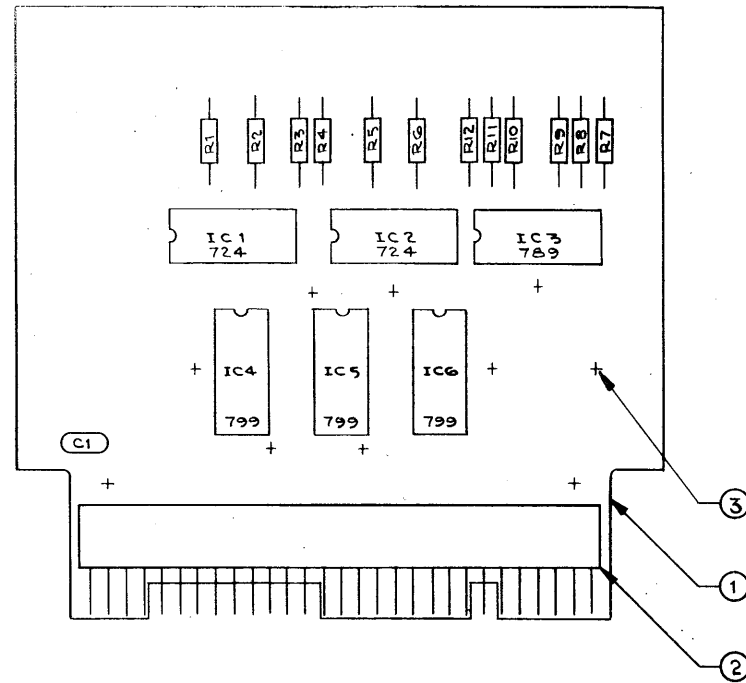
*Start-Stop Sync.*



9	R9 THRU R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
3	IC12 IC11 IC6	MC799P	INTEGRATED CIRCUIT-MOTOROLA
4	IC8 IC5 IC4	MC726P	
2	IC7 IC2	MC725P	
3	IC10 IC3 IC1	MC724P	
1	C1	UK 10-104	CAPACITOR; 100pF ± 20%, 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 928	PRINTED CIRCUIT (REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING & LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA			
DR. R. SANBORNE		2-13-67	SCHEMATIC & ASSEMBLY RTL CLOCK CONTROL #1
CC	RKM	3-1-67	
ENG.	[Signature]	5-31-67	CODE IDENT NO 20886
APP.	[Signature]	5/31/67	
USED ON		5/1/67	SIZE D
			8234
			C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$  1/4 W.  
 3. FOR DRILLING DWG. SEE D8600-929 FOR DIMENSIONAL DWG. SEE C8600

REV	DESCRIPTION	DATE	APPD
D	8235		B
A	67-240; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. PMT 3/8/67 RYM	3/13/67	DM
B	67-445; ADDRESSES REVISED (LINE TITLES ADDED). C.THEW 10-25-67 AS	10/29/67	DM

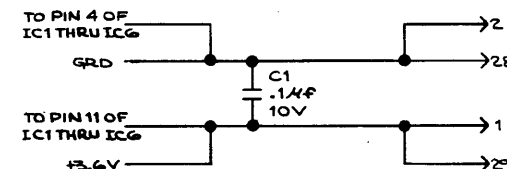
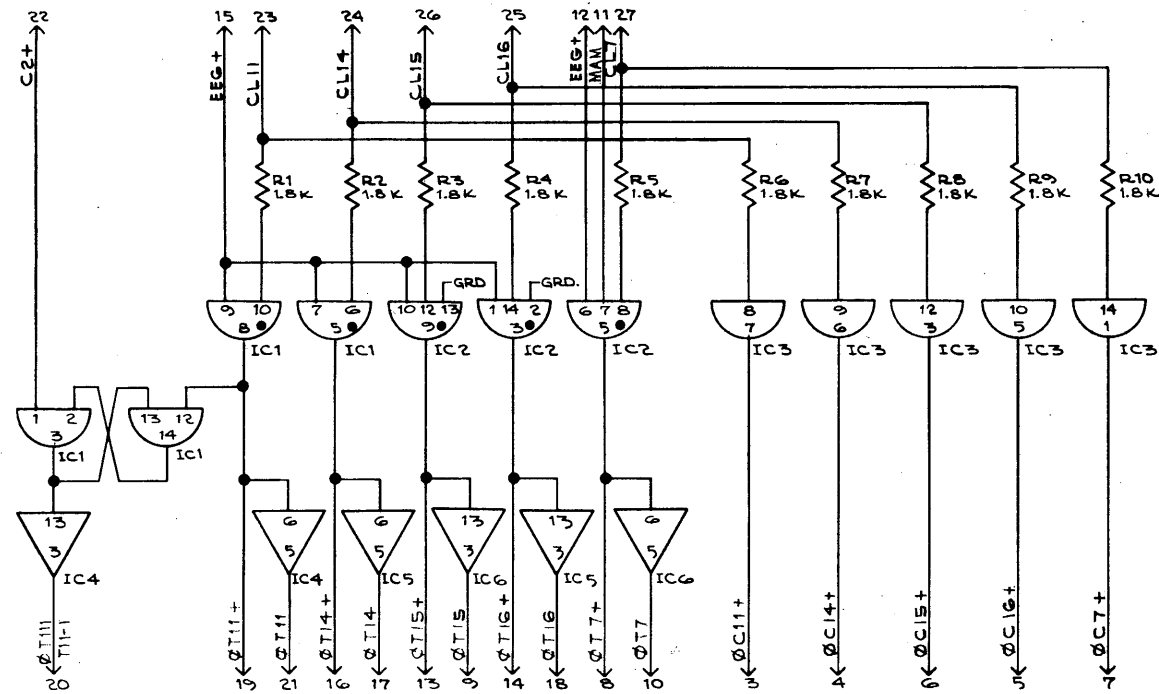
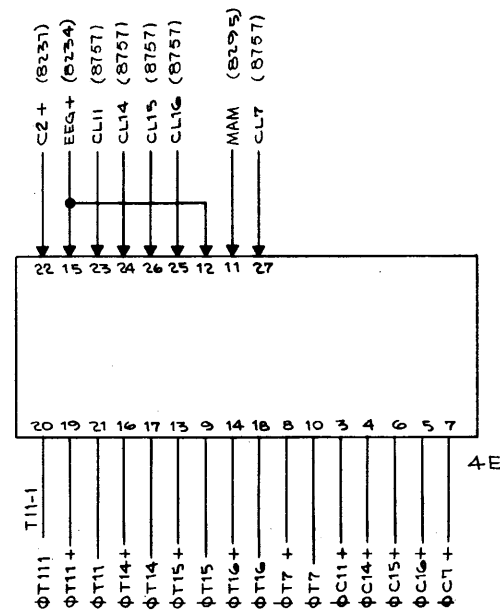
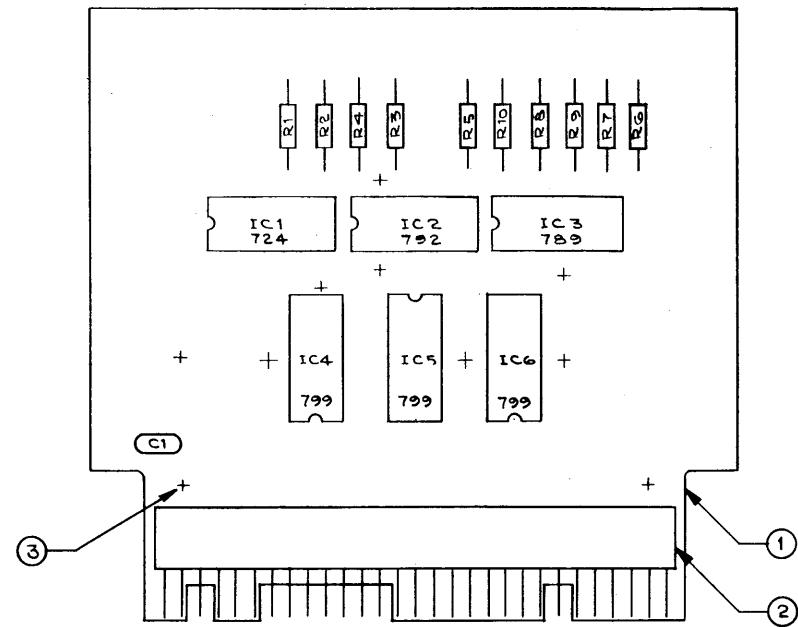


12	R12 THRU R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
3	IC6, IC5, IC4	MC799P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC789P	INTEGRATED CIRCUIT-MOTOROLA
2	IC2, IC1	MC724P	INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK10-104	CAPACITOR-.1uF+80-20% 10V, CRL
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED.
1	2	00-7072029-000-001	CONNECTOR - ELCO
1	1	SEL 929	PRINTED CIRCUIT (FOR REV. SEE A5140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SIEL		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR.	B. BOYD	1-9-67	
CR.	R.K.M.	1-15-67	
ENG.			
PROJ. APP.			
CODE IDENT NO.	20886	SIZE	D 8235
USED ON		REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W  
 3. FOR DRILLING DWG. SEE D8600-030.  
 FOR DIMENSIONAL DWG. SEE C8600

REV	DESCRIPTION	DATE	APPD
D	8236		
A	G7-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 5/8/67 RKM	5/12/67	[Signature]
B	G7-445; ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-25-67	10/29/67	[Signature]

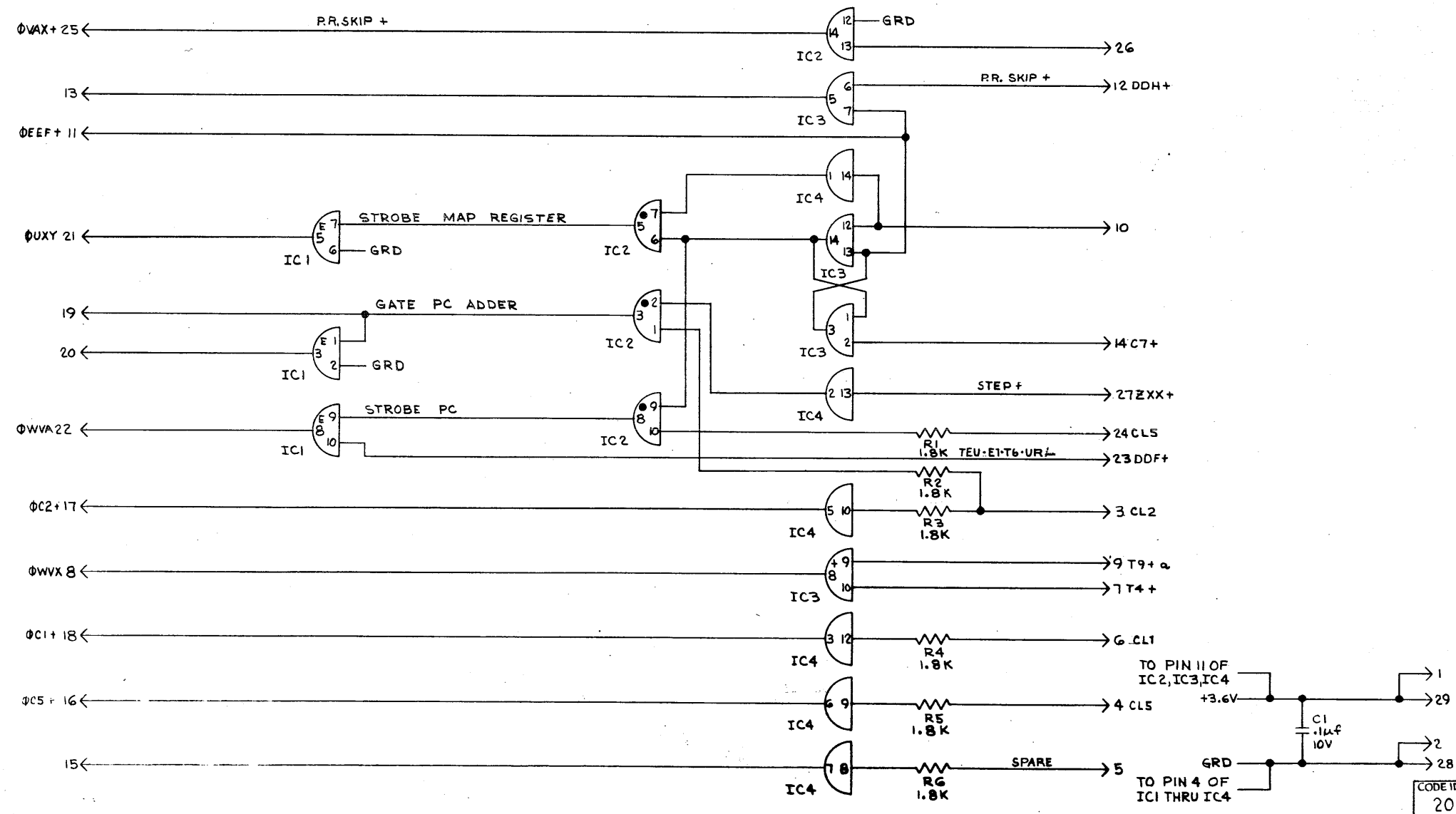
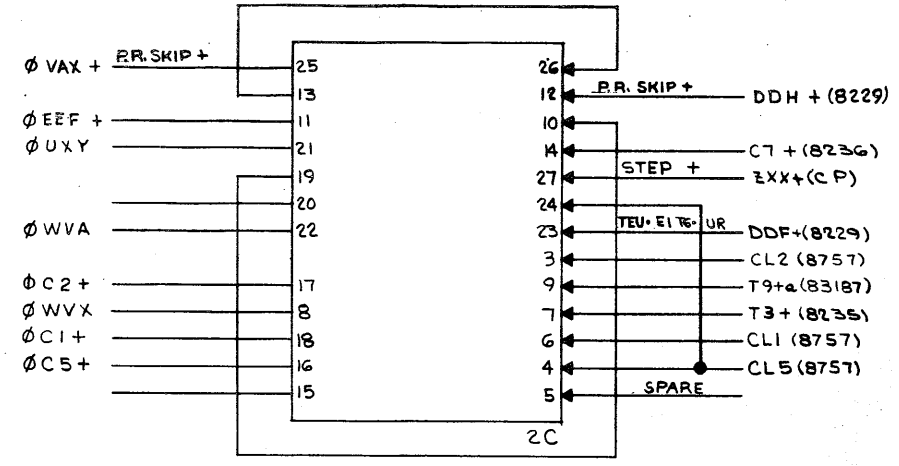
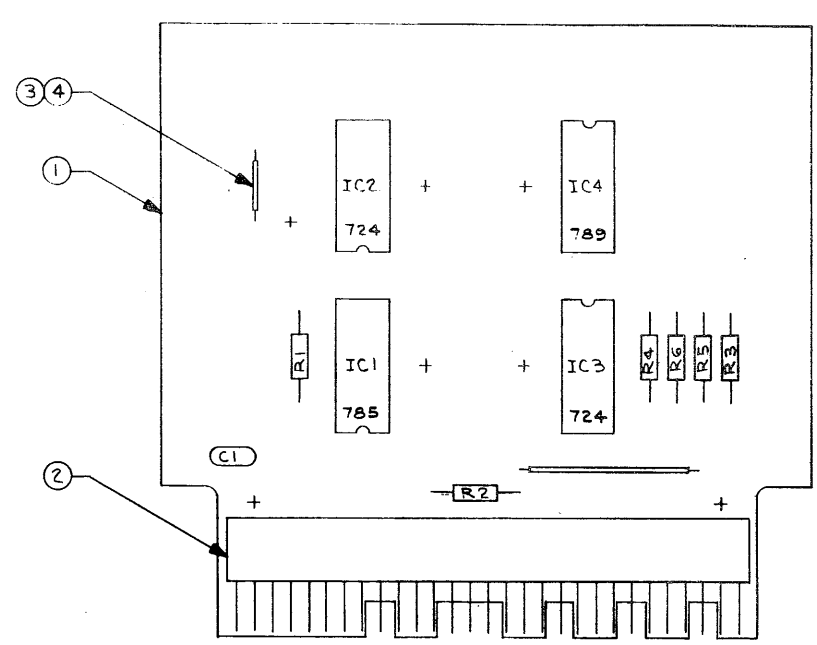


QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
10	R10 THRU R1	RC076F182J	RESISTOR-1.8K, ALLEN BRADLEY
3	IC6, IC5, IC4	MC799P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC789P	
1	IC2	MC792P	
1	IC1	MC724P	
1	C1	UK10-104	CAPACITOR-.144F+80-20%10V CRL
AR 3	AWG 24		WIRE - SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 930	PRINTED CIRCUIT (FOR REV. SEE A5140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	b BOYD	1-9-67	SCHEMATIC & ASSEMBLY RTL-CLOCK CONTROL #3
CL	RKM	1-12-67	
ENG.	[Signature]	5-31-67	
APP.	[Signature]	5/31/67	
CODE IDENT NO.	20886	SIZE	D 8236
USED ON		REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4$  W.  
 3. FOR DRILLING DWG SEE D8600-975.  
 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8237		
A	67-245; ADDRESS ON PIN 7 OF LOGIC WAS T3+ CEM 7/26/67 RKM	7/26/67	[Signature]
B	67-445; ADDRESSES REVISED & LINE TITLES ADDED. C.THEW 10-25-67	10/25/67	[Signature]

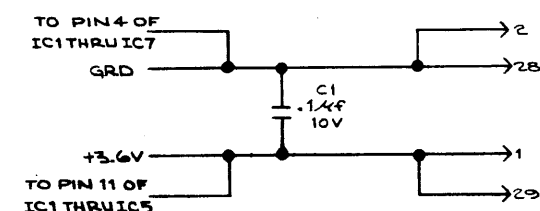
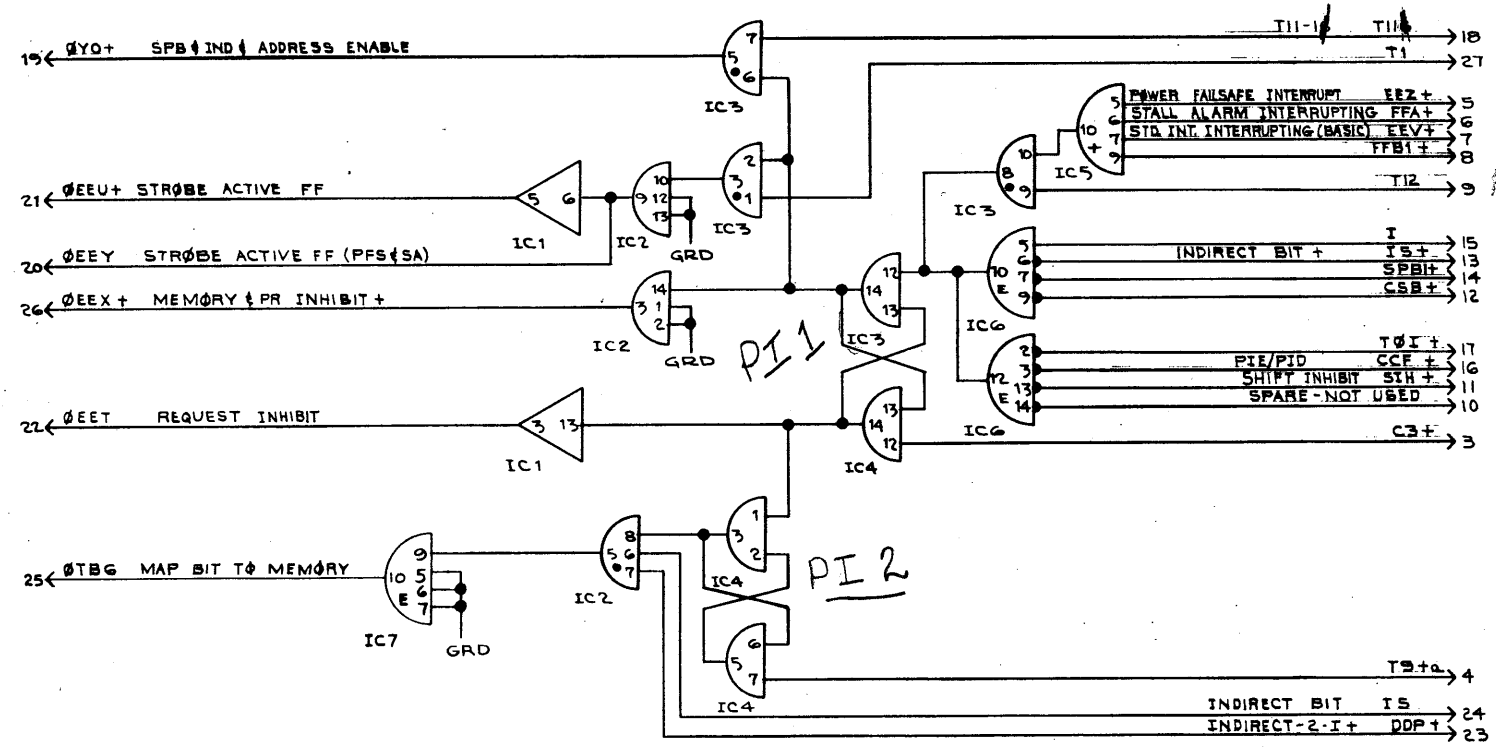
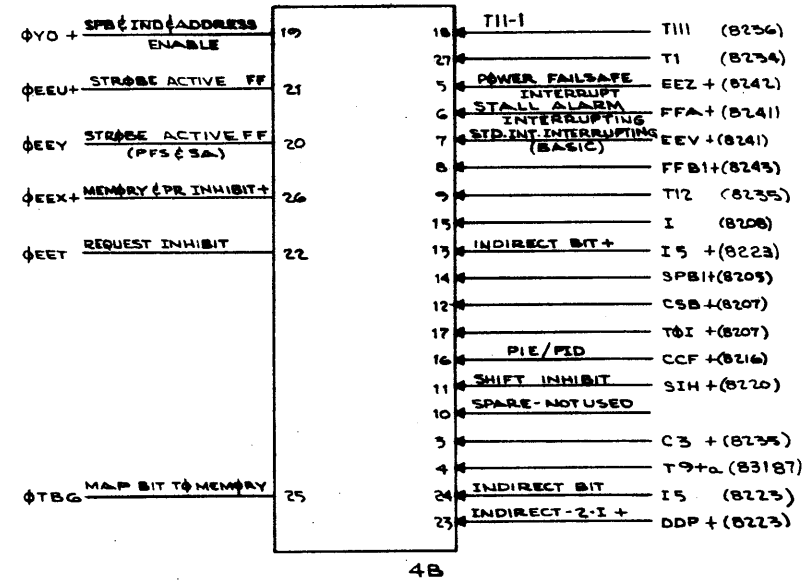
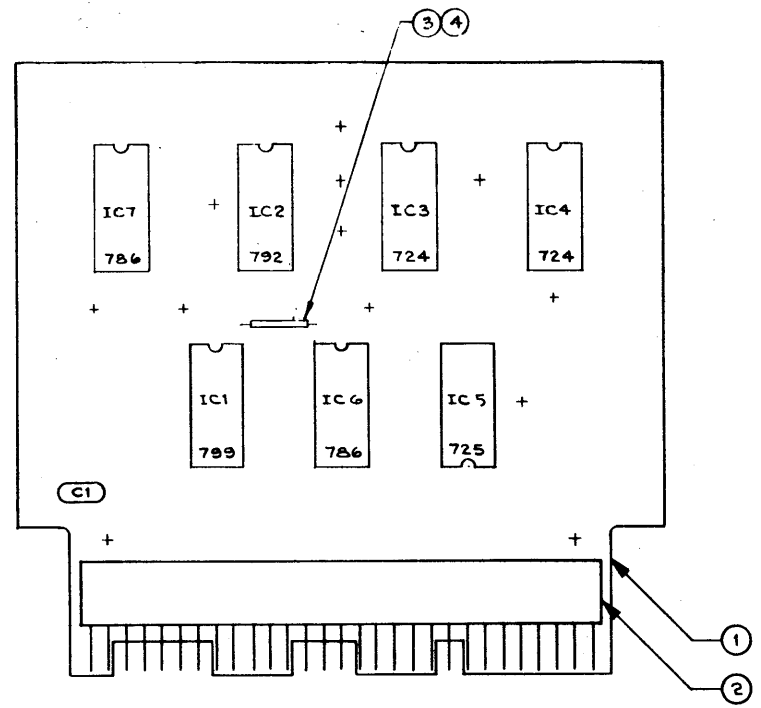


G	R6 R5 R4 R3 R2 R1	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
1	IC4	MC 789P	
2	IC3 IC2	MC 724P	INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC 785P	
1	C1	UK-10-104	CAPACITOR-.1µF +80-20%, 10V, SPRAGUE
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 975	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	L. GOODBREAD	3/27/67	SCHEMATIC & ASSEMBLY RTL LOAD / DISPLAY MEMORY STEP CONTROL
CK	RKM	3-27-67	
ENGR	[Signature]	5-31-67	
APP	[Signature]	5/11/67	
CODE IDENT NO	20886	REV	B
SIZE	D	8237	



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB600-919 FOR DIMENSIONAL DWG. SEE C8600

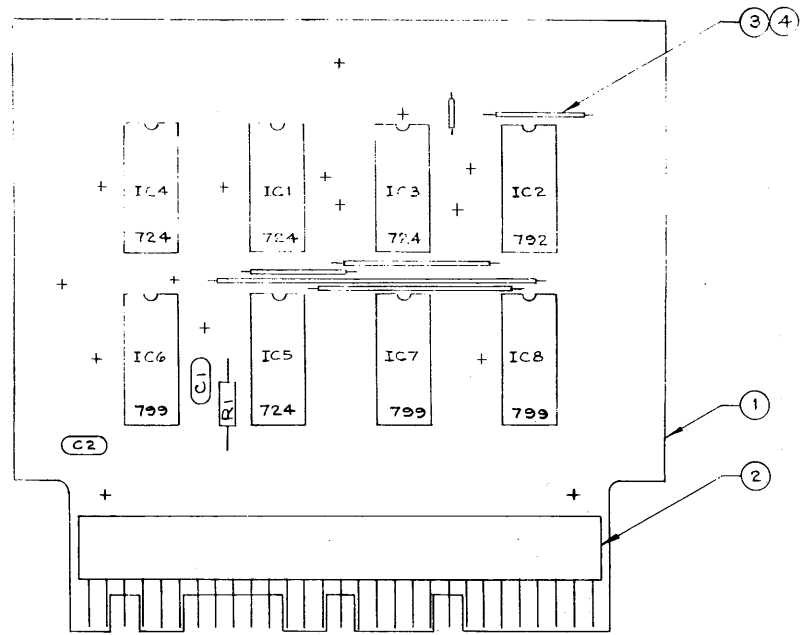
REV	DESCRIPTION	DATE	APPD
D	8238		
A	GT-340- DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/8/67	9/12/67	RKM
B	GT-445; ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-25-67	10/25/67	RKM



2	IC7	MCT86P	INTEGRATED CIRCUIT-MOTOROLA
1	IC6	MCT86P	
1	IC5	MCT25P	
2	IC4	MCT24P	
1	IC3	MCT24P	
1	IC2	MCT92P	
1	IC1	MCT99P	
1	C1	UK10-104	CAPACITOR .1µF±80-20% 10V, CBL
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL (E.P.C.)
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	001021025-000-001	CONNECTOR - ELCO
1	1	SEL 919	PRINTED CIRCUIT-(FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>			
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	B. BOYD	1-11-67	SCHEMATIC & ASSEMBLY
CC	RKM	1-12-67	
ENG.	C. McV...	5-5-67	RTL PRIORITY INTERRUPT LATCH IRI
PROJ.	W. L...	4/6/67	
APP.	R. K...	6/5/67	
USED ON			

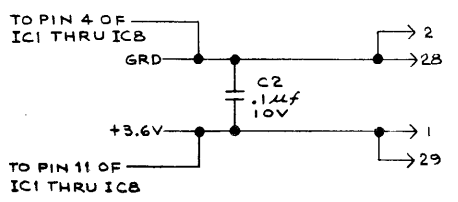
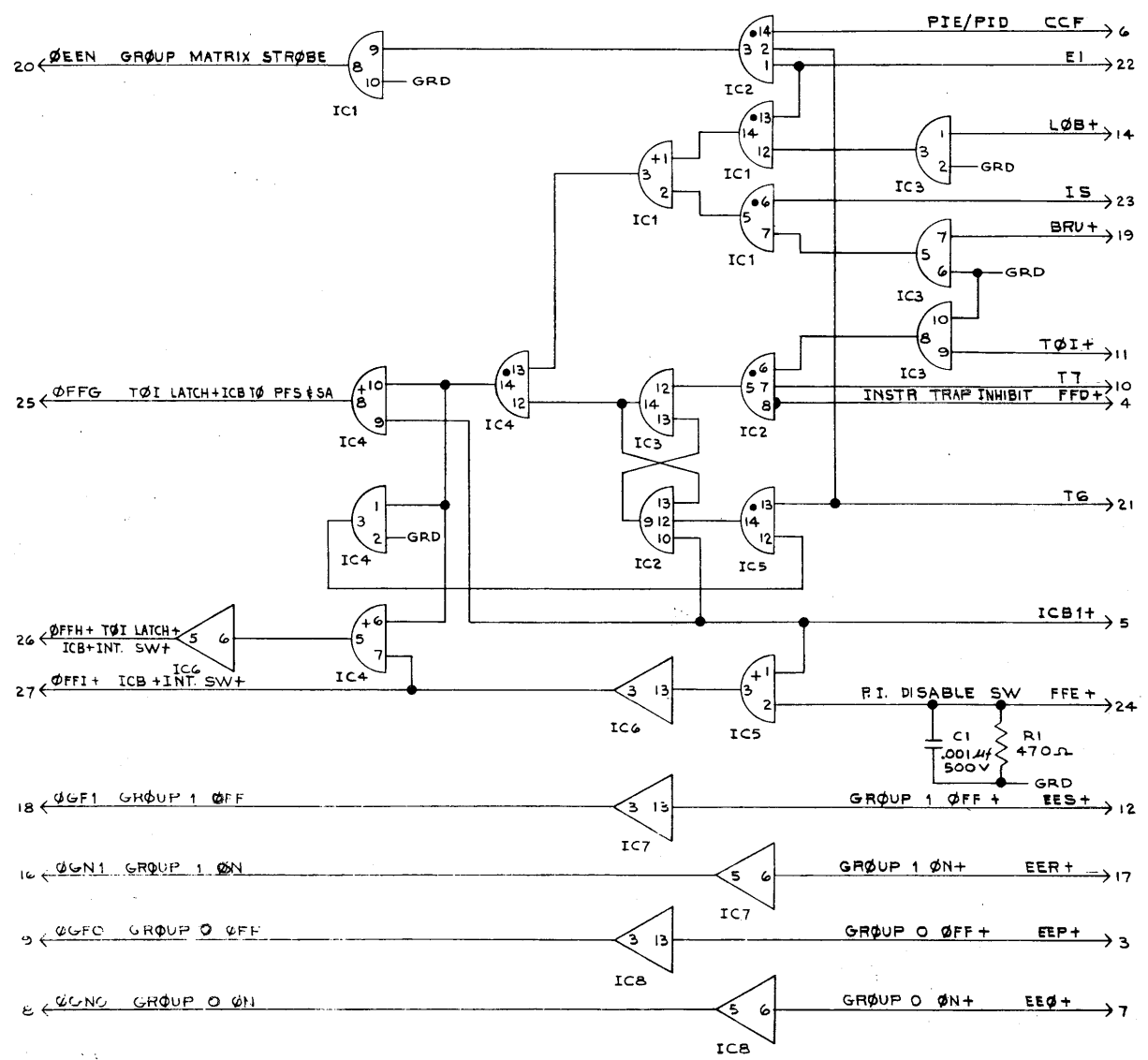
CODE IDENT NO  
20886

SIZE	D 8238	REV	B
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- ØEEN GROUP MATRIX STRØBE 20
- ØFFG TØI LATCH+ICB TØ PFS+SA 25
- ØFFH+ TØI LATCH+ICB+INT SWH 26
- ØFFI+ ICB+INT SW+ 27
- ØGF1 GROUP 1 ØFF 18
- ØGN1 GROUP 1 ØN 16
- ØGFO GROUP 0 ØFF 9
- ØGNO GROUP 0 ØN 8

- 6 PIE/PID CCF (8216)
- 22 EI (8208)
- 14 LØB+(8207)
- 23 IS (8223)
- 19 BRU+(8205)
- 11 TØI+(8207)
- 10 T7 (8236)
- 4 INSTR TRAP INHIBIT FFD+(8239)
- 21 T6 (8234)
- 5 ICB+(8245)
- 24 PI DISABLE SW FFE+(C.P.)
- 12 GROUP 1 ØFF+ EES+(8240)
- 17 GROUP 1 ØN+ EER+(8240)
- 3 GROUP 0 ØFF+ EEP+(8240)
- 7 GROUP 0 ØN+ EEØ+(8240)



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5% 1/4 W.  
 3. FOR DRILLING DWG SEE D8600-921.  
 FOR DIMENSIONAL DWG SEE C8600.

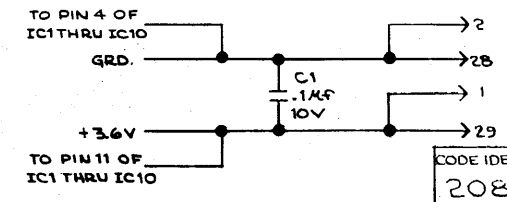
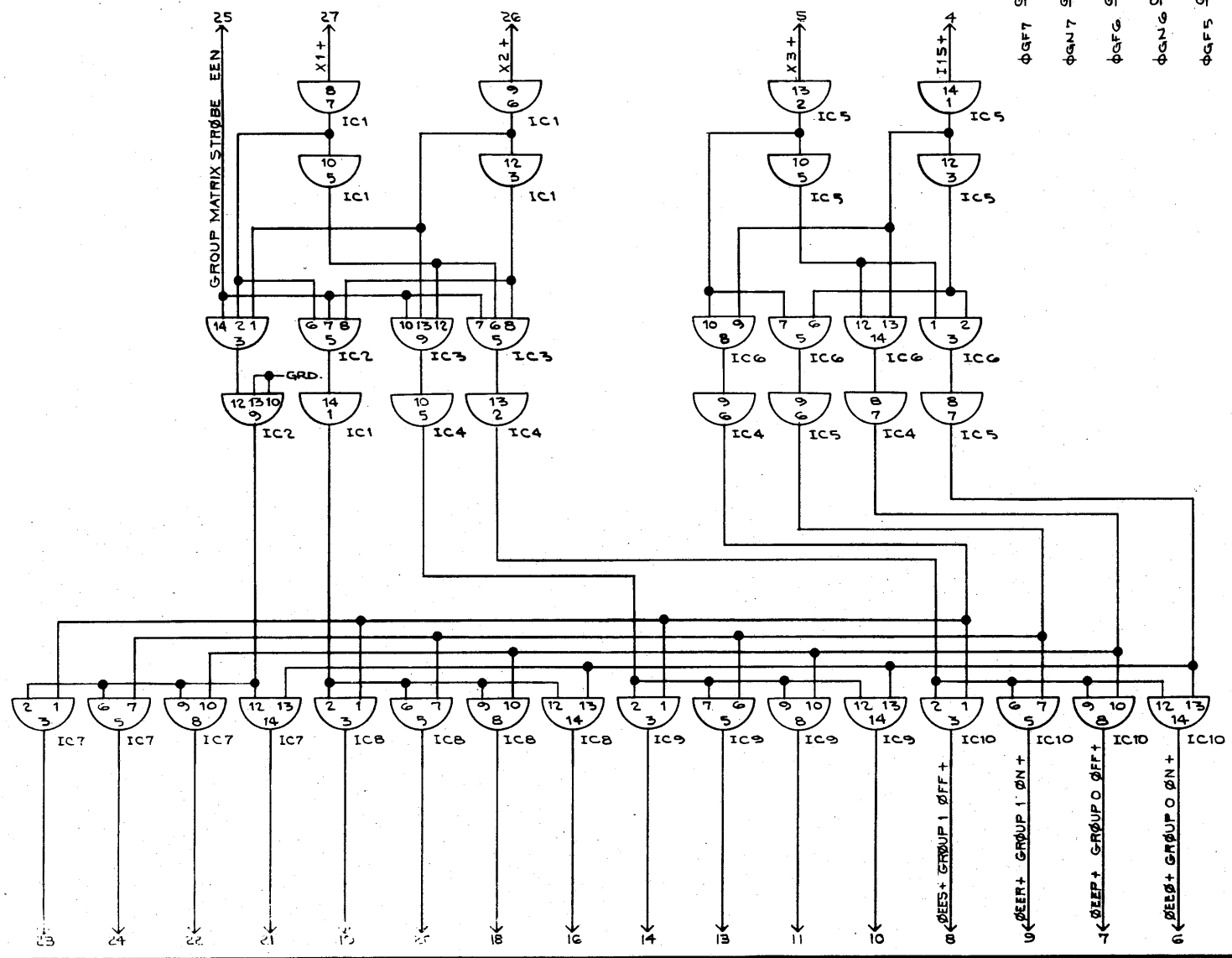
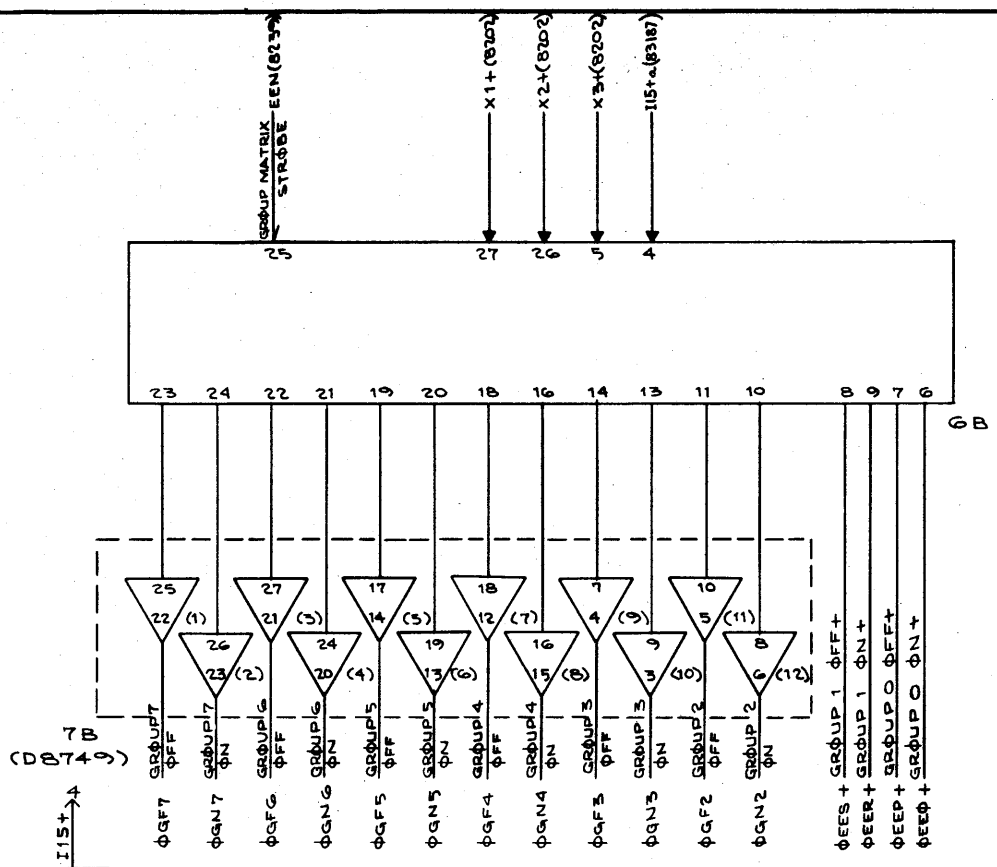
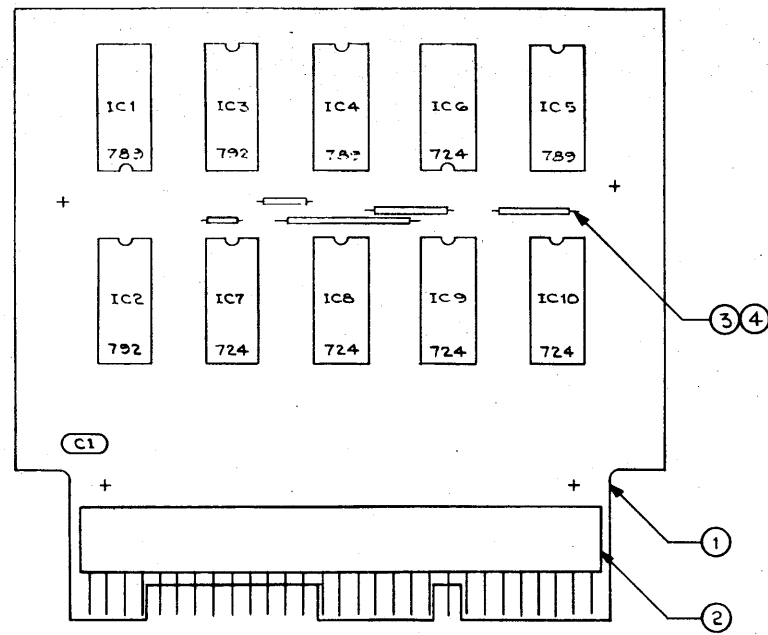
REV	DESCRIPTION	DATE	APPD
D	8239		B
A	G7-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RKM	9/2/67	OK
B	G7-445; ADDRESSES REVISED AND LINE TITLES ADDED E.R.C. 10-25-67	9/29/67	OK

QTY	RI	RC07GF471J	RESISTOR- 470Ω, ALLEN BRADLEY
3	IC8 IC7 IC6	MC799P	INTEGRATED CIRCUIT- MOTOROLA
1	IC2	MC792P	INTEGRATED CIRCUIT- MOTOROLA
4	IC5 IC4 IC3 IC1	MC724P	INTEGRATED CIRCUIT- MOTOROLA
1	C2	UK-10-104	CAPACITOR- 10K500-20V, 10V, CER.
1	C1	TD102	CAPACITOR- 200/100V, 500K, CER.
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL (COLOR OPT.)
AR	3	AWG 24	WIRE- SOLID COPPER, TINNED
I	2	00-7022-029-000-001	CONNECTOR- ELCO
I	1	SEL 921	PRINTED CIRCUIT- (FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

DR.	RKM	1-9-67	SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
CL.	WC	1-11-67	
ENG.	OK	6-5-67	
PROJ.	W. K. ...	6/16/67	
APP.	W. K. ...	6/16/67	
CODE IDENT NO.	20886		SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT TØI & DISABLE LOGIC IRI
SIZE	D	8239	REV B

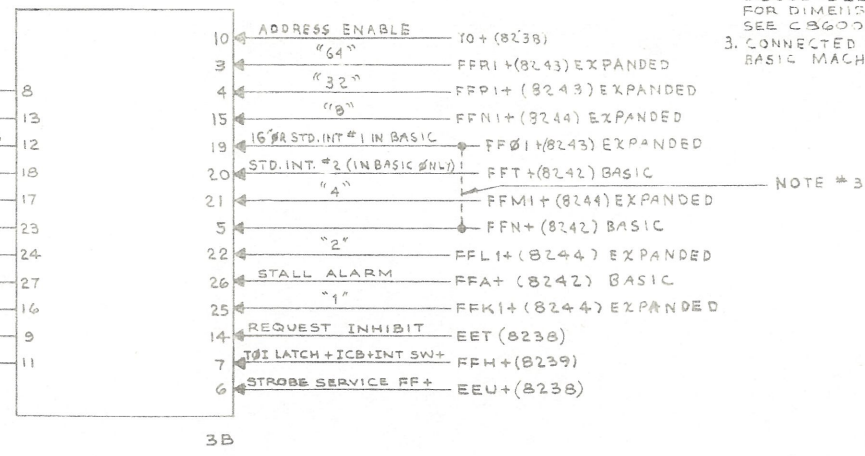
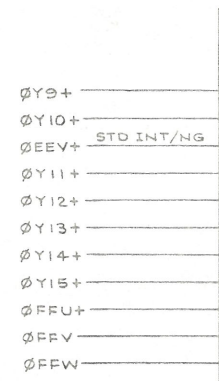
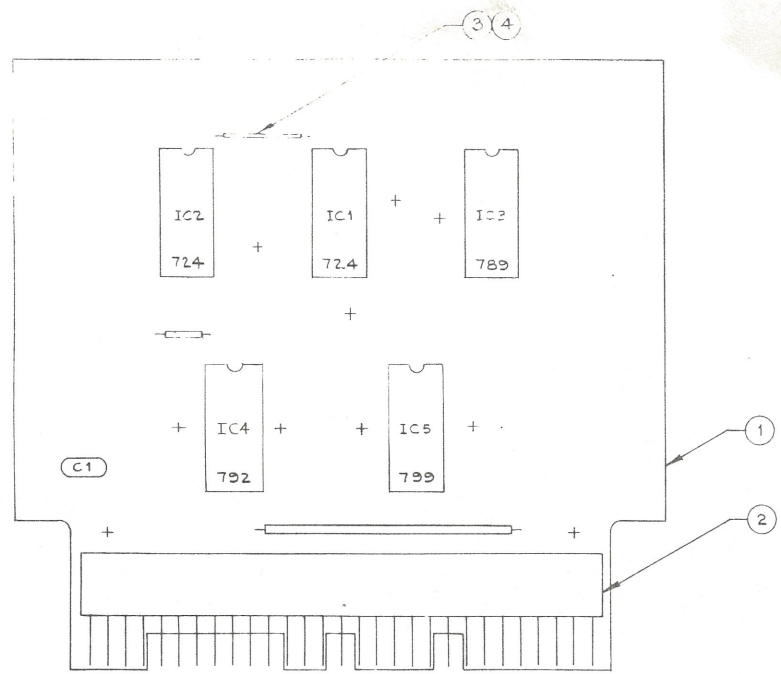
SIZE	D	8240	REV	B
REV	DESCRIPTION		DATE	APPD
A	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 5/8/67 RKM		9/12/67	[Signature]
B	67-445; ADDRESSES REVISED C.THEW 10/25/67		1/30/67	[Signature]

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE; D8600-925  
 FOR DIMENSIONAL DWG. SEE C 8600



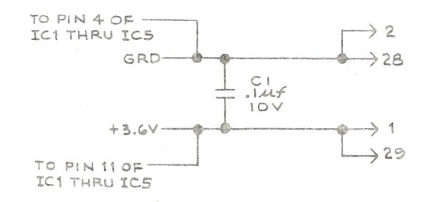
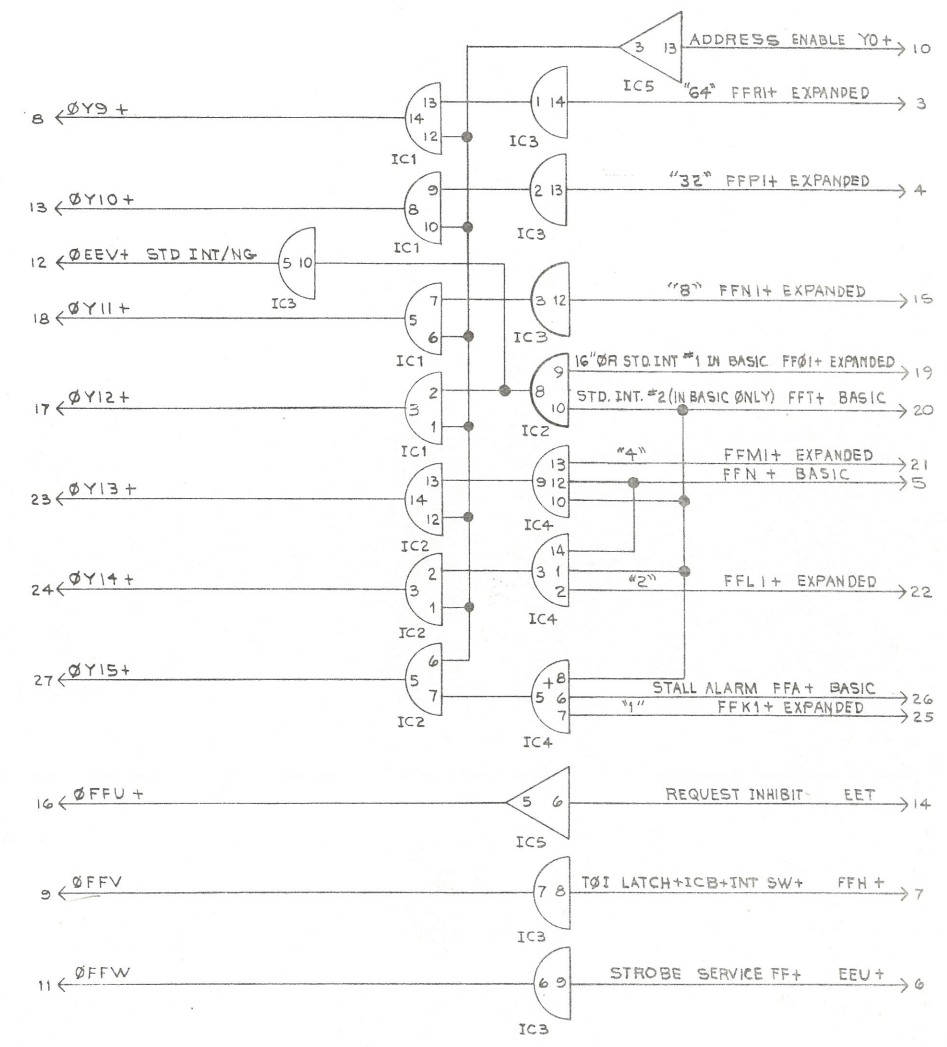
5	IC10 THRU IC6	MC724P	
2	IC3 IC2	MC792P	INTEGRATED CIRCUIT-MOTOROLA
3	IC5 IC4 IC1	MC789P	
1	C1	UK10-104	CAPACITOR-.14F+80-20%, 10V, CRL
AR 4	AWG 24		SLEEVING-TEFLON, THINWALL
AR 3	AWG 24		WIRE-SOLID COPPER, TINTED
1	2	00-7022-029-000001	CONNECTOR - ELCO
1	1	SEL 925	PRINTED CIRCUIT (FOR REV. SEE A5140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	B. BOYD	1-10-67	SCHEMATIC & ASSEMBLY RTL PI GROUP MATRIX IRI
CC.	RKM	1-12-67	
ENG.	C.M.C.	6-5-67	
PROJ. MGR.	[Signature]	6/6/67	
APP.	[Signature]	6/1/67	
USED ON	CODE IDENT NO.	20886	SIZE
			D 8240
			REV
			B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D3600-920. FOR DIMENSIONAL DWG. SEE C9000.  
 3. CONNECTED TOGETHER IN BASIC MACHINE ONLY.

SIZE	D	8241	REV	A
REV	A	DESCRIPTION	DATE	APP'D
		GT-3401 DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67 RKM	9/12/67	



1	IC5	MC799P	INTEGRATED CIRCUIT-MOTOROLA
1	IC4	MC792P	
1	IC3	MC789P	
2	IC2	MC724P	INTEGRATED CIRCUIT-MOTOROLA
	IC1		
1	C1	UK-10-104	CAPACITOR-.1µF±80-20%,10V,GR
AR	4	AWG 24	SLEEVING-TEFLON,THINWALL(COLOR OPT.)
AR	3	AWG 24	WIRE-SOLID COPPER,TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 920	PRINTED CIRCUIT(FOR REV.SEE AST140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

DE	RKM	1-7-67	SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
CC	WC	1/11/67					
ENG	C. McDonald	6-5-67					
PROJ. APP.	W. Kemp	6/6/67					
CODE IDENT NO.	20886		SCHMATIC ASSEMBLY RTL PRIORITY INTERRUPT ADDRESS AND GATES IRI				
USED ON			SIZE	D	8241	REV	A





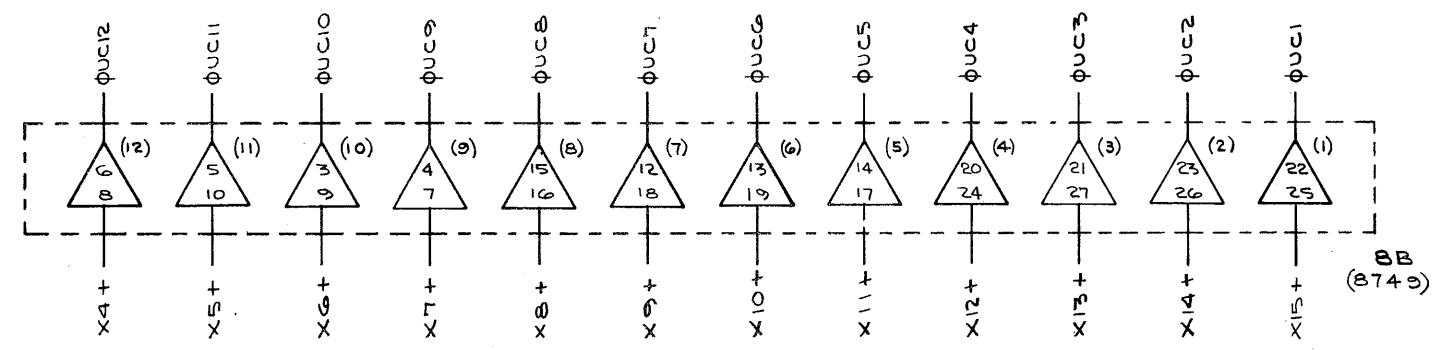
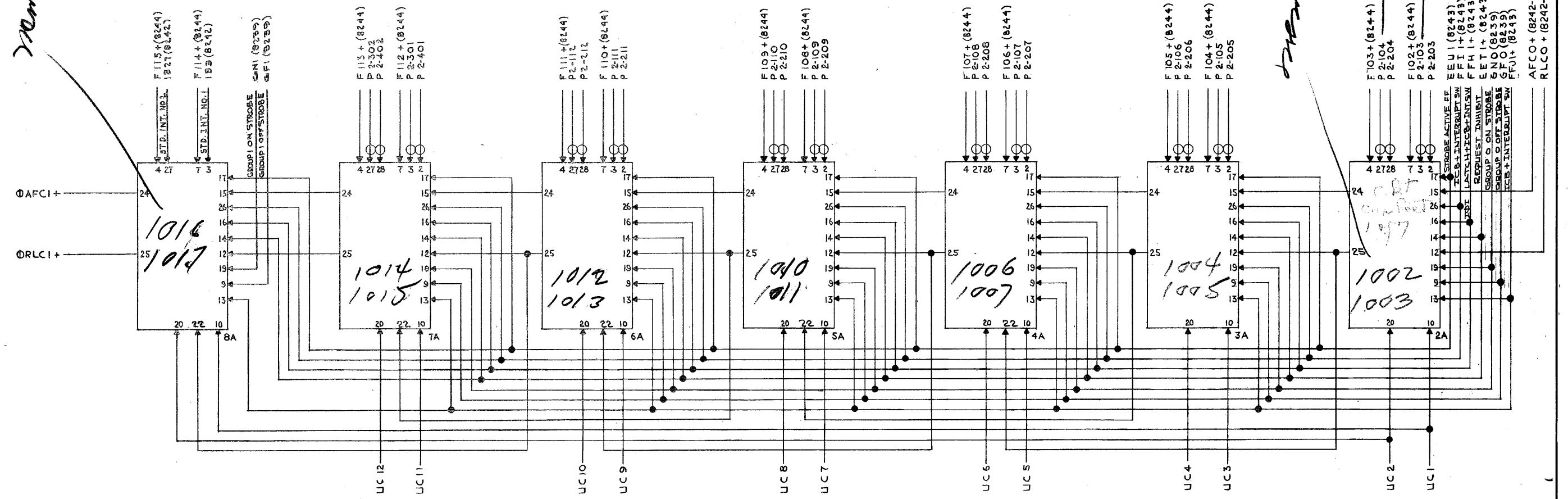
NOTES:  
1. SEE SHEET 1.

SIZE	D	8242	REV	C
REV		DESCRIPTION	DATE	APPD
		SEE SHEET 1.		

*Mem location*

*AD of memory for  
for memory*

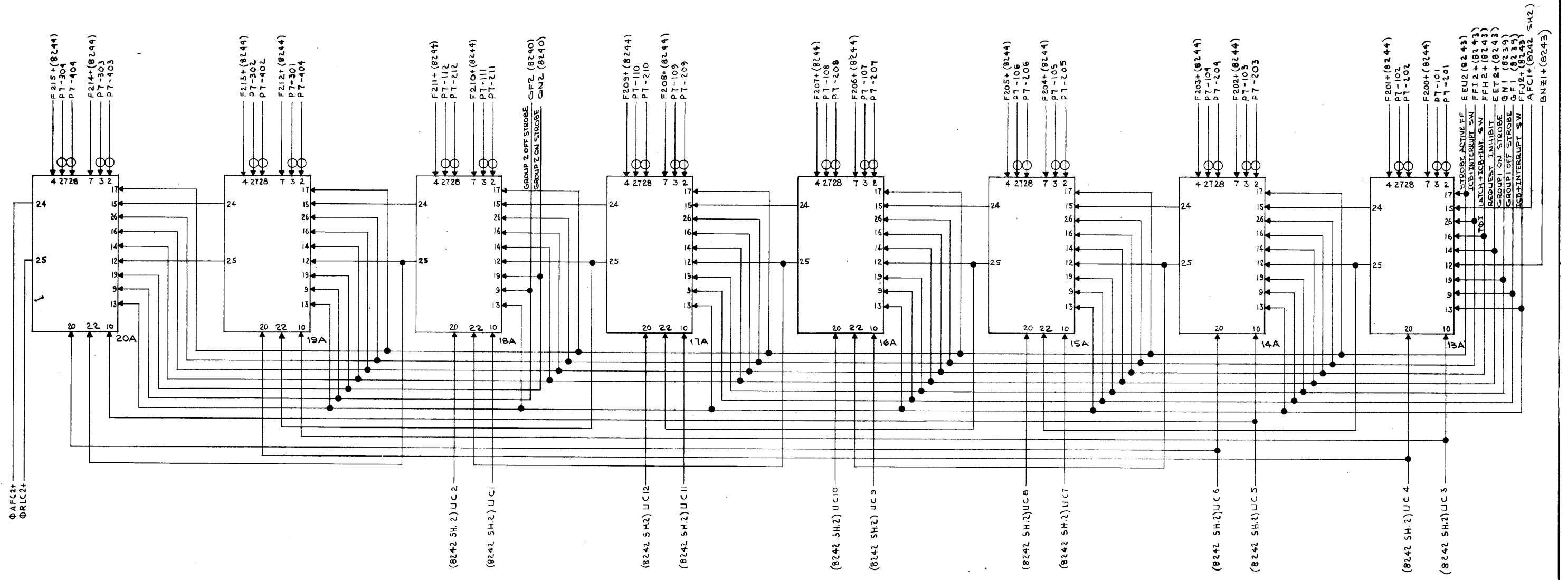
*mem loc. - 1st rec.*



ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR. R. SANBORNE	3-1-67	SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT MODULE 1 IRI				
CL. GOODBREAD	3/17/67					
ENG. [Signature]	6-5-67					
PROJ. [Signature]	6/6/67					
APP. [Signature]	6/5/67					
CODE IDENT NO.	20886	SIZE	D	8242	REV	C
USED ON						

NOTES:  
1. SEE SH. 1

REV	DESCRIPTION	DATE	APP'D
D	8242		C
SEE SHEET 1			



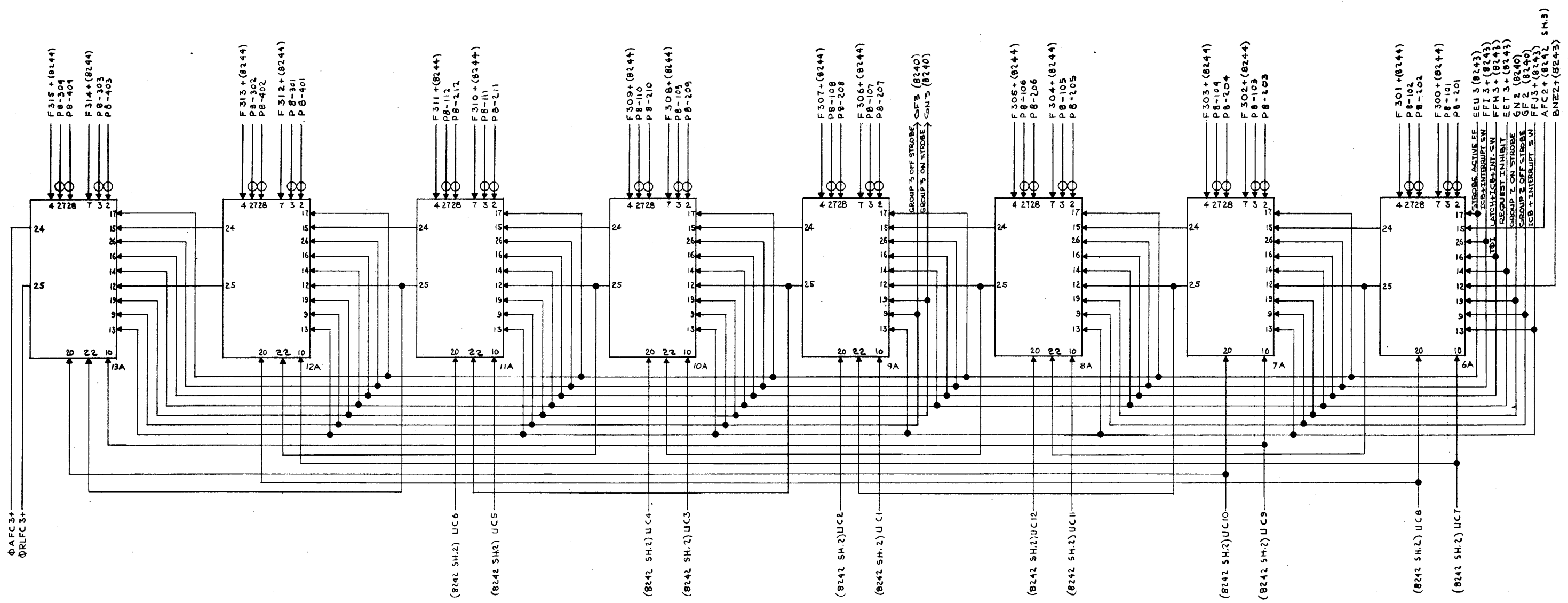
*Handwritten note:*  
Approved by System Computer

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	RSANBORNE 3-1-67	SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT MODULE 2 IRI
CC.	L. GOODBLEAD 3/17/67	
ENG.	C. McDaniel 6-5-67	
PROJ. APP.	6-5-67	
APP.	6-5-67	
CODE IDENT NO.	20886	SIZE
USED ON		D
		8242
		C



NOTES:  
1. SEE SH.1

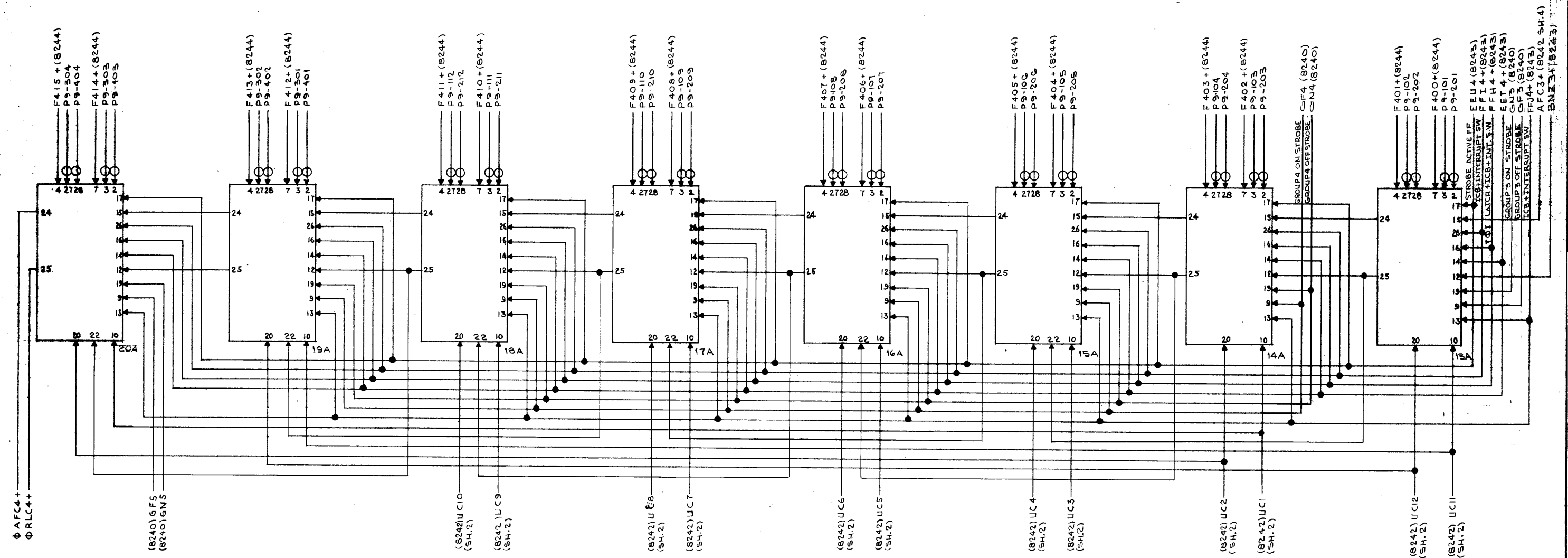
REV	DESCRIPTION	DATE	APP'D
D	8242		C
SEE SHEET 1.			



ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR.	R. SANBORNE 3-1-67	SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT MODULE 3 IR2				
CL.	L. GOODREAD 3/17/67					
ENG.	<i>McDowell</i> 6-5-67					
PROJ.	<i>McDowell</i> 6/6/67					
APP'D.	<i>McDowell</i> 6/5/67					
CODE IDENT NO.	20886	SIZE	D	8242	REV	C

NOTES:  
1. SEE SH.1

REV	DESCRIPTION	DATE	APP
D	8242		
SEE SHEET 1.			

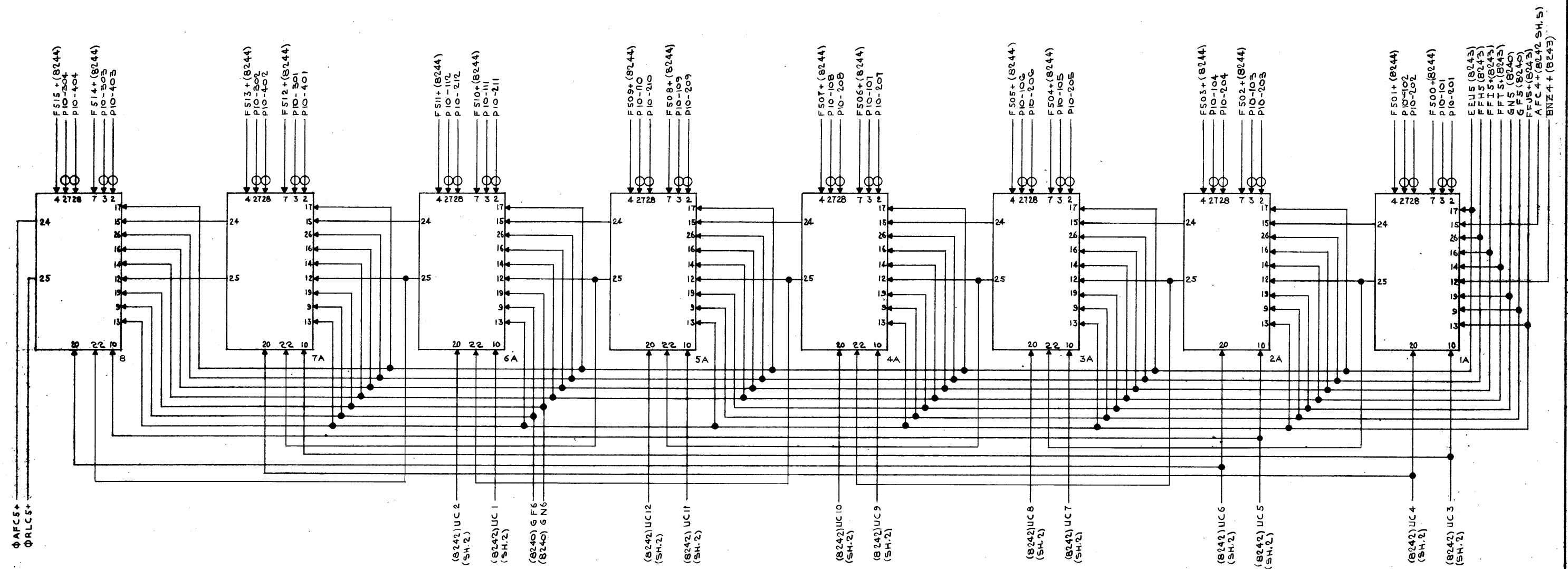


CODE IDENT NO  
20886

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	R.SANBORNE	3-1-67
CL.	L.GOODREAD	3/17/67
DWG.	<i>[Signature]</i>	6-5-67
PROJ.	<i>[Signature]</i>	6-5-67
APP.	<i>[Signature]</i>	6/6/67
USED ON	<i>[Signature]</i>	6/5/67
SIZE	D	8242
REV	C	

NOTES:  
1. SEE SH.1

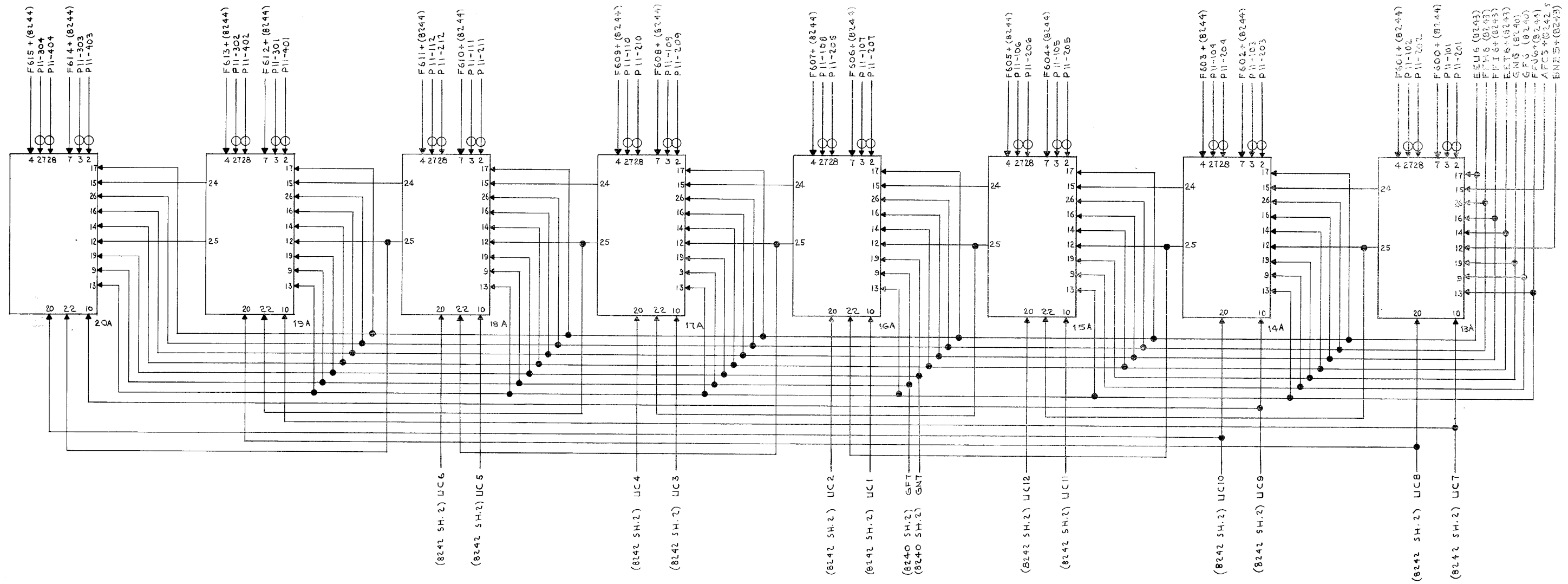
REV	DESCRIPTION	DATE	APP'D
D	8242		C
SEE SHEET 1			



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	R. SANBORNE 3-1-67	SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT MODULE 5 221
CK.	L. GOODBREAD 3/17/67	
ENG.	McDermott 6-5-67	
APP.	K. K. 6/6/67	
USED ON	6/5/67	
CODE IDENT NO.	20886	REV D 8242

NOTES:  
1. SEE SH.1

REV	D	DESCRIPTION	DATE	APPD
		8242		C
SEE SHEET 1.				



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	RSANBORNE	3-1-67
CL.	L.GOODBREAD	3/17/67
ENG.	<i>McDonald</i>	6-5-67
PROJ. APP.	<i>McDonald</i>	6/6/67
APP.	<i>Sample</i>	6/5/67
CODE IDENT NO.	20886	SIZE D
SCHEMATIC & ASSEMBLY RTL PRIORITY INTERRUPT MODULE 6 2R1		REV C
8242		7 OF 7

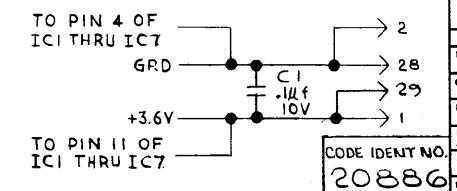
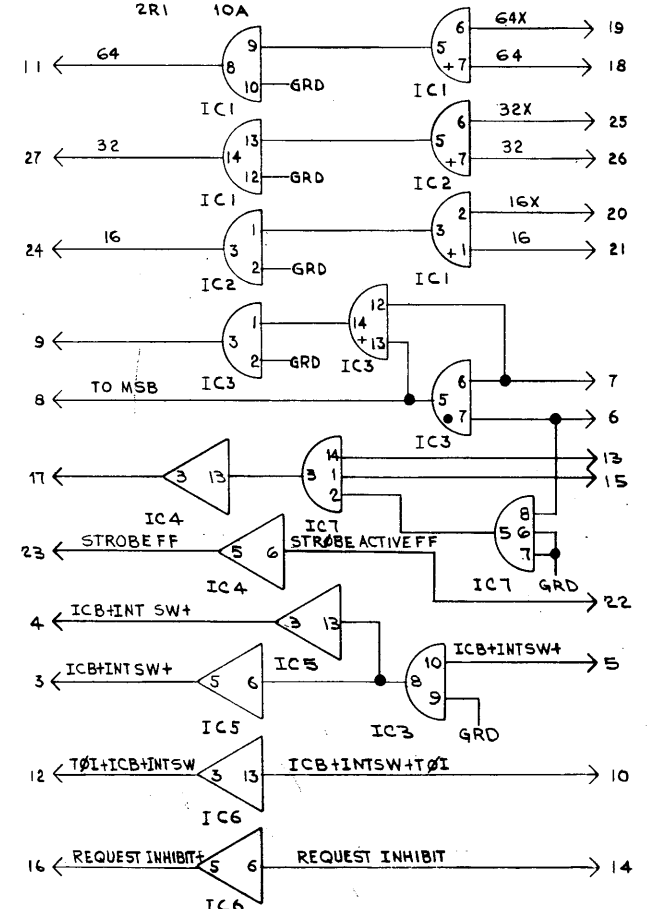
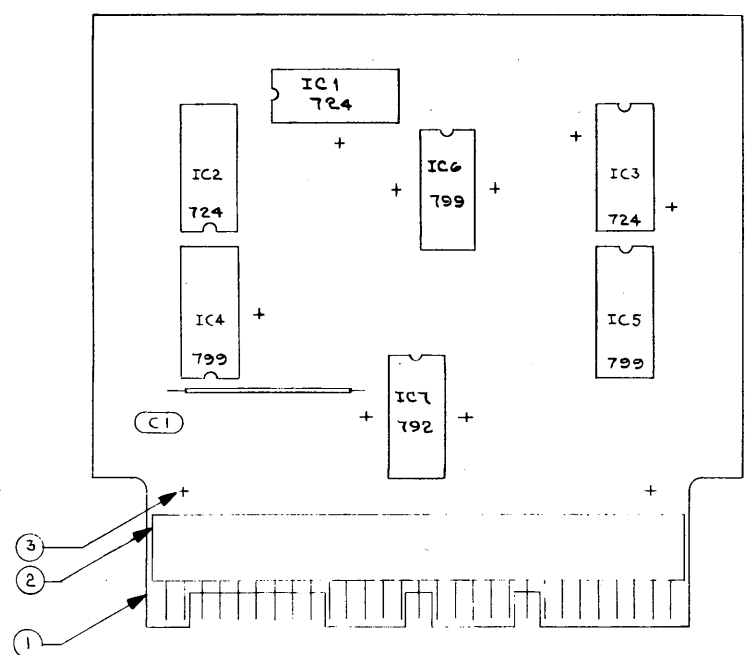
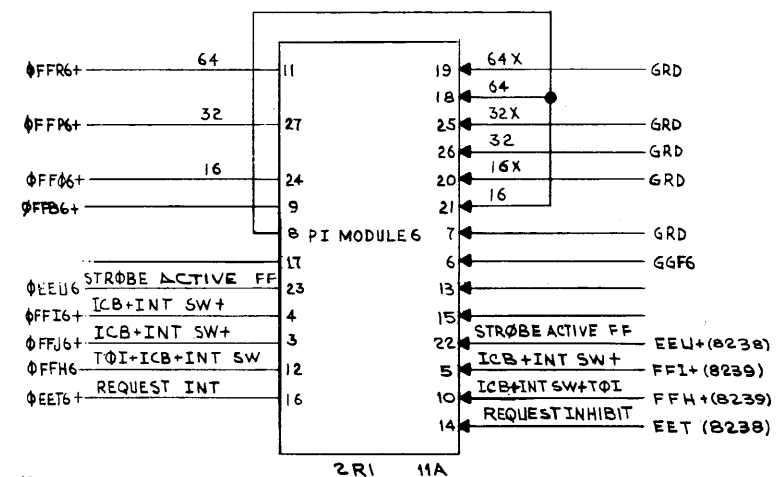
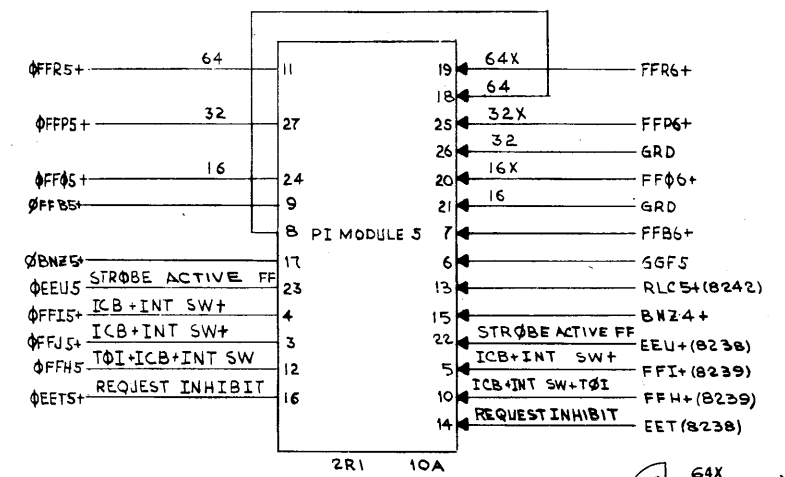
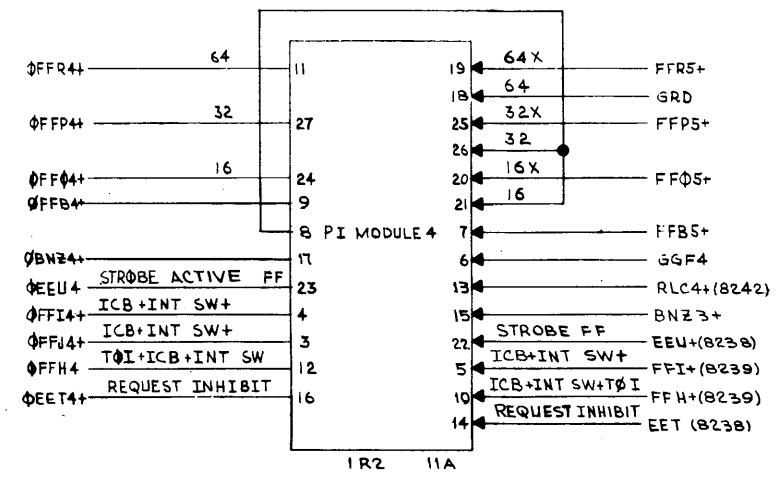
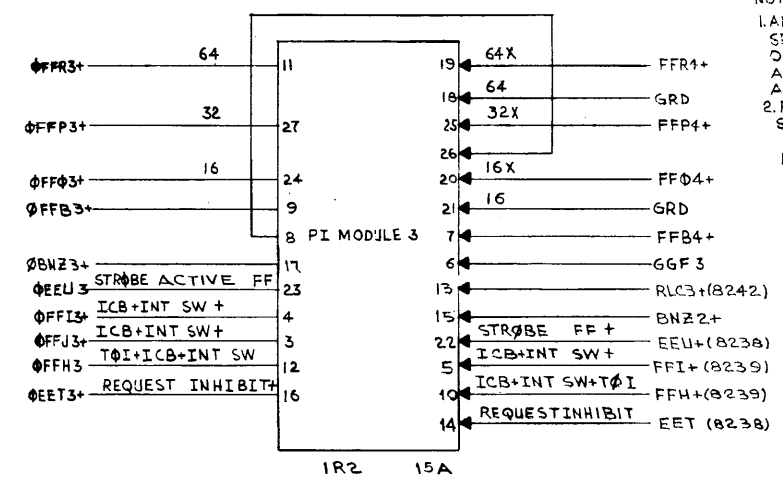
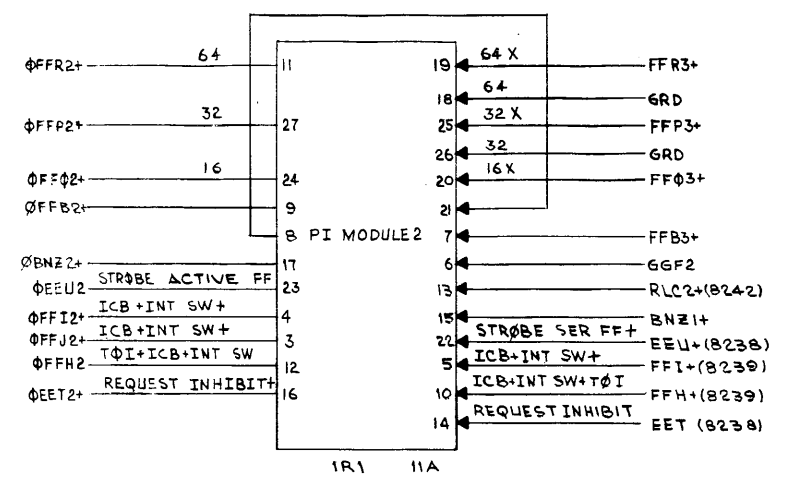
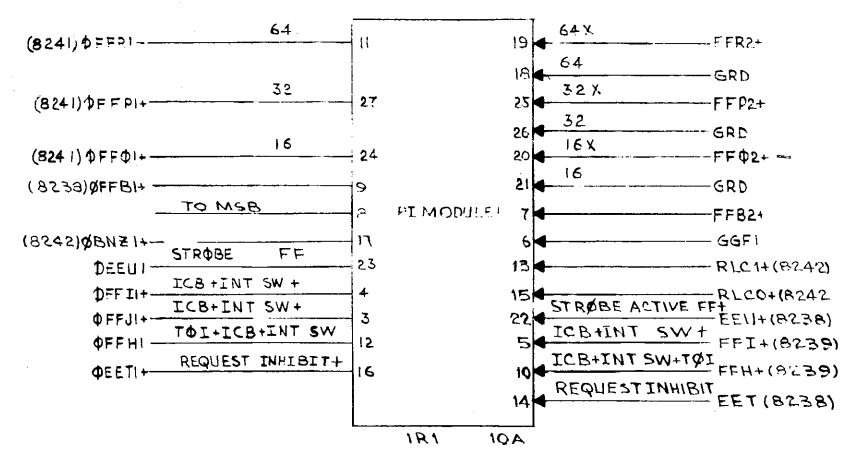
C

C

C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE DB600-924 FOR DIMENSIONAL DWG SEE CB600

REV	DESCRIPTION	DATE	APPD
A	67-259; ADDED ICT & REVISED SCHEMATIC, ASSEMBLY & LOGIC TO AGREE WITH LATEST P.C. BACKGROUND. C.R. 83-6T RKM	8/3/67	[Signature]
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-25-67	10/30/67	[Signature]

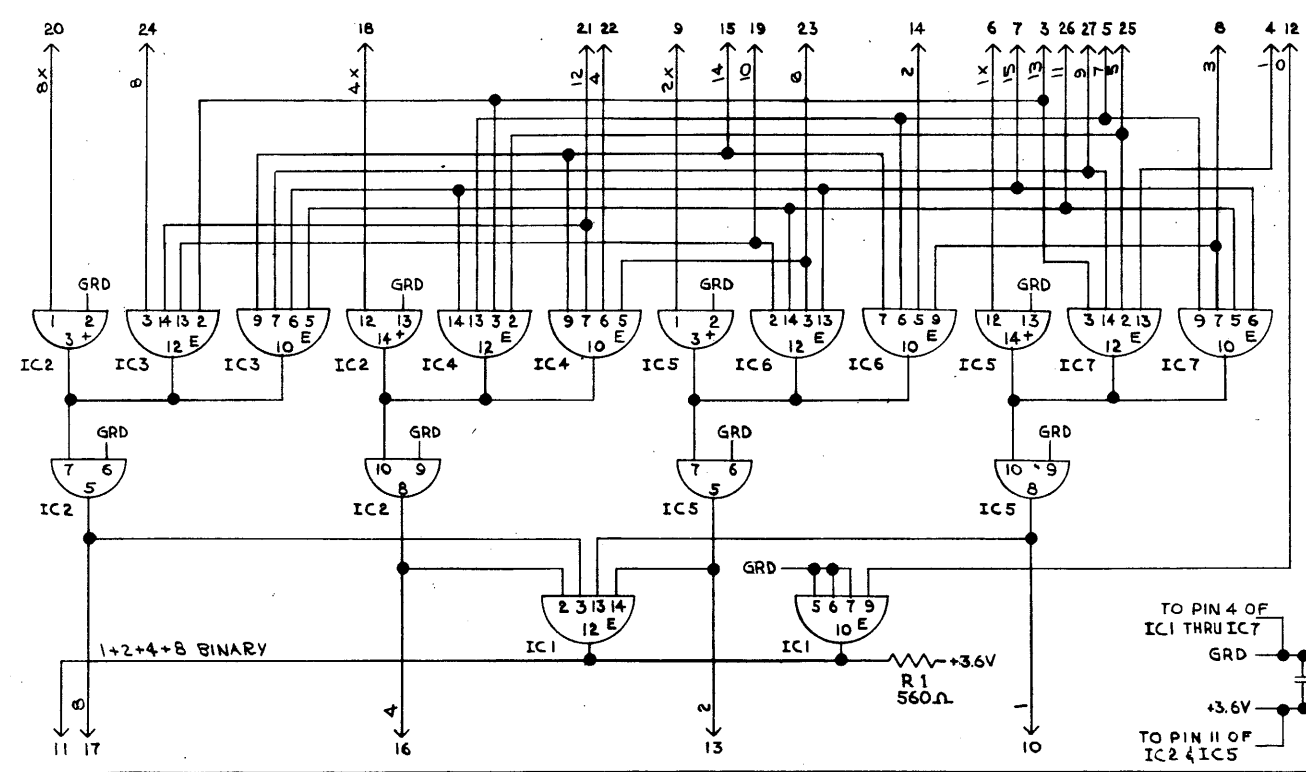
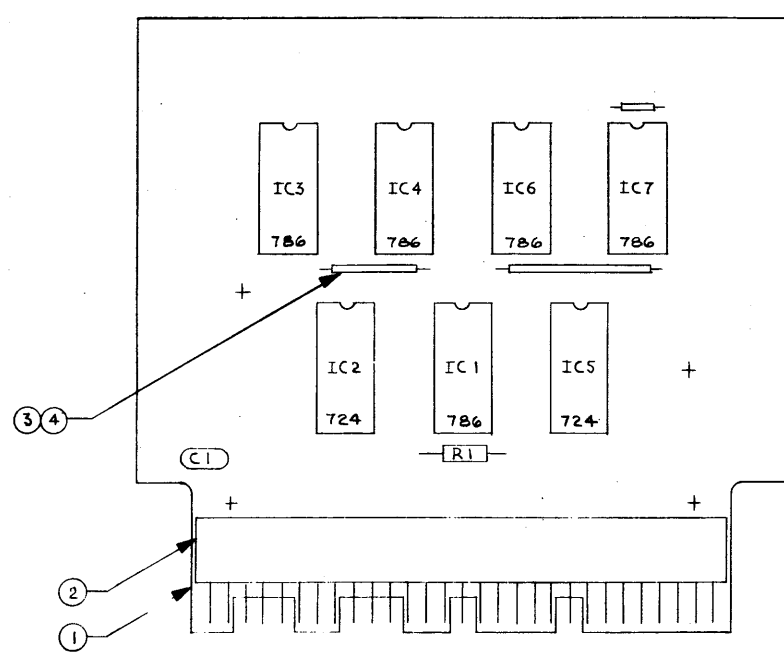
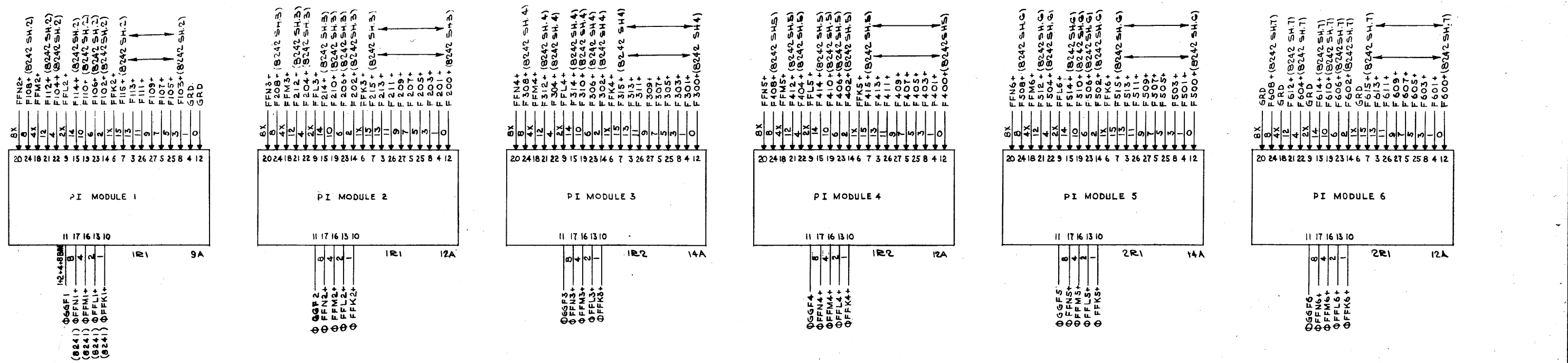


1	IC7	MC 792P	
3	IC6 THRU IC4	MC 799P	INTEGRATED CIRCUIT- MOTOROLA
3	IC3 THRU IC1	MC 724P	
1	C1	UK10-104	CAPACITOR-.1µf-80-20%,10V, CRL
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1	2	DC-7022-C28-010-101	CONNECTOR- ELCO
1	1	SEL 924	PRINTED CIRCUIT(REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SEL			
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA			
DR. R. SANBORNE	2-20-67	SCHEMATIC & ASSEMBLY	
CL. GOODREAD	3/16/67	RTL PI	
PROJ. MCDONALD	6/5/67	UNITARY/BINARY	
APP. WELCH	6/6/67	CONV(MSB'S)	
PROJ. APP. WELCH	6/5/67	SIZE	D
USED ON		8243	REV B

CODE IDENT NO. 20886

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4W$ .  
 3. FOR DRILLING DWG SEE D8600-922.  
 FOR DIMENSIONAL DWG SEE C8600

REV	DESCRIPTION	DATE	APPD
D	8244		
A	6T-259; 12AWG5 17A ON LOGIC. C.P.B-3-67 RKM	8/3/67	[Signature]
B	6T-445; REVISED CARD NUMBERS & LINE TITLES ADDED. AS 10-25-67 AS	10/30/67	[Signature]



1	R1	RC07GFS6J	RESISTOR-560Ω, ALLEN BRADLEY
2	IC5	MC724P	INTEGRATED CIRCUIT-MOTOROLA
	IC2	MC724P	
	IC7		
5	IC4	MC786P	
	IC3		
	IC1		
1	C1	UK10-104	CAPACITOR-.1μf±80-20%, 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 922	PRINTED CIRCUIT (REV SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. R. SANBORNE 2-22-67  
 CC RKM 3-2-67  
 ENG. [Signature] 6-5-67  
 PROJ. AP. [Signature] 6/5/67

SCHEMATIC ASSEMBLY  
 RTL  
 UNITARY / BINARY  
 CONV. (LSB'S)

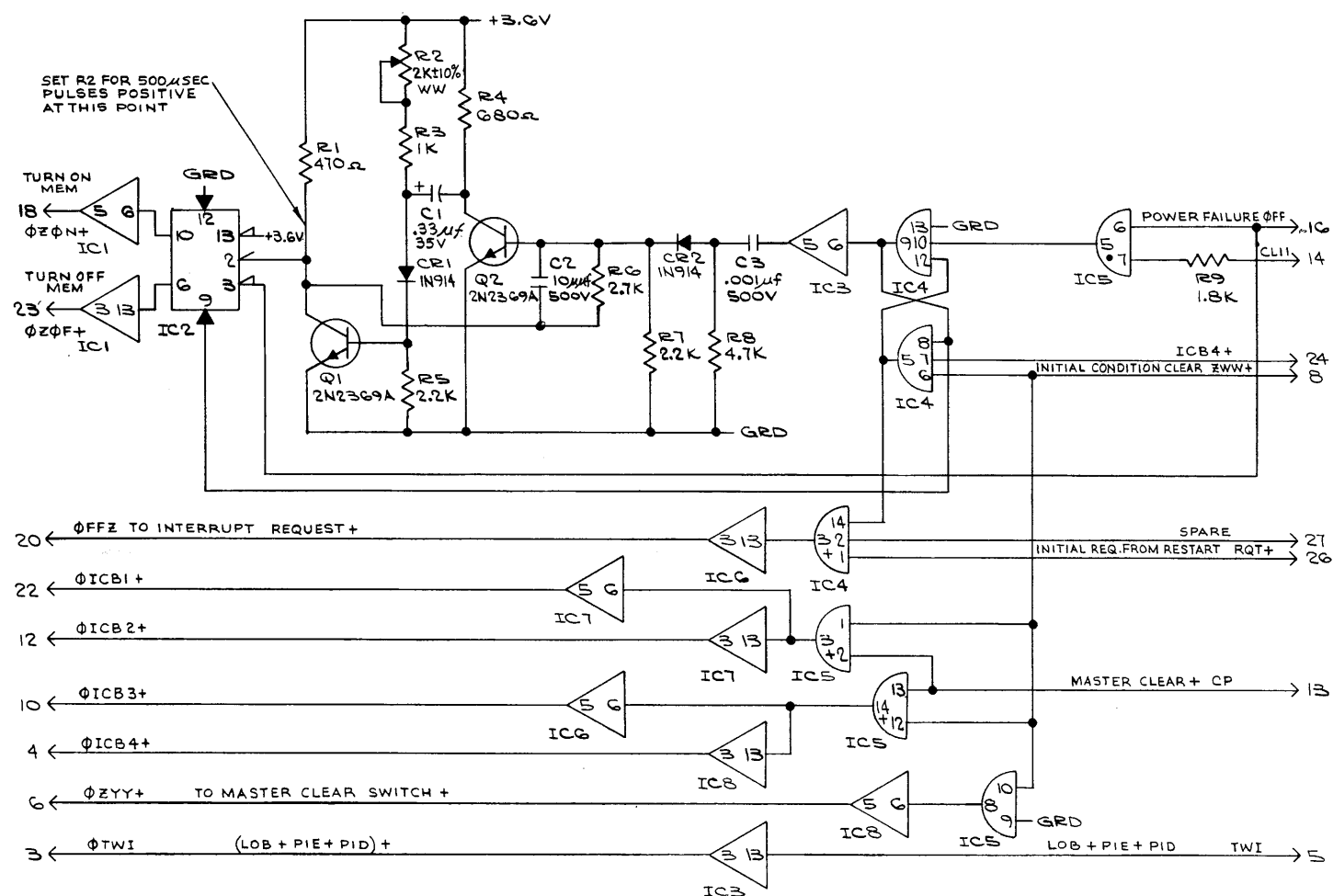
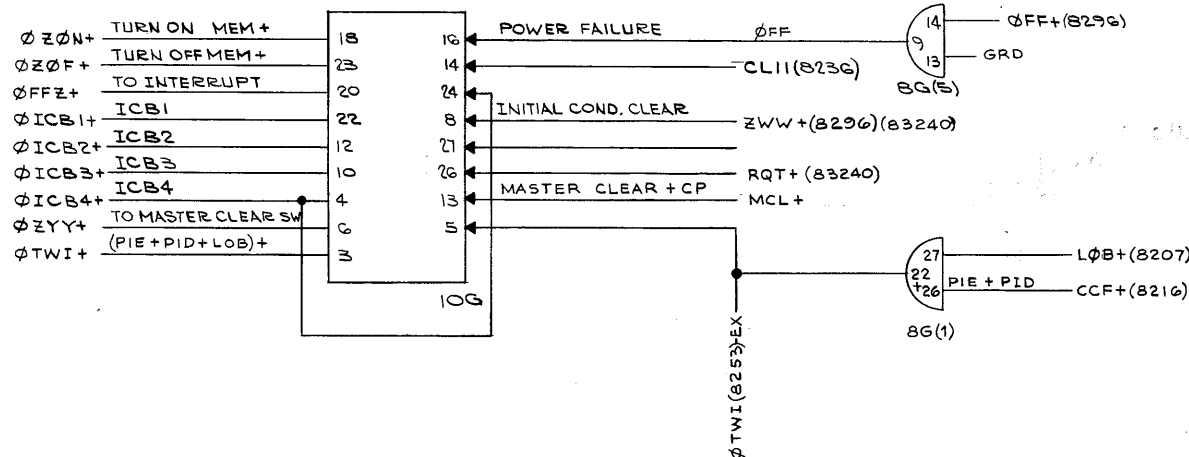
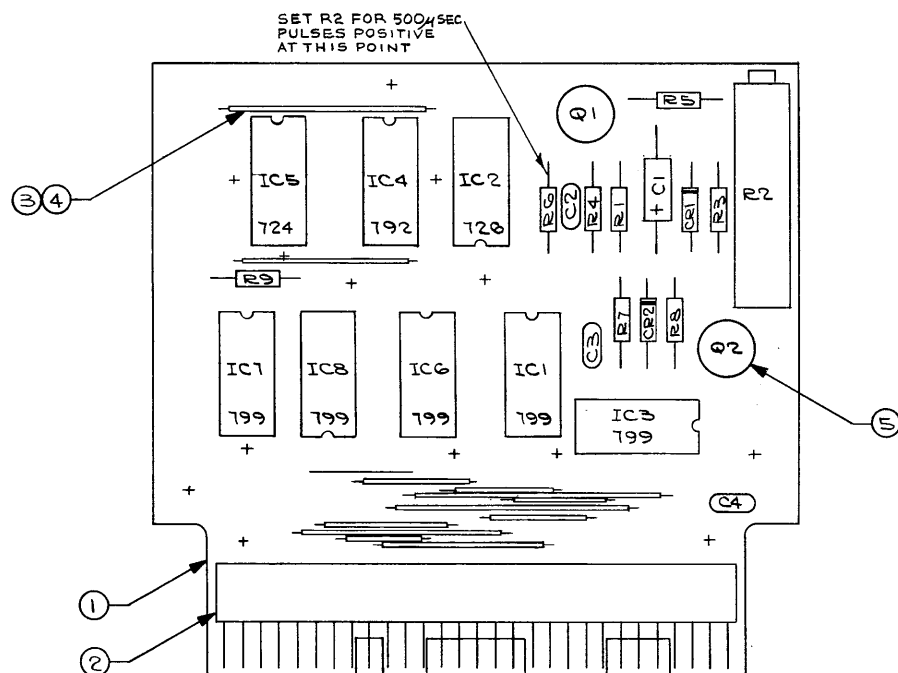
CODE IDENTIFY 2088G  
 USED ON

REV	DESCRIPTION	DATE	APPD
D	8244		

REV.	DESCRIPTION	DATE	APPRD.
D	8245		
A	67-445; ADDED VALUE FOR C1, ADDED LINE DESIGNATIONS & NOTES FOR SETTING POT. RKM 10-25-67	10/25/67	
B	68-199; (83240) ON PINS 8 & 26 OF LOGIC WAS (83185) FLP 4-18-68 RKM	4/18/68	

3. FOR DRILLING DWG. SEE DB600-972.  
FOR DIMENSIONAL DWG SEE CB900.

NOTES:  
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE ±5%, 1/4W.



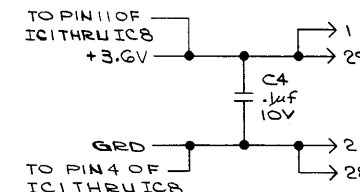
1	R9	RCOTGF182J	RESISTOR - 1.8K, ALLEN BRADLEY
1	R8	RCOTGF472J	RESISTOR - 4.7K, ALLEN BRADLEY
1	R6	RCOTGF272J	RESISTOR - 2.7K, ALLEN BRADLEY
2	R7	RCOTGF222J	RESISTOR - 2.2K, ALLEN BRADLEY
1	R4	RCOTGF681J	RESISTOR - 680Ω, ALLEN BRADLEY
1	R3	RCOTGF102J	RESISTOR - 1K, ALLEN BRADLEY
1	R2	200P-1-202	POTENTIOMETER - 2K ±10%, WW, BOUENS
1	R1	RCOTGF471J	RESISTOR - 470Ω, ALLEN BRADLEY
2	Q2	2N2369A	TRANSISTOR - FAIRCHILD
1	Q1	2N2369A	TRANSISTOR - FAIRCHILD
1	IC5	MC724P	INTEGRATED CIRCUIT - MOTOROLA
1	IC4	MC792P	
1	IC2	MC726P	
5	IC8	MC799P	
1	IC7		
1	IC6		
1	IC1		
2	CR2	IN914	DIODE - CLEVITE
1	CR1	IN914	DIODE - CLEVITE
1	C4	UK-10-104	CAPACITOR - .1µf ±80-20%, 10V, CRL
1	C3	ID-102	CAPACITOR - .001µf ±10%, 500V, CRL
1	C2	ID-100	CAPACITOR - .01µf ±10%, 500V, CRL
1	C1	150D334X0035A2	CAPACITOR - .33µf ±20%, 35V, CRL
2	5	B10369	UNIPAD
AR	4	AWG 24	SLEEVING - TEFLON, THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 972	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

**Systems Engineering Laboratories**

6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR	W. J. ...	6-2-67	SCHEMATIC & ASSEMBLY RTL POWER FAILURE CONTROL
CHK	RKM	6-6-67	
ENGR	E. ...	6-23-67	
PROJ	W. ...	6/2/67	
APPD	W. ...	6/2/67	
NEXT ASSY			

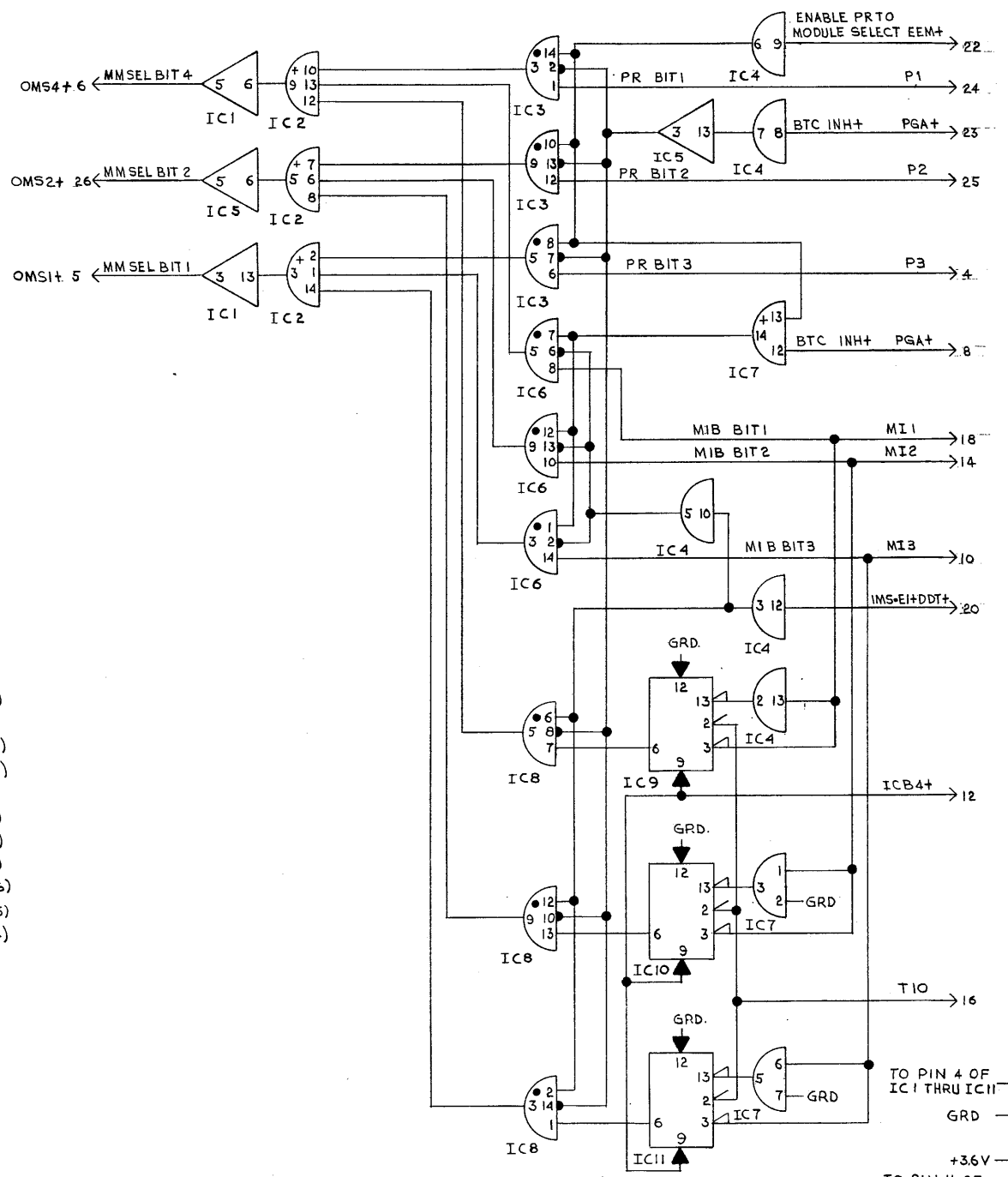
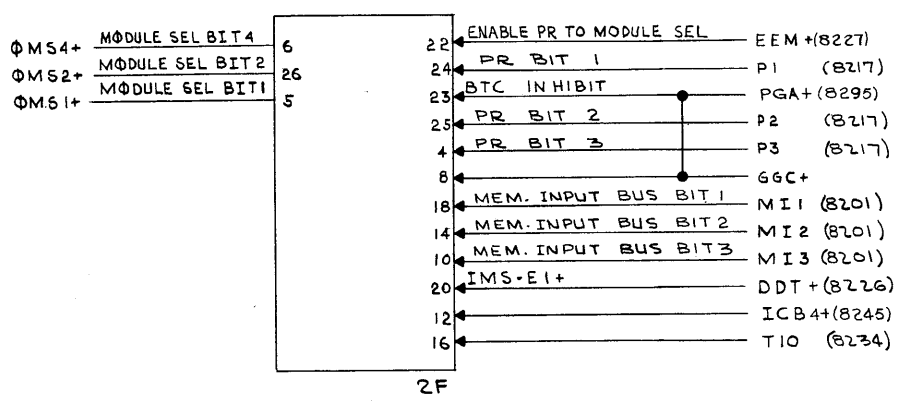
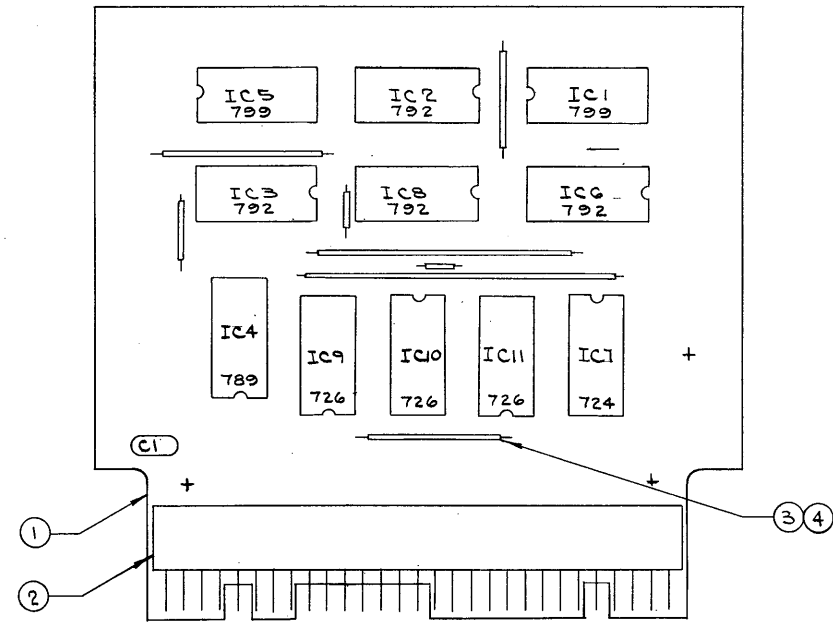
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SIZE	D	8246	REV	B
REV	A	G7-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-25-67	DATE	10/30/67
REV	B	G8-199; DESIGNATION ON PIN 25 OF SCHEMATIC WAS P1 JWM 4-18-68	DATE	4/18/68

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-934.  
 FOR DIMENSIONAL DWG SEE C8600.



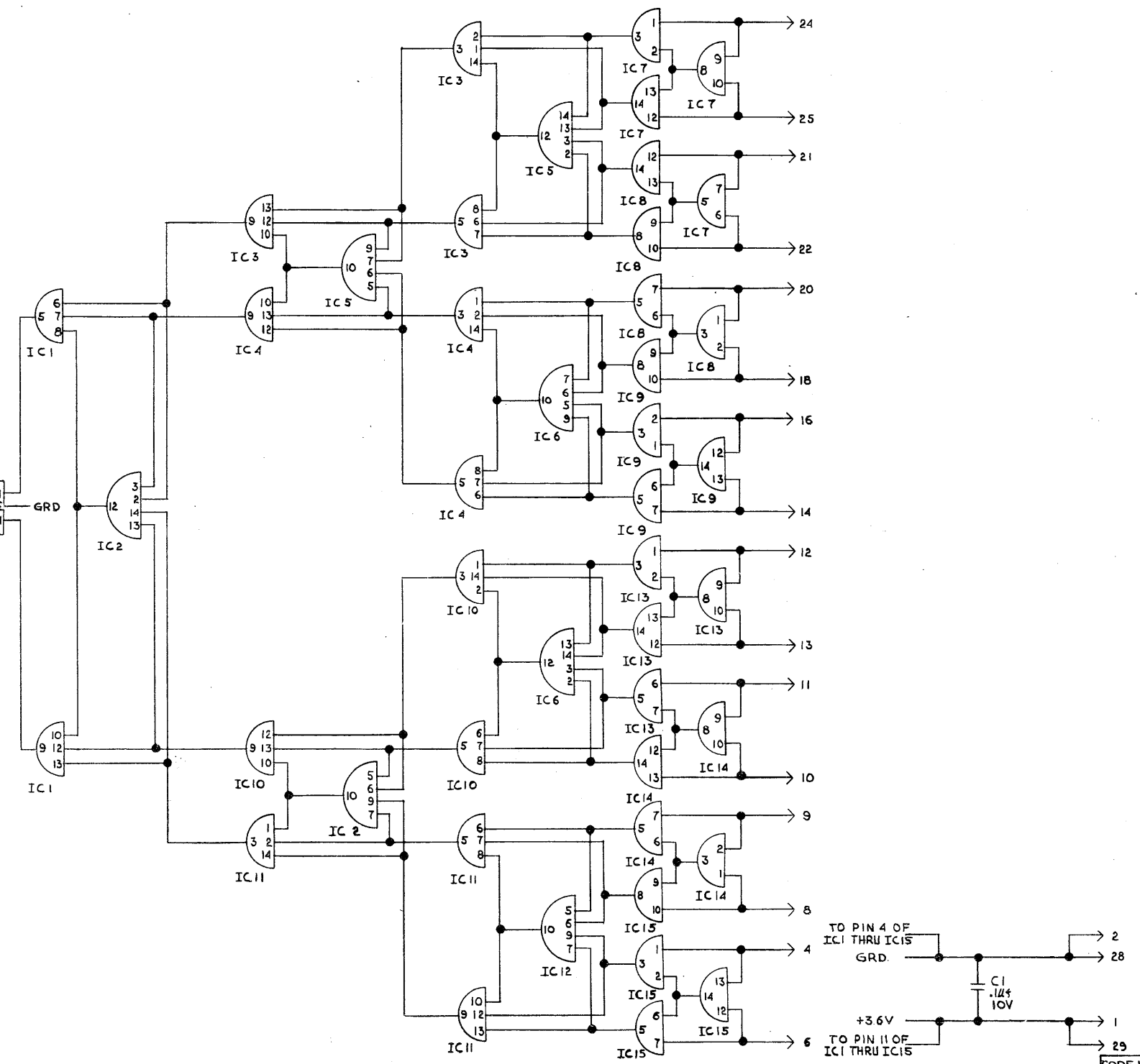
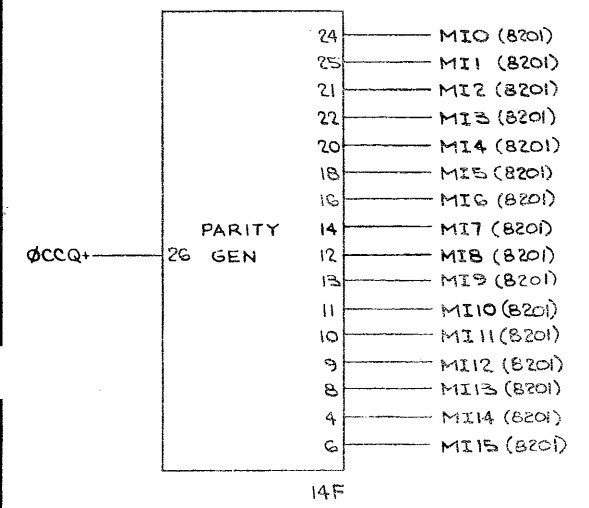
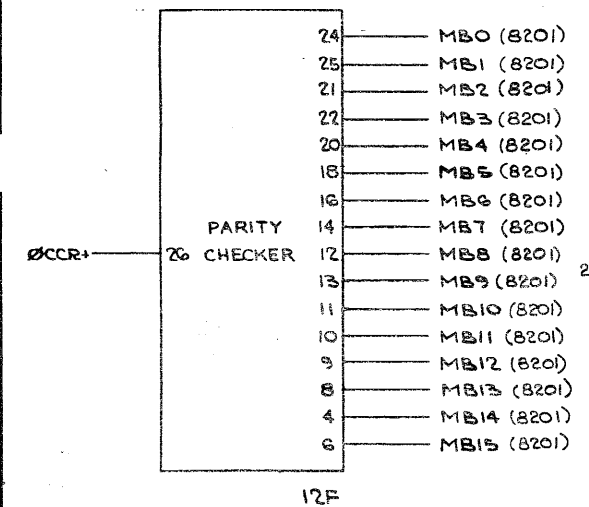
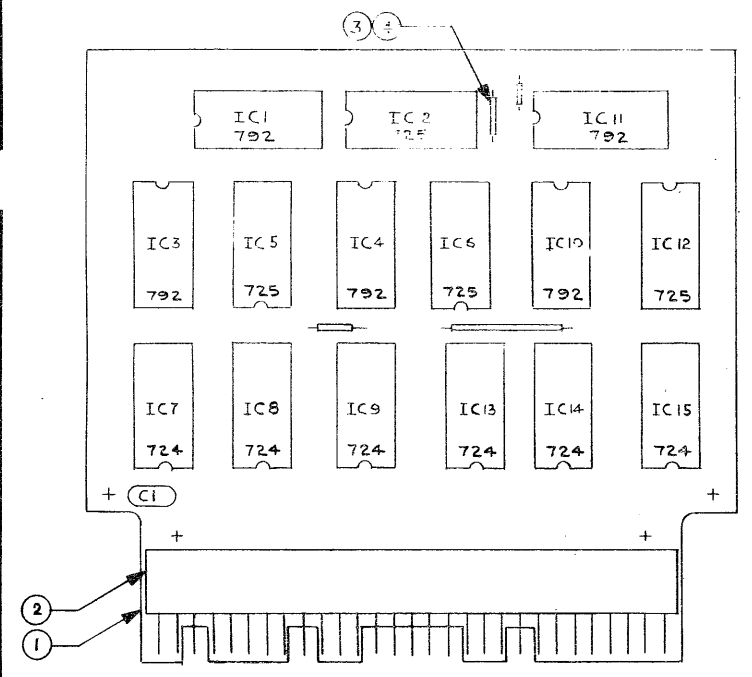
3	IC11	MC 724 P	INTEGRATED CIRCUIT-MOTOROLA	
	IC10	MC 726 P		
1	IC7	MC 724 P		
1	IC4	MC 789 P		
4	IC8	MC 792 P		
	IC6	MC 792 P		
	IC3	MC 792 P		
2	IC5	MC 799 P		
	IC1	MC 799 P		
1	C1	UK10-104		CAPACITOR-.1uF+80-20%,10V,CRL
AR	4	AWG 24		SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED	
1	2	00-7022-029-000-001	CONNECTOR-ELCO	
1	1	SEL 934	PRINTED CIRCUIT (REV. SEE AS1140)	

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. R SANBORNE	2-15-67
CK. RKM	2-24-67
ENG. C. Villanti	6-8-67
APP. [Signature]	6/8/67
APP. [Signature]	6/8/67
CODE IDENT NO	20886
SIZE	D
REV	B

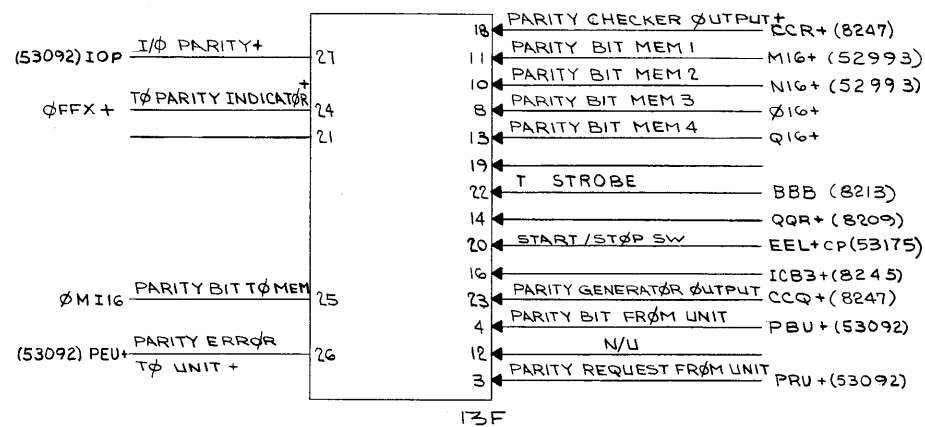
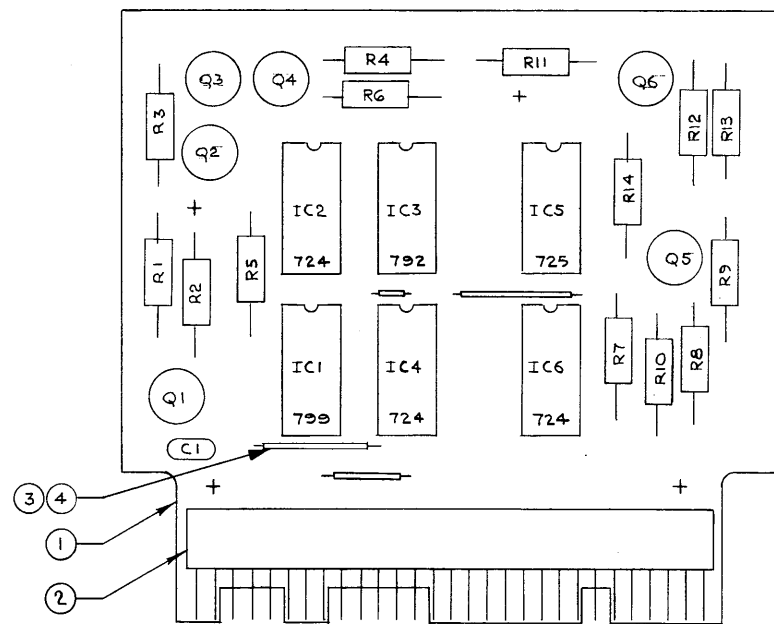
SCHMATIC & ASSEMBLY  
 RTL MEMORY MODULE  
 SELECT DRIVER

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT  
 2. FOR DRILLING DWG SEE D8600-B79 FOR DIMENSIONAL DWG SEE C 8600.

SIZE	D	8247	REV	DESCRIPTION	DATE	APP'D
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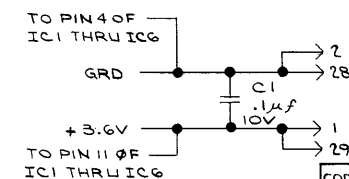
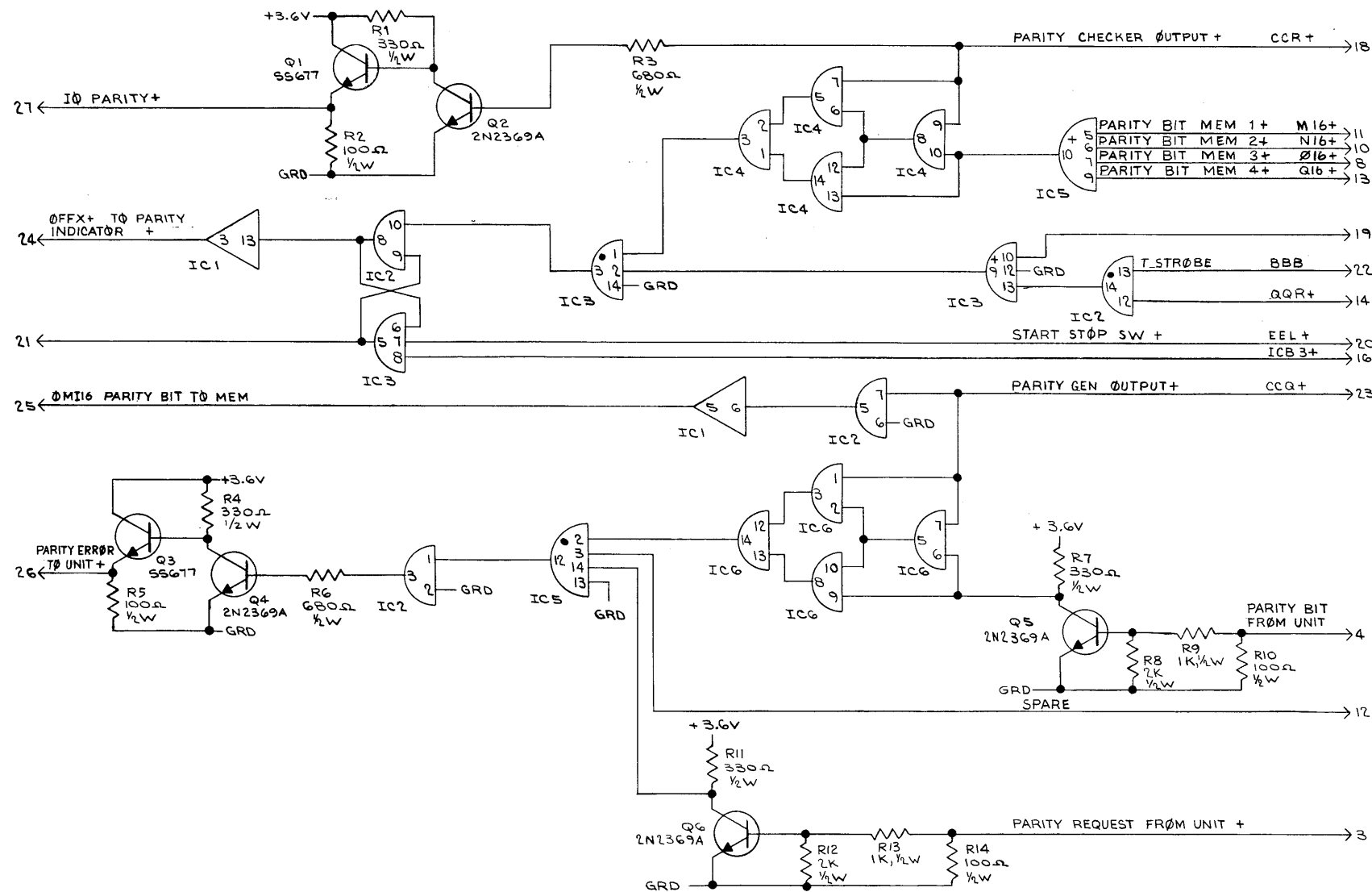


6	IC15 IC14 IC13 IC9 IC8 IC7	MC 724P	INTEGRATED CIRCUIT-MOTOROLA				
4	IC12 IC6 IC5 IC2	MC725P					
5	IC11 IC10 IC4 IC3 IC1	MC 792P					
1	C1	UK 10-104		CAPACITOR-.1μf±80-20%,10V,CRL			
AR	4	AGW 24	SLEEVING-TEFLON, THINWALL				
AR	3	AGW 24	WIRE-SOLID COPPER, TINNED				
1	2	00-7022-029-000-001	CONNECTOR-ELCO				
1	1	SEL 879	PRINTED CIRCUIT(REV SEE A51140)				
-1	ITEM	DWG. OR PART NO.	DESCRIPTION				
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA							
DR	R SANBORNE	2-13-67	SCHEMATIC & ASSEMBLY RTL16 BIT PARITY GEN / CHECK				
CL	R K M	2-28-67					
PROJ.	E. Villante						
APP.	L. King						
CODE IDENT NO.	20886		SIZE	D	8247	REV	
USED ON			DATE	6/7/67			



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5%, 1/4W.  
 3. FOR DRILLING DWG SEE D8600-931 FOR DIMENSIONAL DWG SEE C 8600

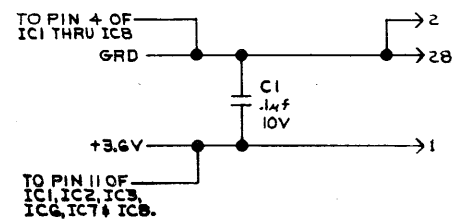
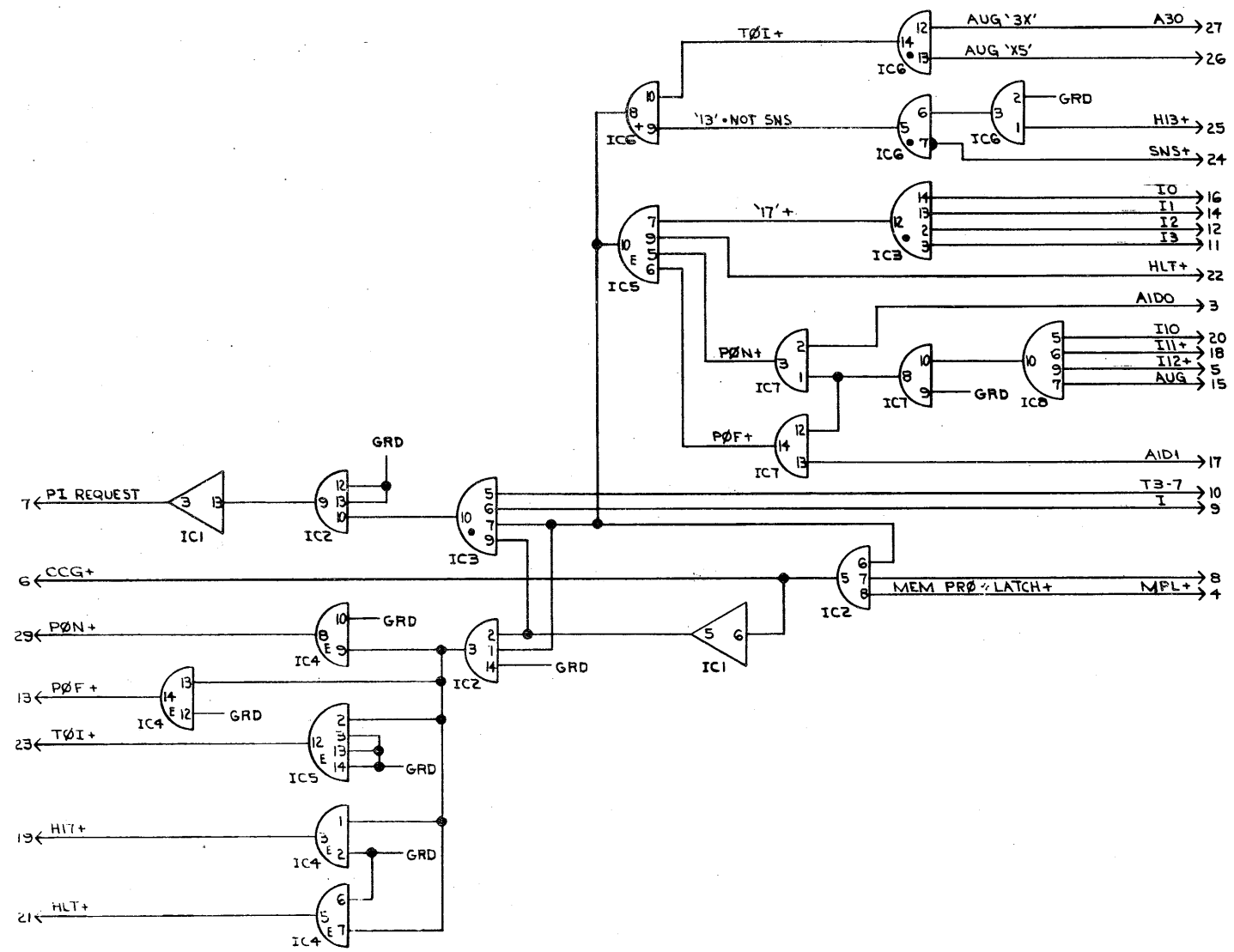
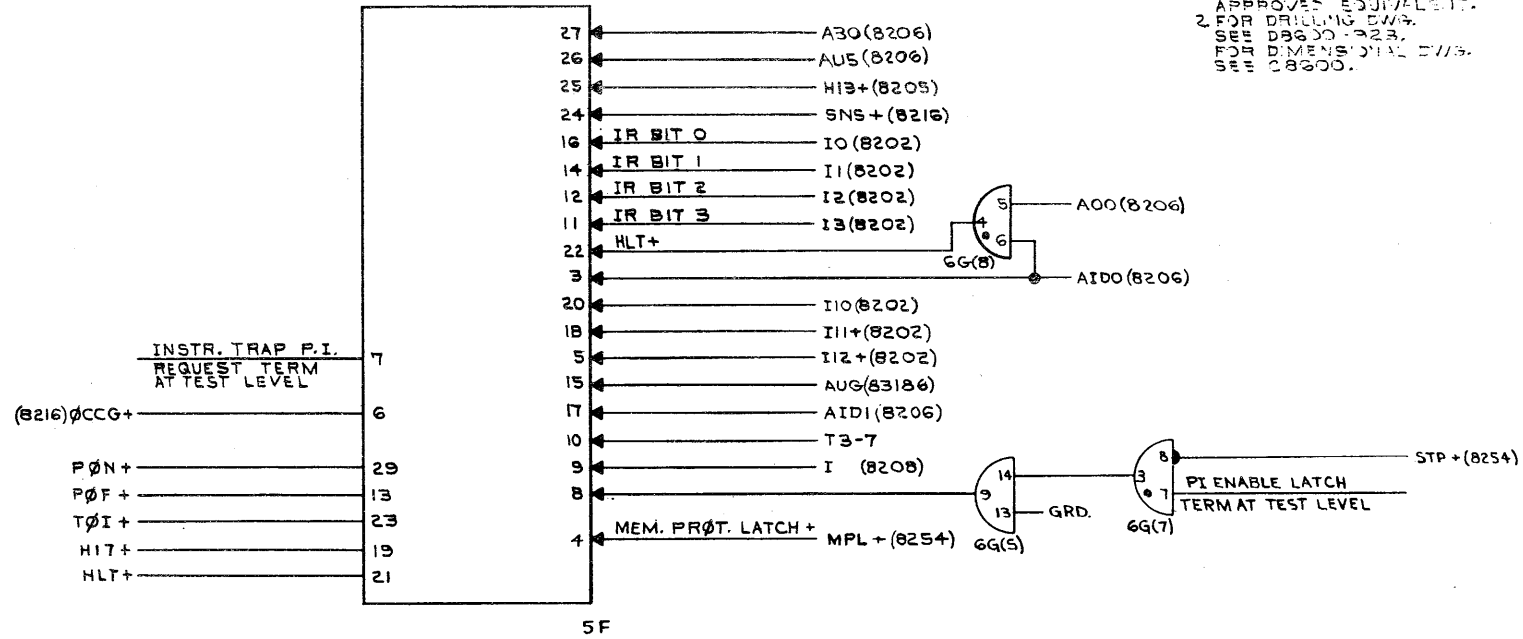
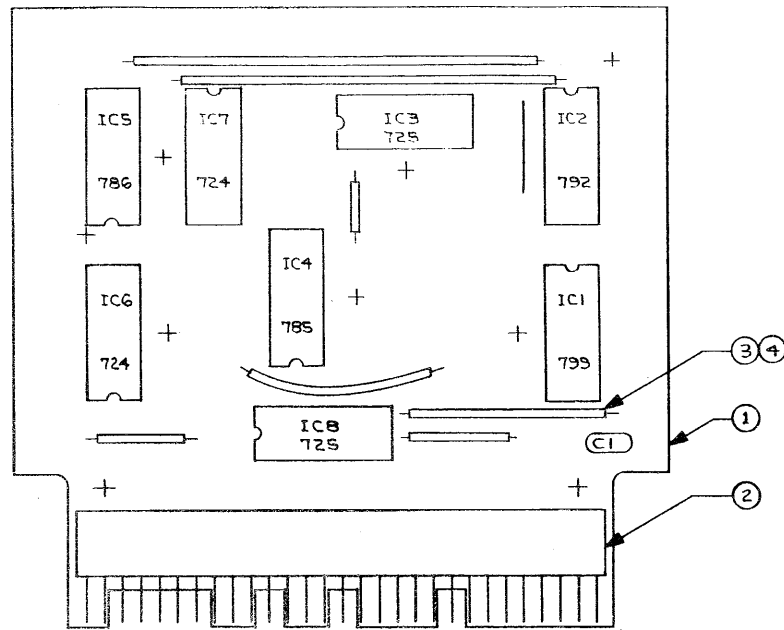
REV	DESCRIPTION	DATE	APPD
D	8248		C
A	67-204; REVISED LOGIC ON PINS 21 & 24 BB 6-27-67 RKM	7/12/67	
B	67-445; ADDRESSES REVISED & LINE TITLES ADDED C.THEW 10-25-67 CW	10/29/67	
C	68-122; Q1 & Q3 WERE 2N3904. CEM 3/8/68 F.L.P.	3/13/68	



2	R13	RC20GF102J	RESISTOR-1K, 1/2W, ALLEN BRADLEY
2	R9	RC20GF202J	-2K, 1/2W,
	R12		
	R8		
2	R6	RC20GF681J	-680Ω, 1/2W,
	R3		
4	R10	RC20GF101J	-100Ω, 1/2W,
	R5		
	R2		
4	R11	RC20GF331J	RESISTOR-330Ω, 1/2W, ALLEN BRADLEY
	R7		
	R4		
	R1		
4	Q6	2N2369A	TRANSISTOR - FAIRCHILD
	Q5		
	Q4		
	Q2		
2	Q3	55677	TRANSISTOR - MOTOROLA
	Q1		
1	IC5	MC 725P	
1	IC3	MC 792P	
	IC6		
3	IC4	MC 724P	
	IC2		
1	IC1	MC 799P	
1	C1	UK10-104	CAPACITOR -.1µF-80%-20%10VCRCL
AR	4	AWG 24	SLEEVING - TEFLON, THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-7022-019-000-001	CONNECTOR - ELCO
1	1	SEL931	PRINTED CIRCUIT - (REV. SEE A5140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	F.L. SIENA	2-15-67	SCHEMATIC & ASSEMBLY
CC.	RKM	2-28-67	
ENG.	E. W. WINT	6/7/67	RTL PARITY CONTROL
PROJ. MGR.	W. C. CROOK	6/7/67	
APP.	L. KING	6/7/67	
CODE IDENT NO	20886	SIZE	D
USED ON			C

SIZE	D	8249	REV.	A
REV.	D	DESCRIPTION	DATE	APPD
A		GT-445; ADDED GG(S) (6667) ADDRESSES REVISED AND FOR DRILLING DIMS. SEE DB 30-923. FOR DIMENSIONS SEE 28000.	1/11/67	W

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DIMS. SEE DB 30-923. FOR DIMENSIONS SEE 28000.



2	IC7	MCT24P	INTEGRATED CIRCUIT - MOTOROLA
1	IC6	MCT78GP	
1	IC5	MCT78GP	
1	IC4	MCT785P	
2	IC8	MCT25P	
1	IC3	MCT25P	
1	IC2	MCT92P	
1	IC1	MCT99P	
1	C1	UK-10-104	CAPACITOR - .1µf +80-20%, 10V, CRL
AR	4	AWG 24	SLEEVING - TEFLON, THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-7022-025-000-X1	CONNECTOR - ELCO
1	1	923	PRINTED CIRCUIT (FOR REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

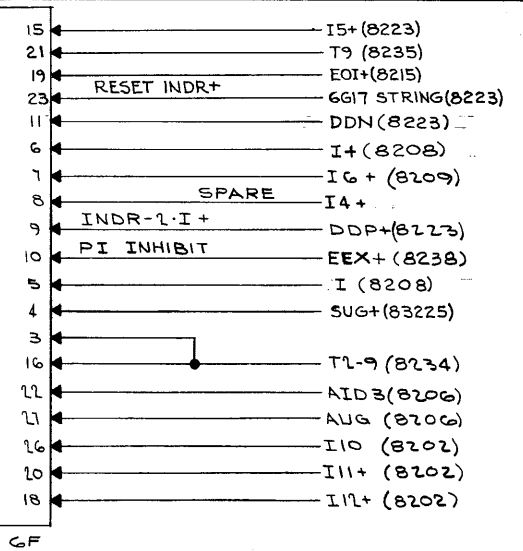
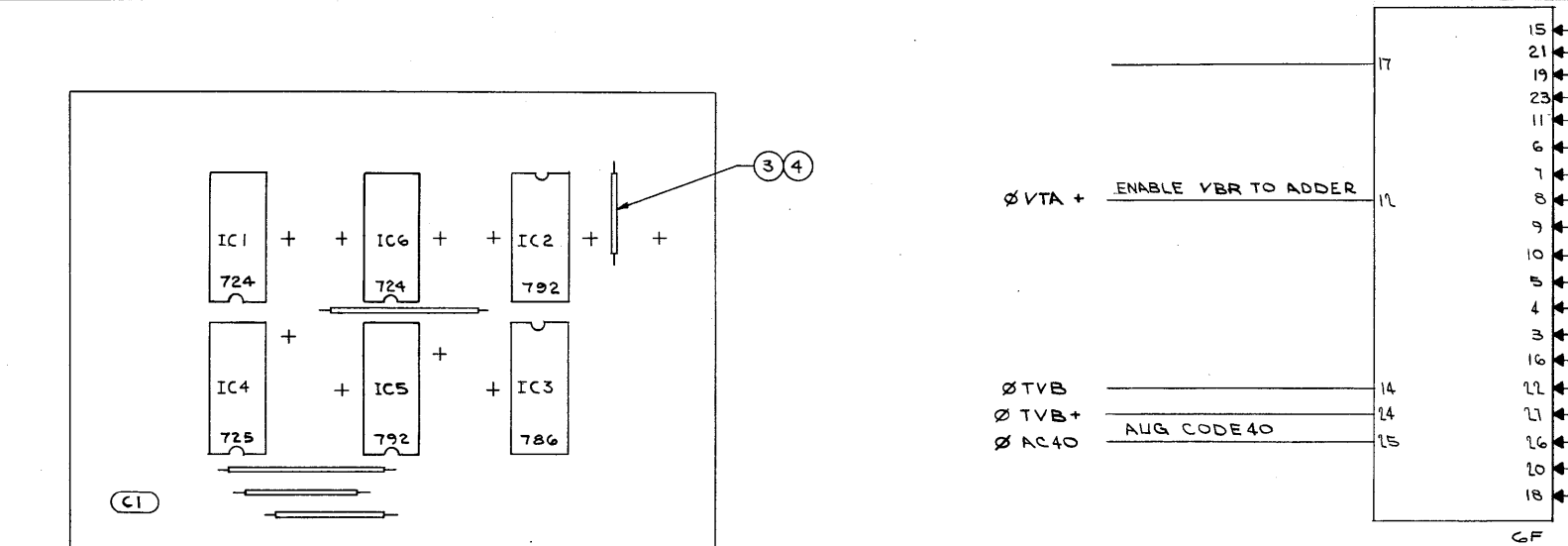
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**Systems Engineering Laboratories**  
 6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR	h.m. l.p.s.	9-1-67
CHK	RKM	9-5-67
ENGR	<i>[Signature]</i>	9-27-67
PROJ	<i>[Signature]</i>	9-27-67
APPD	<i>[Signature]</i>	9-27-67
NEXT ASSY		

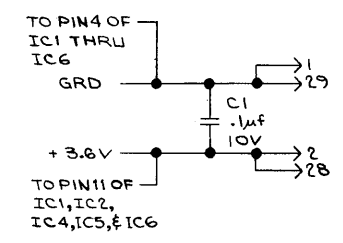
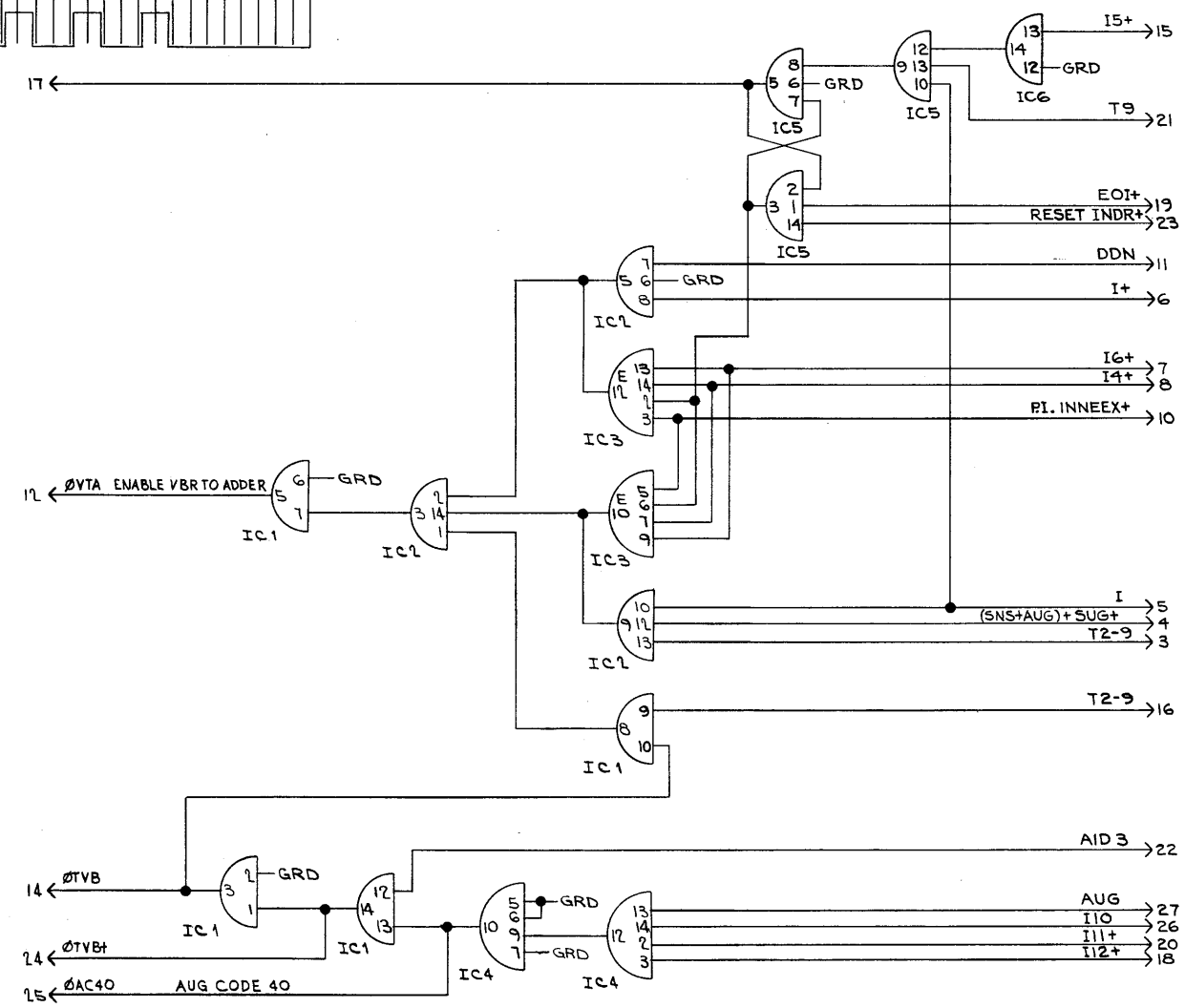
SCHEMATIC & ASSEMBLY  
 RTL INSTRUCTION TRAP

CODE IDENT NO.	SIZE	REV.
20886	D	8249
		A



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT  
 2. FOR DRILLING DWG SEE DB600-904.  
 FOR DIMENSIONAL DWG SEE C8600

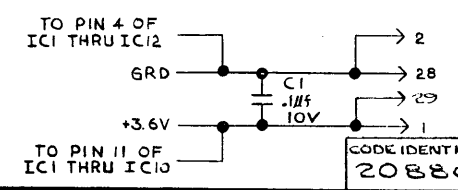
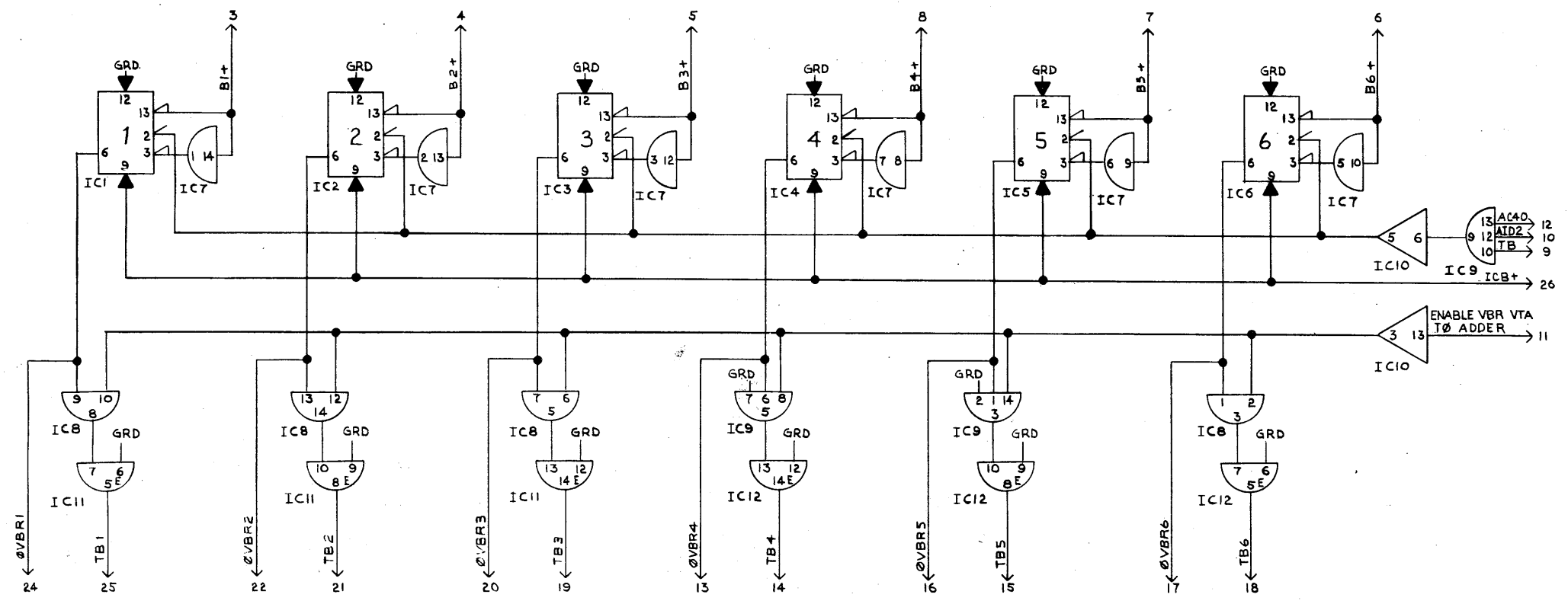
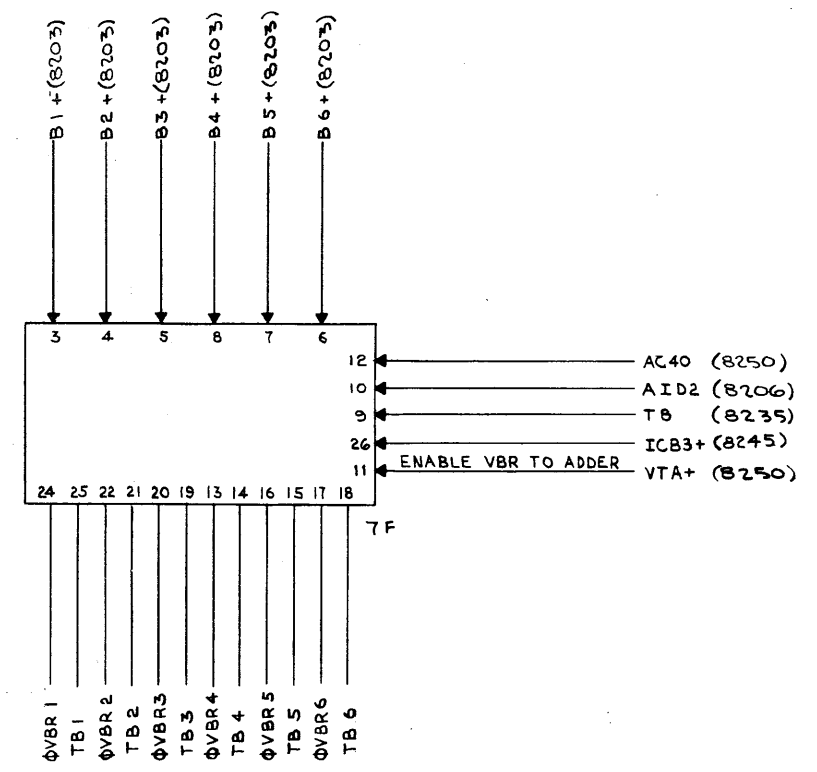
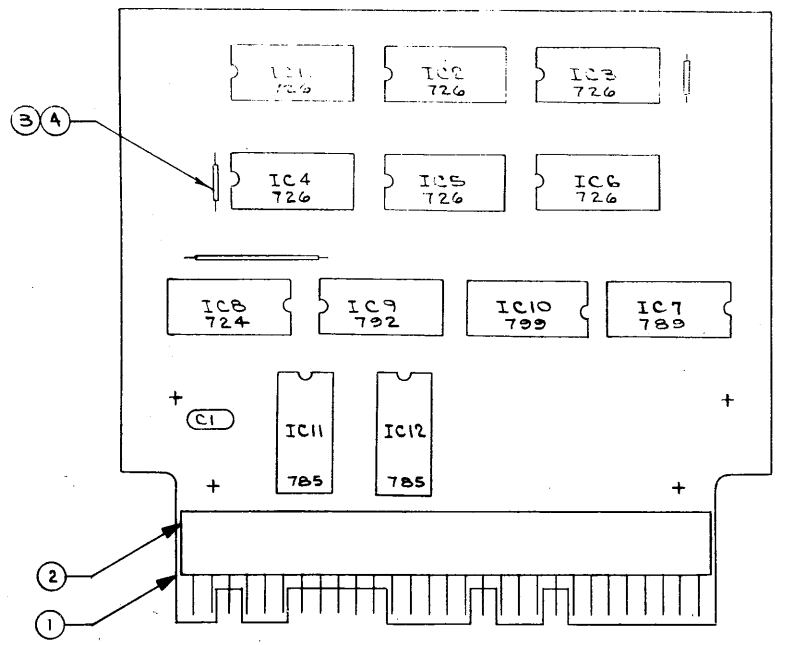
REV	DESCRIPTION	DATE	APPD
D	8250		C
A	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-25-67	10/13/67	[Signature]
B	68-220; ADDED IC5 AND IC6. <i>W.P. Henschel</i> 4-17-68 RKM	4/18/68	[Signature]
C	68-199; DESTINATION OF PIN 4 ON LOGIC WAS AUG2+ (83186). <i>W.P. Henschel</i> 4-17-68 RKM	4/19/68	[Signature]



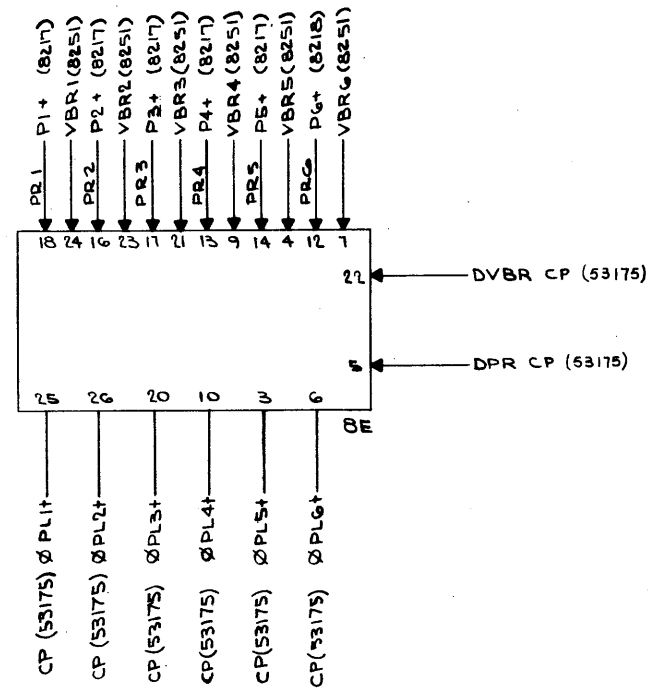
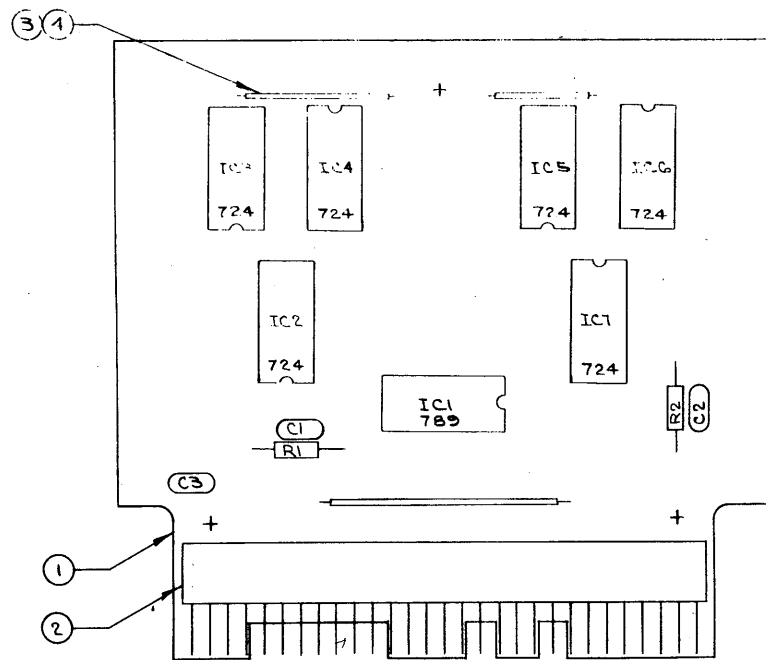
QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
1	IC4	MCT25P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MCT86P	
2	IC5	MCT92P	
	IC2		
2	IC6	MCT24P	
	IC1		
1	C1	UK10-104	CAPACITOR - .1µf +80-20%, 10V, CRL
AR 4	AWG 24		SLEEVING-TEFLON, THINWALL
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1	2	00-1012-029-000-001	CONNECTOR - ELCO
1	1	SEL 904	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
DR.	F.L. SIENA	2-13-67	SCHEMATIC & ASSEMBLY RTL VARIABLE BASE REGISTER CONTROL
CC.	RKM	2-28-67	
ENG.	E. Villanti		
PROJ. APP.	W. Kinsler	4/7/67	
APP.	A. Kinsler	4/7/67	
CODE IDENT NO.	20886		
SIZE	D	8250	REV C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE 08600-906  
 FOR DIMENSIONAL DWG SEE C8600.

SIZE	D	8251	REV	A
REV	A	67-445; ADDRESSES REVISED LINE TITLES ADDED C.THEW 10-26-67	DATE	10/25/67

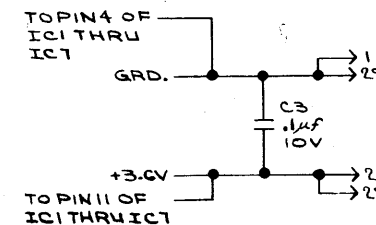
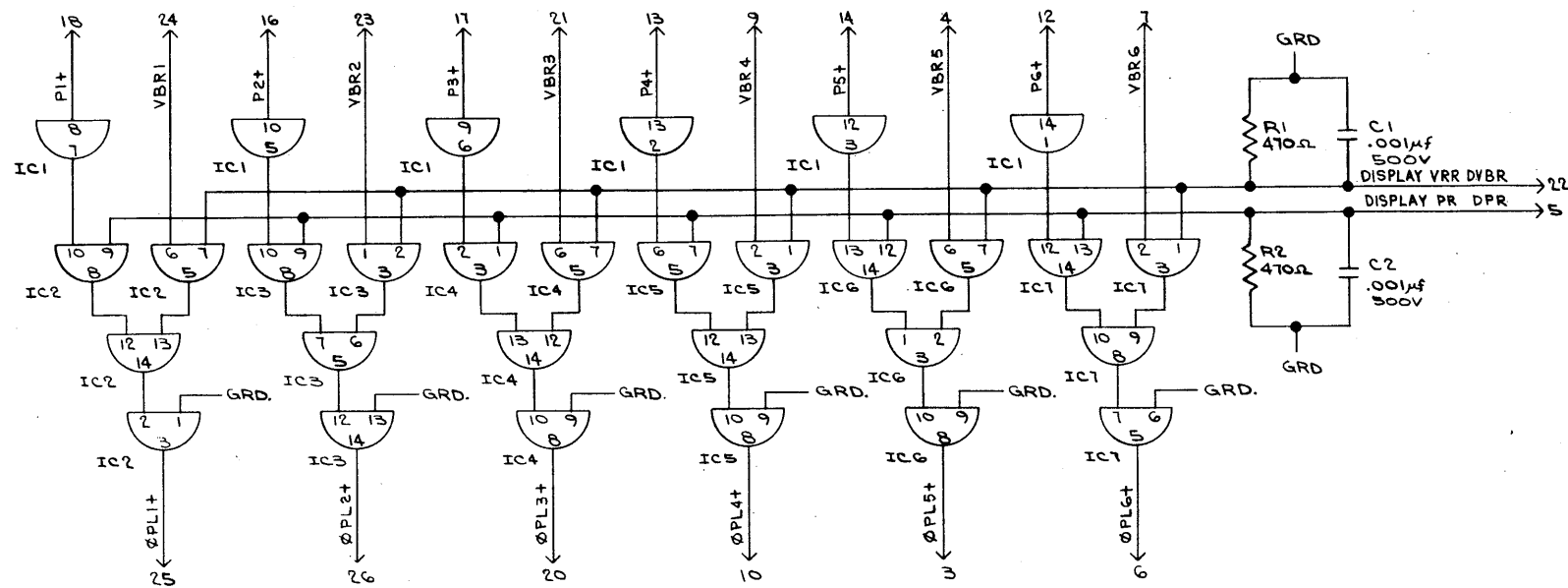


2	IC12	MC 785P	INTEGRATED CIRCUIT-MOTOROLA
	IC11	MC 785P	
1	IC10	MC 799P	
1	IC9	MC 792P	
1	IC8	MC 724P	
1	IC7	MC 789P	
6	THRU IC1	MC 726P	
1	C1	UK10-104	CAPACITOR-.1uF+80-20%,10V, CRL
AR	4	AWG 24	GLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 906	PRINTED CIRCUIT(REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	R.SANBORNE	2-16-67	SCHEMATIC ASSEMBLY RTL VARIABLE BASE REGISTER-REGISTER
CK	RKM	3-1-67	
ENG.	E. Villart		
PROJ.	W. L. ...	6/7/67	
APP.			
CODE IDENT NO.	20886	REV	D
USED ON		DATE	8251
		REV	A

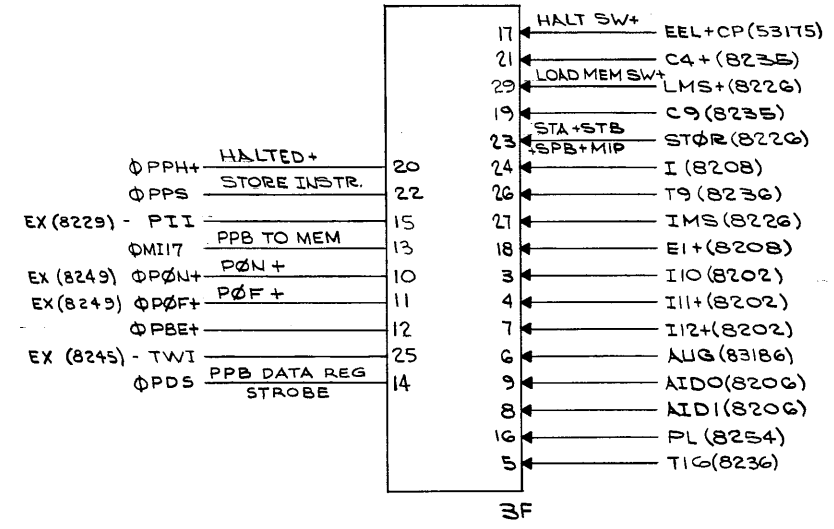
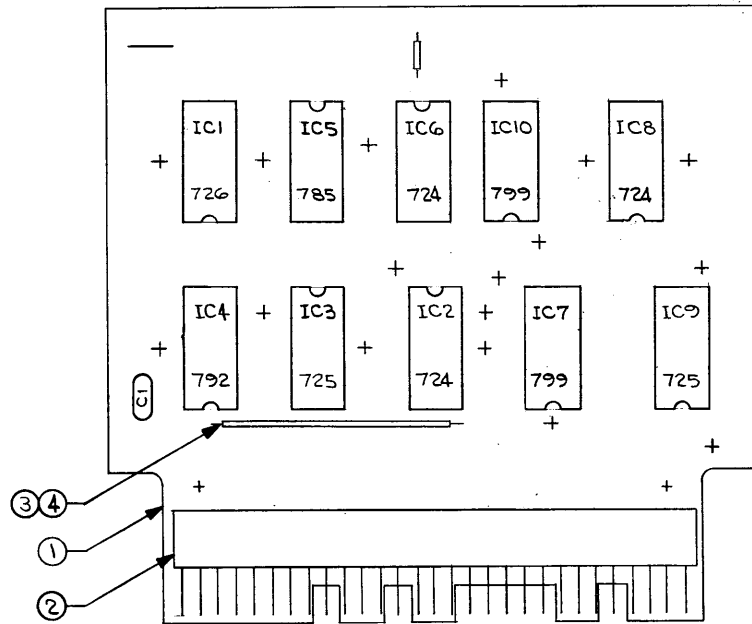


- NOTES:**
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
  2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5%, 1/4W.
  3. FOR DRILLING DWG. SEE D8600-905 FOR DIMENSIONAL DWG. SEE C8600
  4. ADD: 8E25 TO 8E18  
8E24 TO 8E16  
8E20 TO 8E17  
8E10 TO 8E13  
8E3 TO 8E14  
8E6 TO 8E12  
WHEN NO VBR INSTALLED

REV	DESCRIPTION	DATE	APP'D
A	67-445 ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-26-67	10/30/67	JN

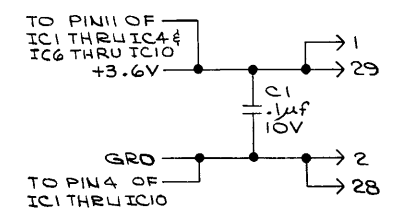
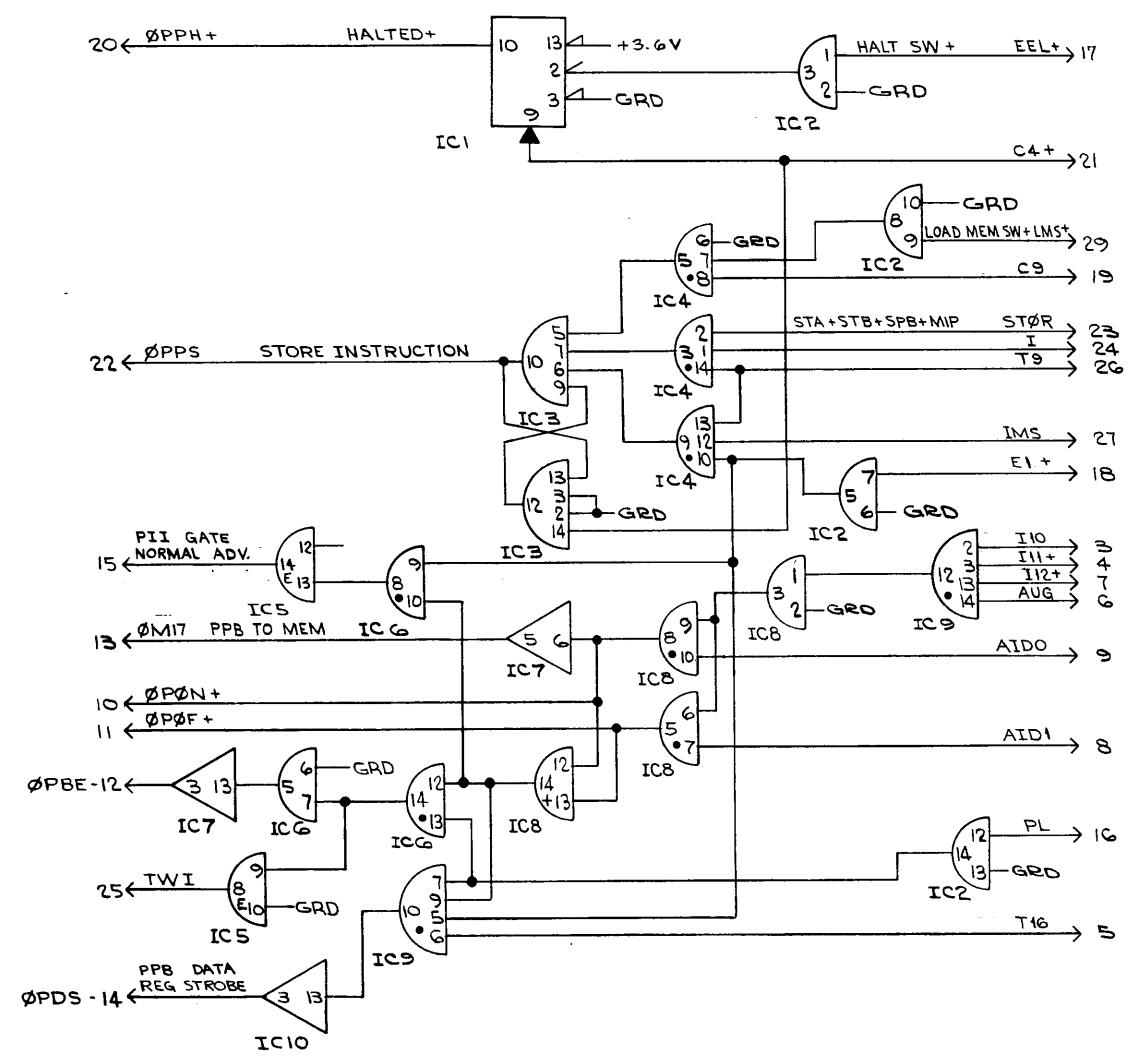


2	R2 R1	RC01GF471J	RESISTOR-470Ω, ALLEN BRADLEY
6	IC7 IC6 IC5 IC4 IC3 IC2	MC 724P	INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC 789P	
1	C3	UK10-104	CAPACITOR-.1μf±80-10%,10V,CRL
2	C2 C1	1D102	CAPACITOR-.001μf±10%,500V,CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	80-1021-019-000-001	CONNECTOR-ELCO
1	1	SEL 905	PRINTED CIRCUIT-(REV.SEE A51140)
1	ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DE	F.L.SIENA	2-16-67	SCHEMATIC & ASSEMBLY RTL-VBR DISPLAY GATES
CC	RKM	3-2-67	
ENG.	J. Villarta		
PROJ. APP.	Allen D.	6/1/67	
APP.	R. Kingle	6/1/67	CODE IDENT NO 20886
USED ON			SIZE D
			8252
			REV A



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D 8600-967.  
 3. FOR DIMENSIONAL DWG. SEE C 8600

SIZE	REV.	DESCRIPTION	DATE	APPD.
D		8253		B
A		67-445; ADDRESSES REVISED AND LINE TITLES ADDED AS. 10-26-67	10/29/67	[Signature]
B		68-199; ADDED DESTINATION ON PIN 5. W.A. [Signature] 4-18-68 RKM	4/18/68	[Signature]



2	IC10 IC7	MC799P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC5	MC785P		
1	IC4	MC792P		
2	IC9 IC3	MC725P		
3	IC8 IC6 IC2	MC724P		
1	IC1	MC726P		
1	C1	UK-10-104		CAPACITOR-.1uF±80-20%,10V,CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL		
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED		
1	2	00-7022-029-000-001		CONNECTOR-ELCO
1	1	SEL 967	PRINTED CIRCUIT (REV. SEE AS1140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	

**Systems Engineering Laboratories**  
 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

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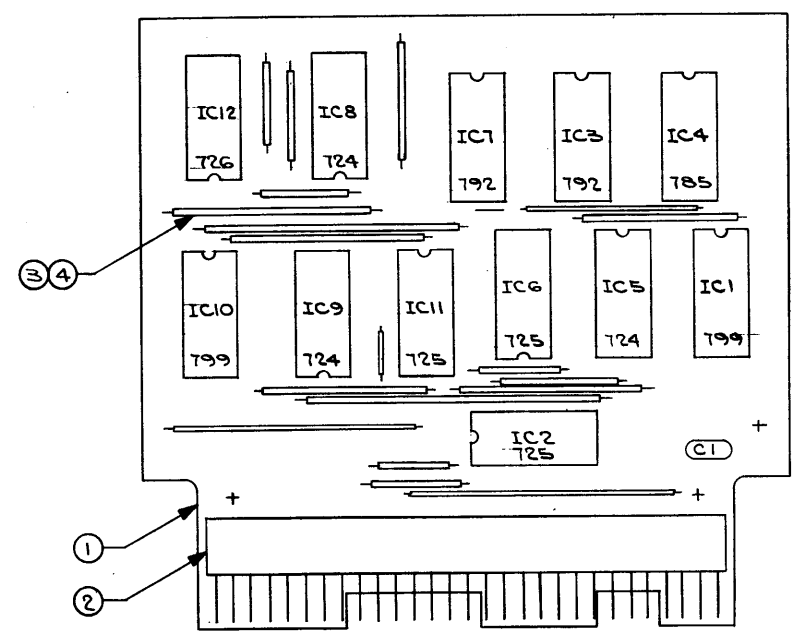
DR [Signature]	6-1-67	SCHEMATIC & ASSEMBLY RTL PROGRAM PROTECT LOGIC 1
CHK RKM	7-14-67	
ENGR [Signature]	9-7-67	
PROJ [Signature]	9/9/67	
APPD [Signature]	9/18/67	
NEXT ASSY		

CODE IDENT NO.	SIZE	REV.
20886	D	B
8253		

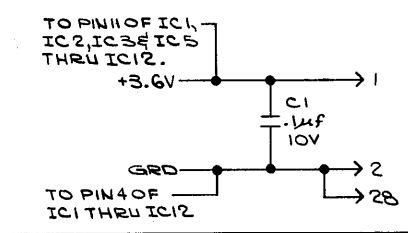
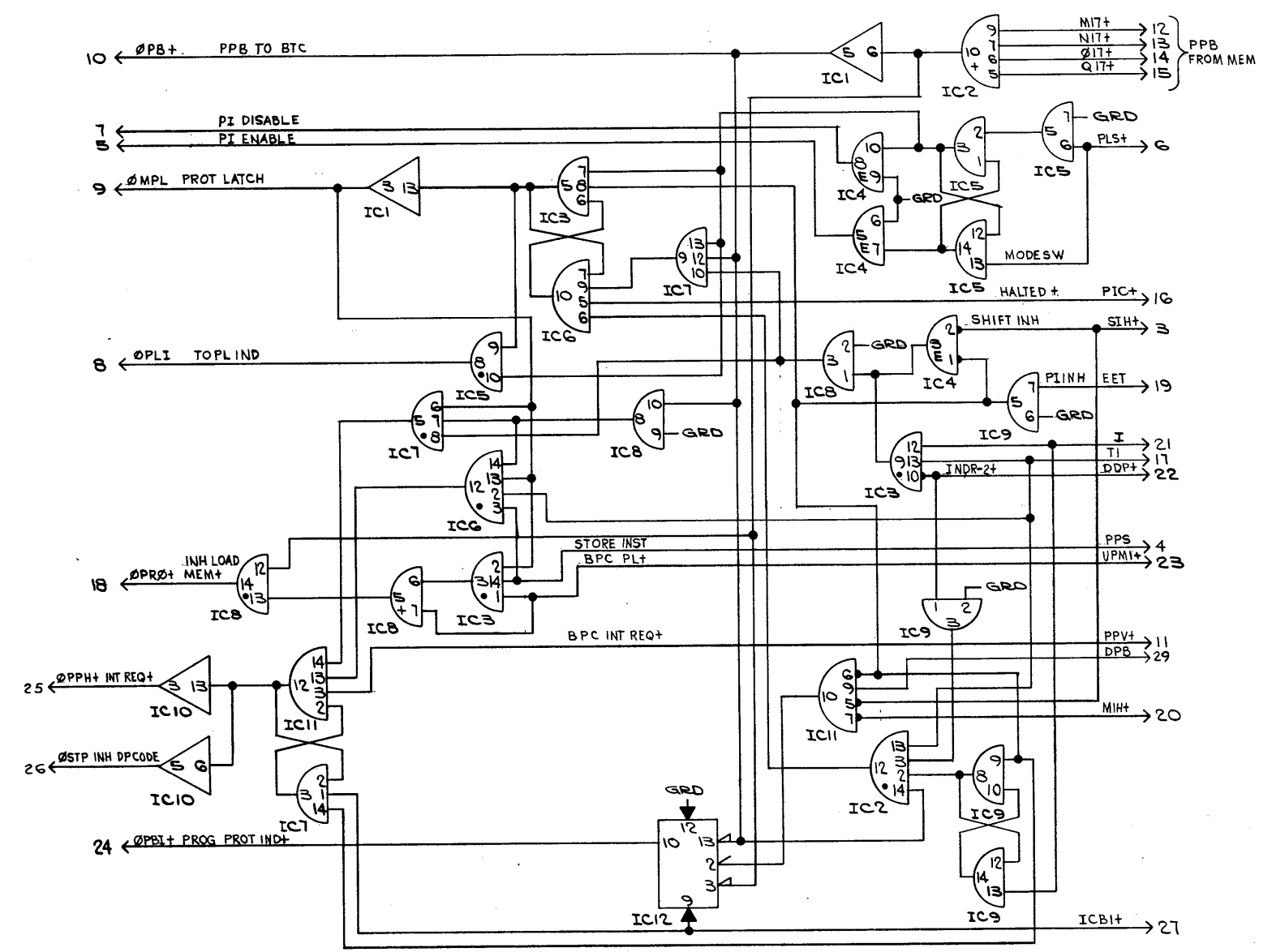
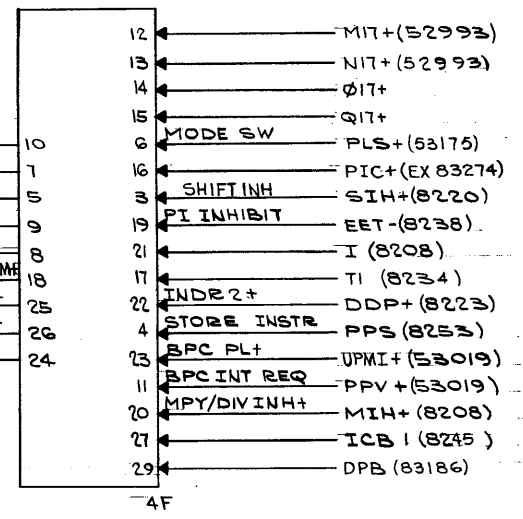


NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-968.  
 FOR DIMENSIONAL DWG. SEE C8600.

SIZE	REV.	DESCRIPTION	DATE	APPD	REV.
D		8254			B
A		67-445; ADDRESSES REVISED AND LINE TITLES ADDED E.P.C. 10-26-67	10/26/67		
B		68-199; DESTINATION OF PIN 16 ON LOGIC SCHEMATIC WAS PPH+(8253) WAS PPH+(8253) RKM 4-19-68	4/19/68		



∅ PB+ PPB TO BTC+  
 TERMINATE AT PI DISABLE  
 TEST LEVEL PI ENABLE  
 ∅ MPL+ TO PL IND+  
 ∅ PLI+ INHIBIT LOAD MEM+  
 ∅ PR∅+ INT REQUEST+  
 TERMINATE AT ∅ PPH+  
 TEST LEVEL ∅ STP+  
 ∅ PBI+ PPB IND.+



1	IC12	MCT26P	INTEGRATED CIRCUIT-MOTOROLA
3	IC8	MCT24P	
	IC5		
1	IC4	MCT85P	
2	IC7	MCT92P	
	IC3		
3	IC6	MCT25P	
	IC2		
2	IC10	MCT99P	
	IC1		
1	C1	UK-10-104	
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	DD-1022-023-000-001	CONNECTOR-ELCO
1	1	SEL 968	PRINTED CIRCUIT (REV. SEE A51140)
-1			DWG. OR PART NO. DESCRIPTION

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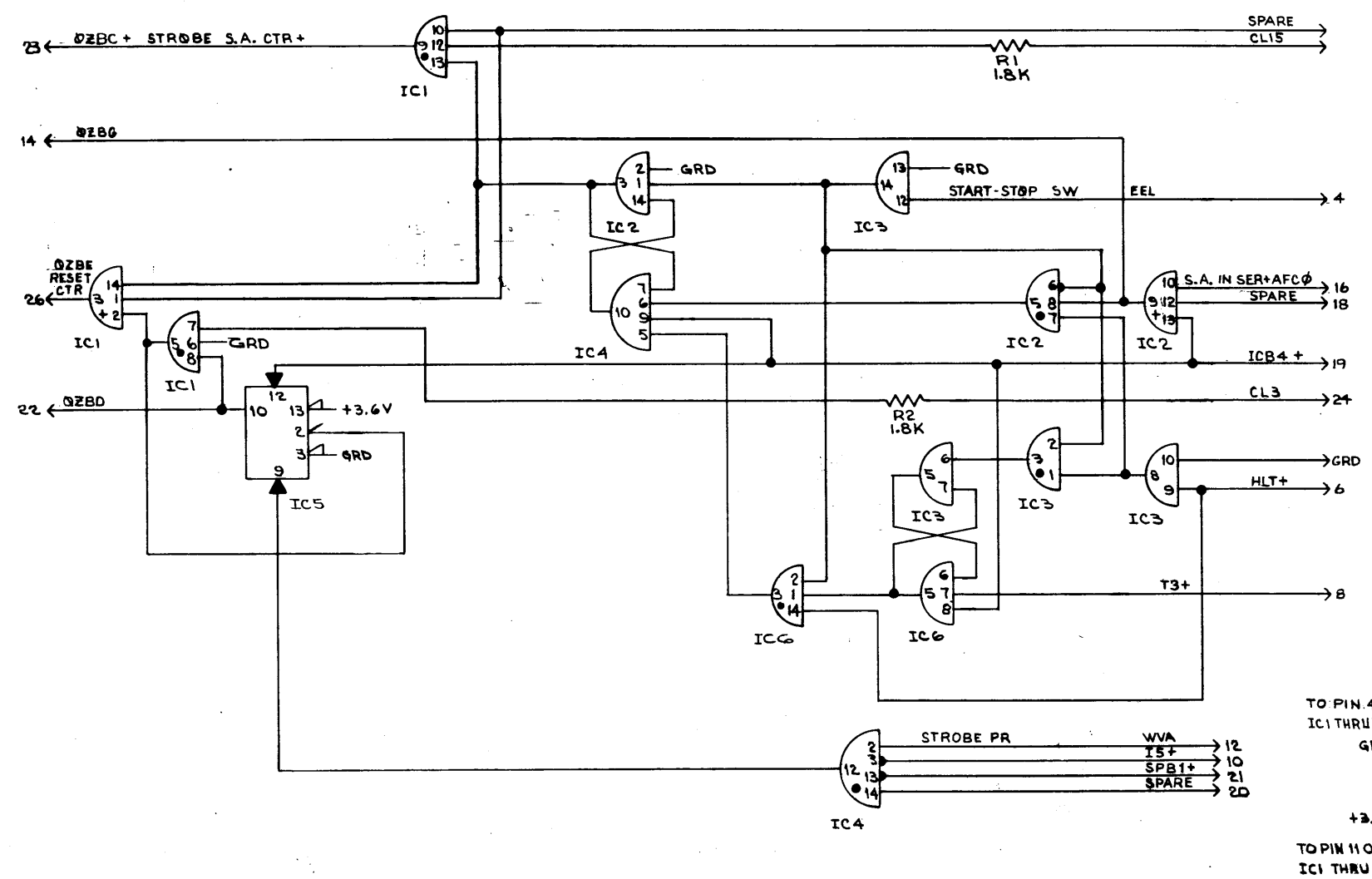
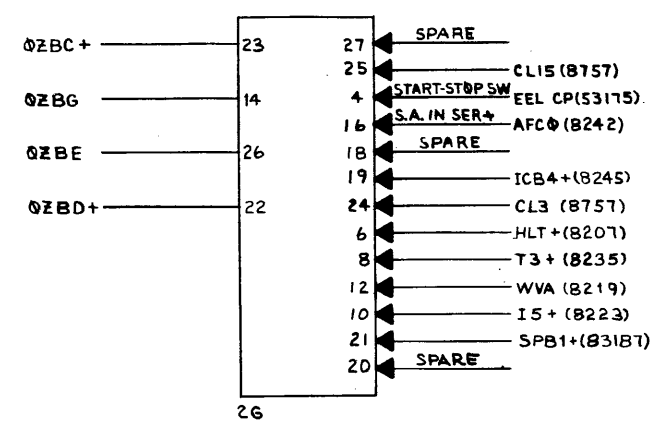
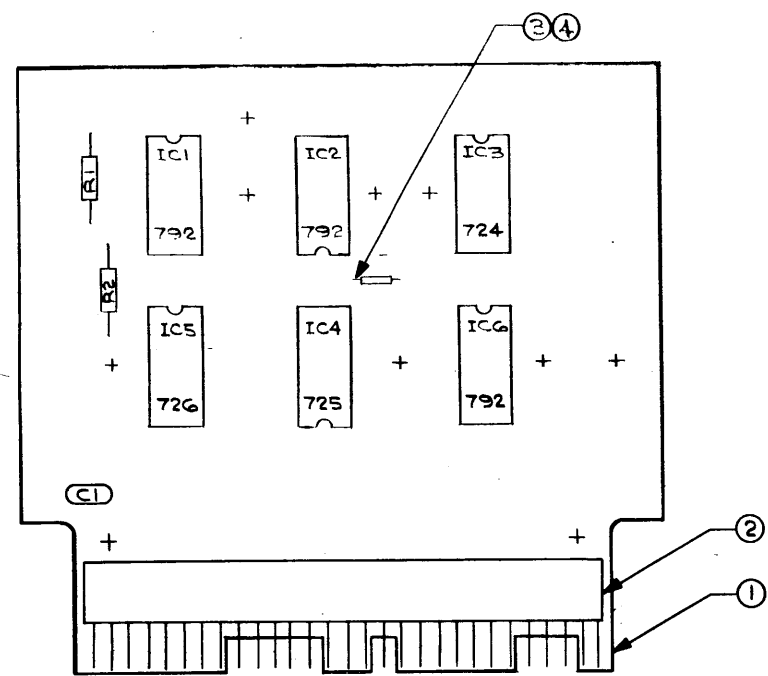
DR *[Signature]* 5-31-67  
 CHK RKM 6-2-67  
 ENGR *[Signature]* 6/29/67  
 PROJ *[Signature]* 6/29/67  
 APPD *[Signature]* 4/28/67  
 NEXT ASSY

SCHEMATIC ASSEMBLY  
 RTL PROGRAM PROTECT  
 LOGIC 2

CODE IDENT NO. 20886  
 SIZE D  
 8254  
 REV. B

SIZE	D	8255	REV.	A
REV.		DESCRIPTION	DATE	APPD
A		67-445; 2R & LINE TITLES ADDED. C.THEW 10-26-67	11/11	[Signature]

- NOTES:
- ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
  - UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.
  - FOR DRILLING & DIM. DWG SEE D8600-327



2	R1,2	RCO TGF 182 J	RESISTOR - 1.8K ALLEN BRADLEY
1	IC5	MC 726 P	INTEGRATED CIRCUIT - MOTOROLA
1	IC4	MC 725 P	
1	IC3	MC 724 P	
3	IC2	MC 792 P	
	IC1		
1	C1	1K 10-104	
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-000	CONNECTOR - ELCO
1	1	SEL 327	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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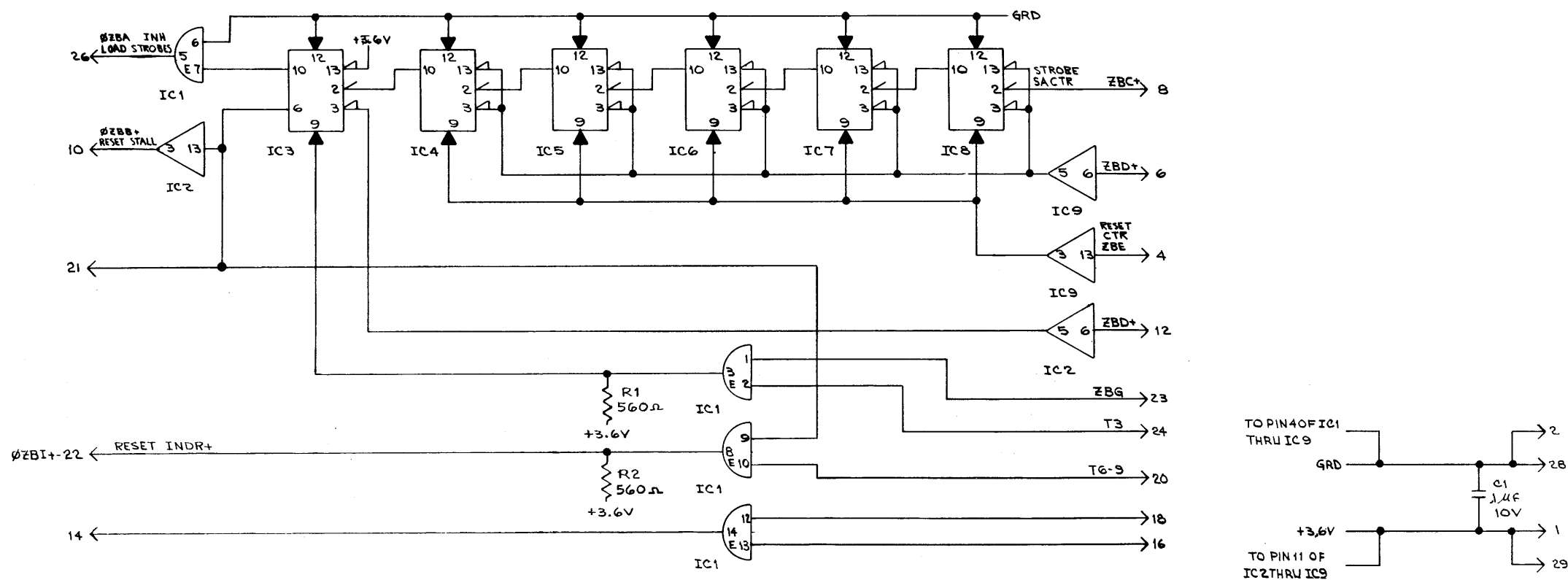
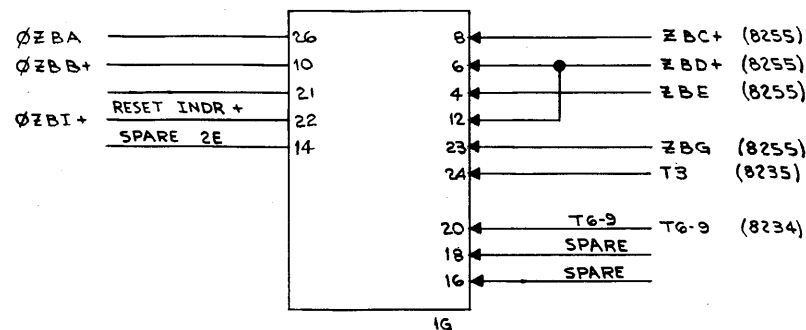
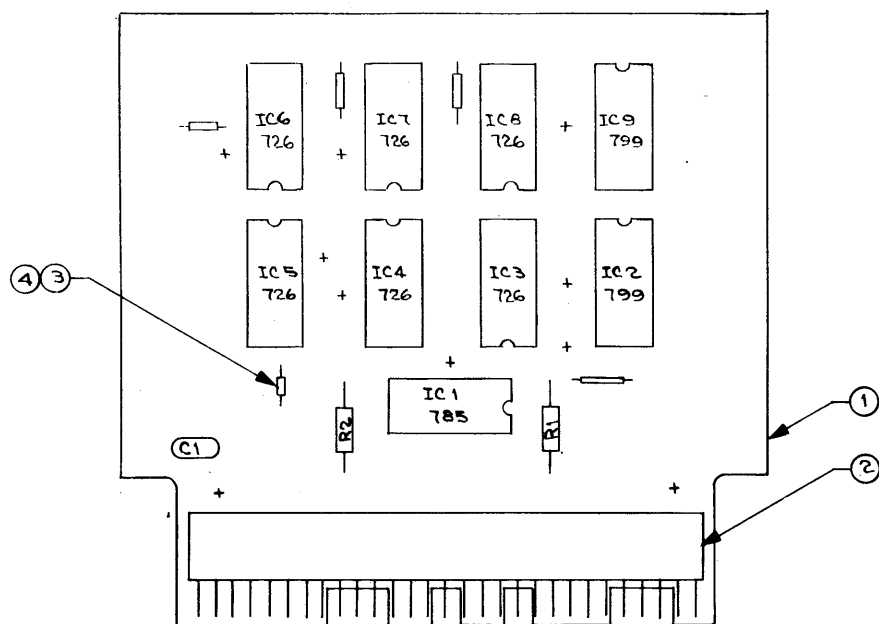
DR C. PRUNA 5-11-67  
 CHK RKM 7-24-67  
 ENGR [Signature]  
 PROJ [Signature]  
 APPD [Signature]  
 NEXT ASSY

SCHEMATIC & ASSEMBLY  
 RTL STALL ALARM CONTROL

CODE IDENT NO. 20886  
 SIZE D 8255  
 REV. A

- NOTES:
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
  2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$  1/4 W.
  3. FOR DRILLING & DIMENSIONAL DWG SEE D8600-328.

SIZE	D	8256	REV.	A
REV.	A	67-445; ADDRESSES REVISED, LINE TITLES AND CARD NUMBERS ADDED. AS. 10/26/67	DATE	10/30/67

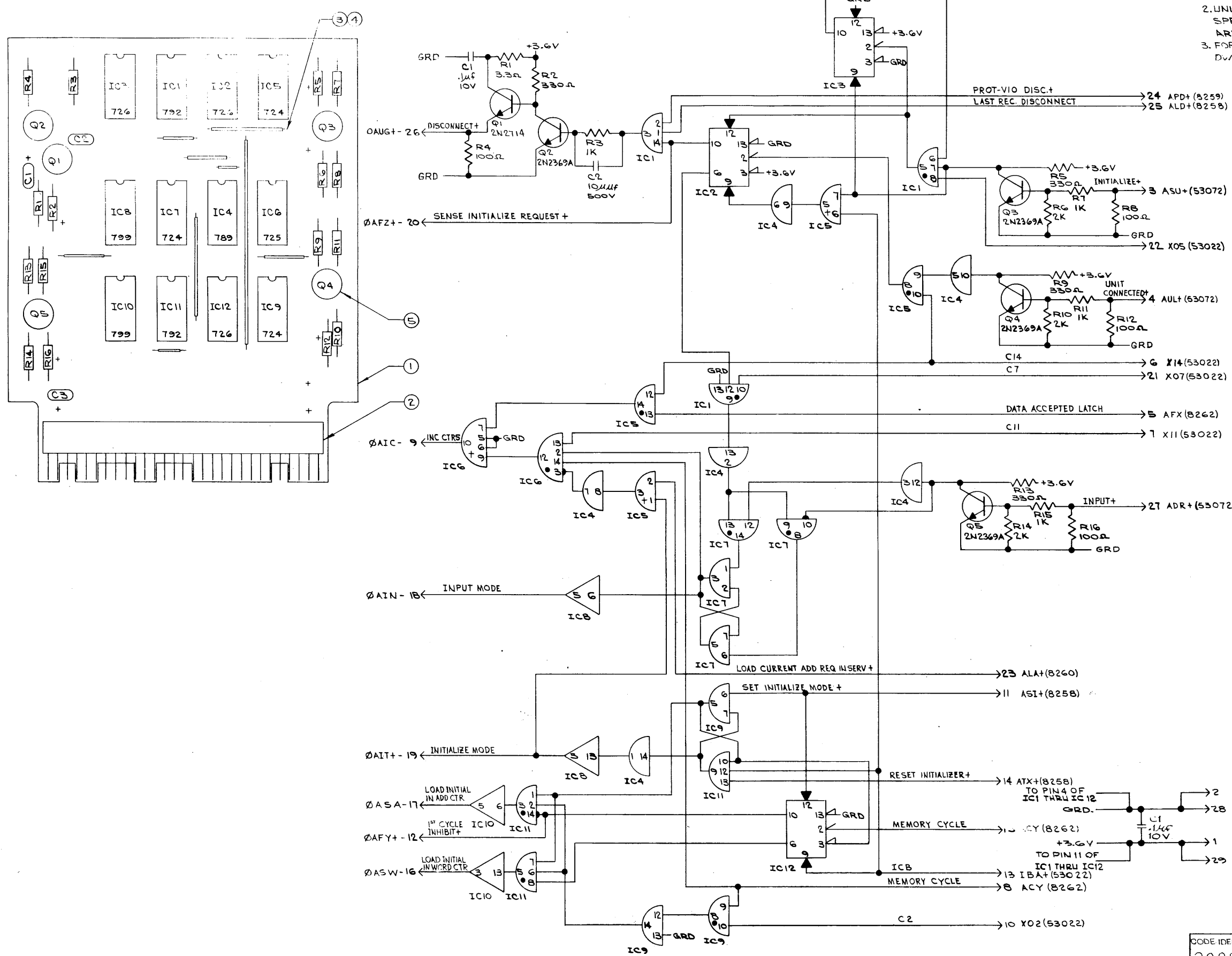


2	R2	RC07GF561J	RESISTOR - 560 $\Omega$ , ALLEN BRADLEY
6	IC8 IC7 IC6 IC5 IC4 IC3	MC726P	INTEGRATED CIRCUIT - MOTOROLA
2	IC9	MC799P	
1	IC1	MC785P	
1	C1	UK-10-104	CAPACITOR - .1 $\mu$ F +80-20%, 10V, CRL
AR	4	AWG 24	SLEEVING - TEFLON, THIN WALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-1022-029-000-001	CONNECTOR - ELCO
1	1	SEL 328	PRINTED CIRCUIT - (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>Systems Engineering Laboratories</b>			
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DR. C. PRUNA	7-17-67	SCHEMATIC & ASSEMBLY RTL STALL ALARM COUNTER	
CHK. RKM	7-19-67		
ENGR. J. H. ...	...	CODE IDENT NO.	SIZE
APPD. ...	...	20886	D 8256
NEXT ASSY	...	REV.	A

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $\frac{1}{4}W$ .  
 3. FOR DRILLING & DIMENSIONAL DWG SEE D15466

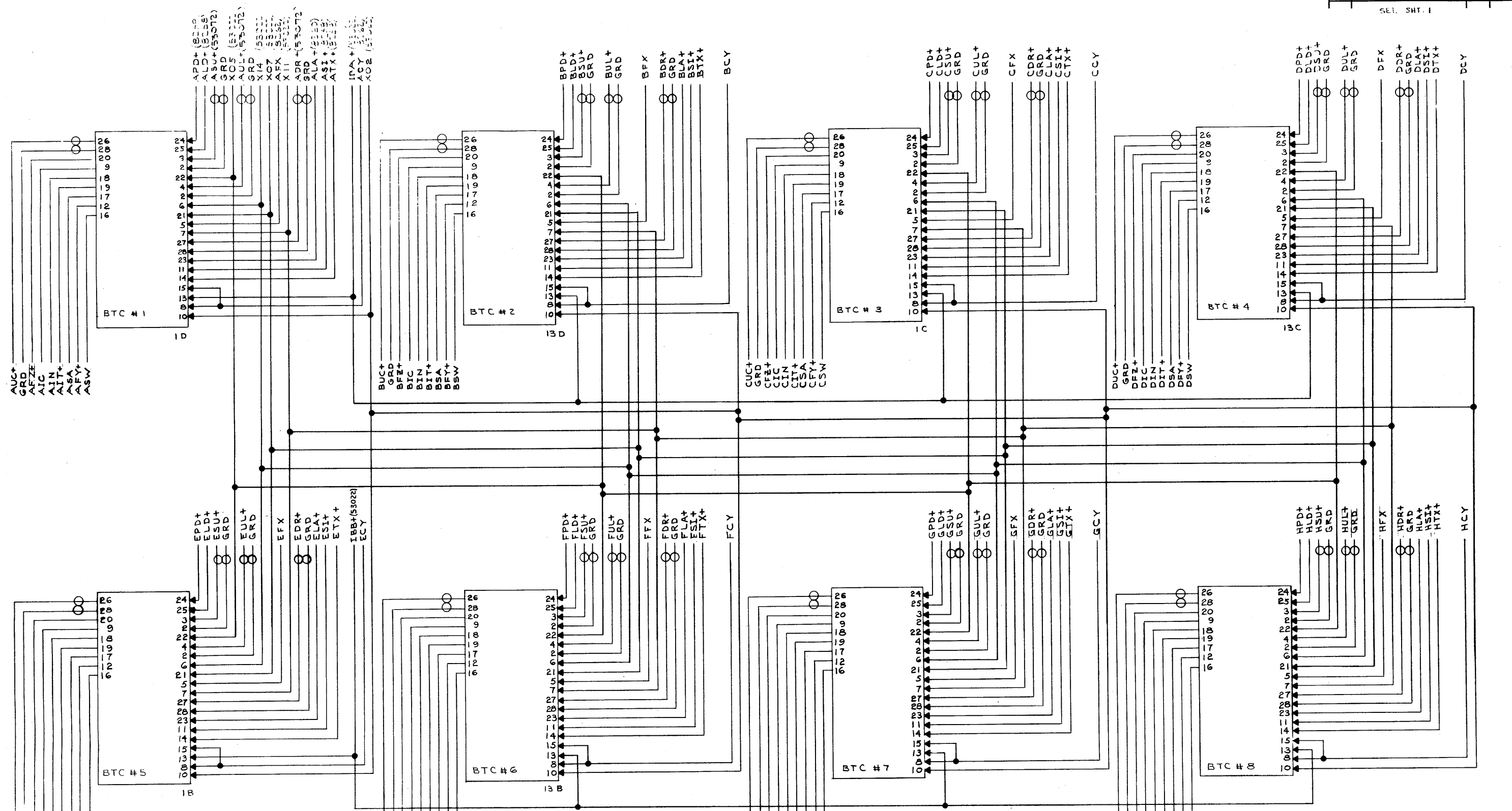
REV	DESCRIPTION	DATE	APP'D
D	8257		
A	G1445; ADDRESSES & LINE TRILL SALDED; SHT. 2 REVISED CAPD LOCATIONS E.P.C. 10-26-67	10/23/67	[Signature]



3	R14 R10 R6	RC07GF202J	RESISTOR-2K, ALLEN BRADLEY	
4	R16 R12 R8 R4	RC07GF101J	100Ω,	
4	R15 R11 R7 R3	RC07GF102J	1K,	
4	R13 R9 R5 R2	RC07GF331J	330Ω,	
1	R1	RC07GF332J	RESISTOR-3.3Ω, ALLEN BRADLEY	
4	Q5 Q4 Q3 Q2	2N2369A	TRANSISTOR-FAIRCHILD	
1	Q1	2N2714	TRANSISTOR-GE.	
2	IC10 IC8	MC799P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC6	MC725P		
3	IC9 IC7 IC5	MC724P		
1	IC4	MC789P		
3	IC12 IC3 IC2	MC726P		
2	IC11 IC1	MC792P		
1	C2	ID100		CAPACITOR-10μf±10%,500V,CRL
2	C3 C1	UK-10-104		CAPACITOR-.1μf±80-20%,10V,CRL
5	5	B10369		UNIPAD
AR	4	KWG 24		SLEEVING-TEFLON, THINWALL
AR	3	KWG 24	WIRE-SOLIDCOPPER, TINNED	
1	2	00-7022-029-000-001	CONNECTOR-ELCO	
1	1	SEL 941	PRINTED CIRCUIT (REV. SEE AS1140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	F.L. SIENA	3-15-67	SCHEMATIC & ASSEMBLY RTL-INITIALIZE CONTROL 1R2	
CL	RKN	3-27-67		
ENG.	[Signature]	[Signature]		
PROJ.	[Signature]	[Signature]	CODE IDENT NO.	
APP.	[Signature]	[Signature]	20886	
USED ON			SIZE	
			D	
			8257	
			REV	
			A	

NOTES:  
1. SEE P. 1.

REV	D	DESCRIPTION	DATE	APP'D
		8257		A
SEE SH. 1				



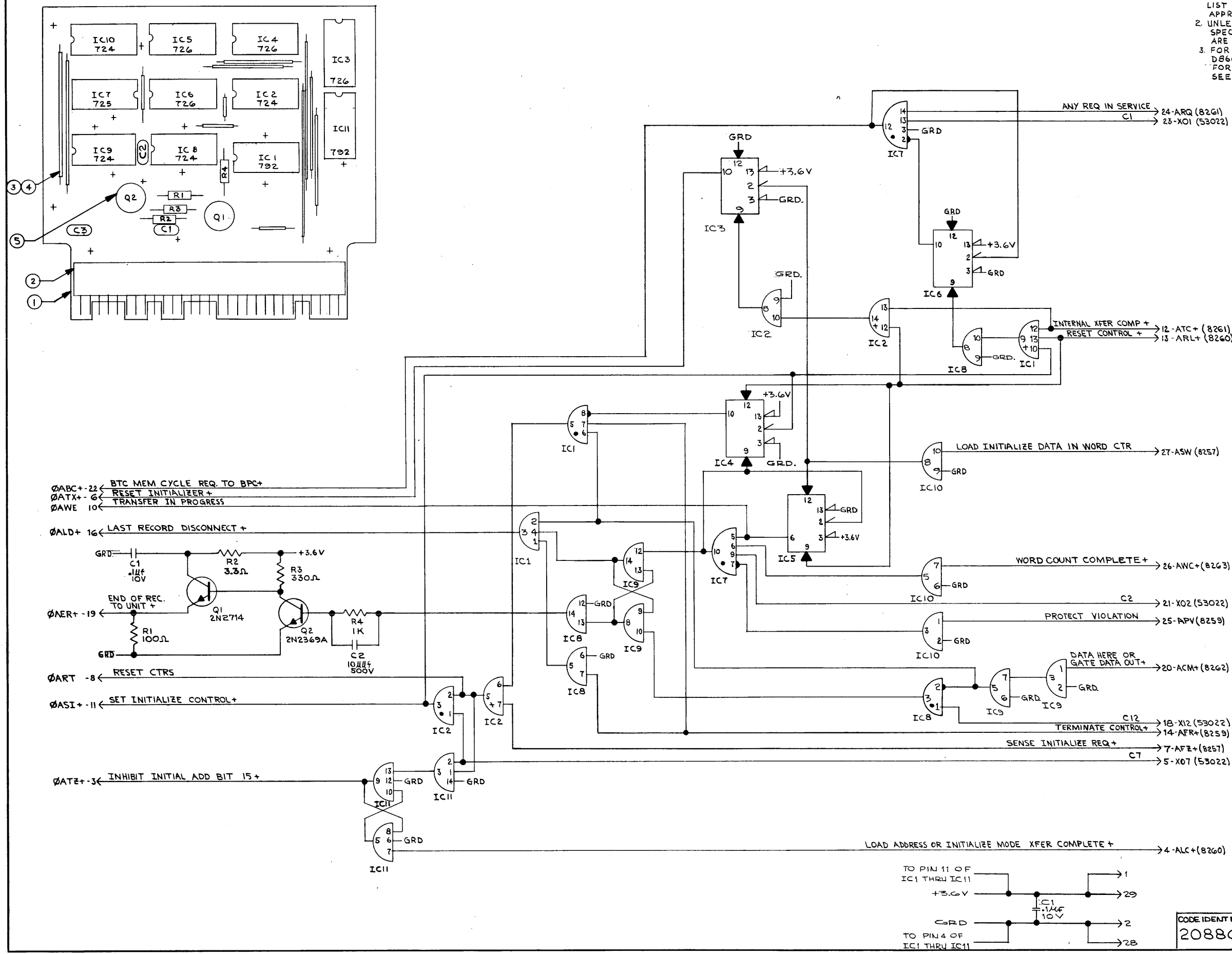
ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	F.L.SIENA 3-16-61	SCHEMATIC & ASSEMBLY
CK.	RKM 3-27-67	
ENG.	<i>E. Williams</i>	RTL-INITIALIZE CONTROL
REL. APP.	<i>W. Williams</i>	1R2
APP.	<i>W. Williams</i>	
USED ON		

CODE IDENT NO  
20886

SIZE	D	8257	REV	A
------	---	------	-----	---

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE ±5%, 1/4W.  
 3. FOR DRILLING DWG SEE D8600-942.  
 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8258		
A	6T-445; ADDRESSES AND LINE TITLES ADDED. SHT. 2-CARD LOCATIONS REVISED. AS. 10-26-67	10/30/67	[Signature]
B	68-199; DESIGNATION ON PIN 26 WAS UNIT DATA REQ. +. REVISED 4-19-68 RKM	4/19/68	[Signature]



ITEM	DWG. OR PART NO.	DESCRIPTION
1	R4	RC07GF102J RESISTOR - 1K, ALLEN BRADLEY
1	R3	RC07GF331J - 330Ω
1	R2	RC07GF3R3J - 3.3Ω
1	R1	RC07GF101J RESISTOR - 100Ω, ALLEN BRADLEY
1	Q2	2N2369A TRANSISTOR-FAIRCHILD
1	Q1	2N2714 TRANSISTOR-GE
1	IC7	MC725P INTEGRATED CIRCUIT-MOTOROLA
4	IC6	MC726P
4	IC5	MC726P
4	IC4	MC726P
4	IC3	MC726P
4	IC9	MC724P
4	IC8	MC724P
2	IC11	MC792P INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC792P
1	C2	ID100 CAPACITOR-10μF±10%, 500V, CRL
2	C3	UK10-104 CAPACITOR-1μF±80-20%, 10V, CRL
1	C1	UK10-104 CAPACITOR-1μF±80-20%, 10V, CRL
2	5	B10369 UNIPAD
AR	4	AWG 24 SLEEVING-TEFLON, THINWALL
AR	3	AWG 24 WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001 CONNECTOR-ELCO
1	1	SEL 942 PRINTED CIRCUIT (REV. SEE Δ51140)

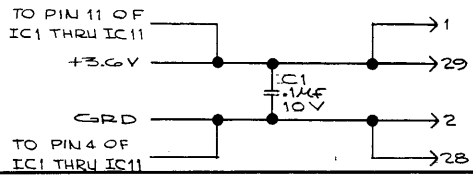
ITEM	DWG. OR PART NO.	DESCRIPTION
DR	R. SANBORNE	3-16-67
CK	RKM	3-24-67
ENG.	E. V. [Signature]	6-8-67
PROJ. MGR.	[Signature]	6/8/67
APP.	[Signature]	6/8/67
USED ON		

SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

SCHEMATIC ASSEMBLY  
 RTL CYCLE CONTROL  
 IR2

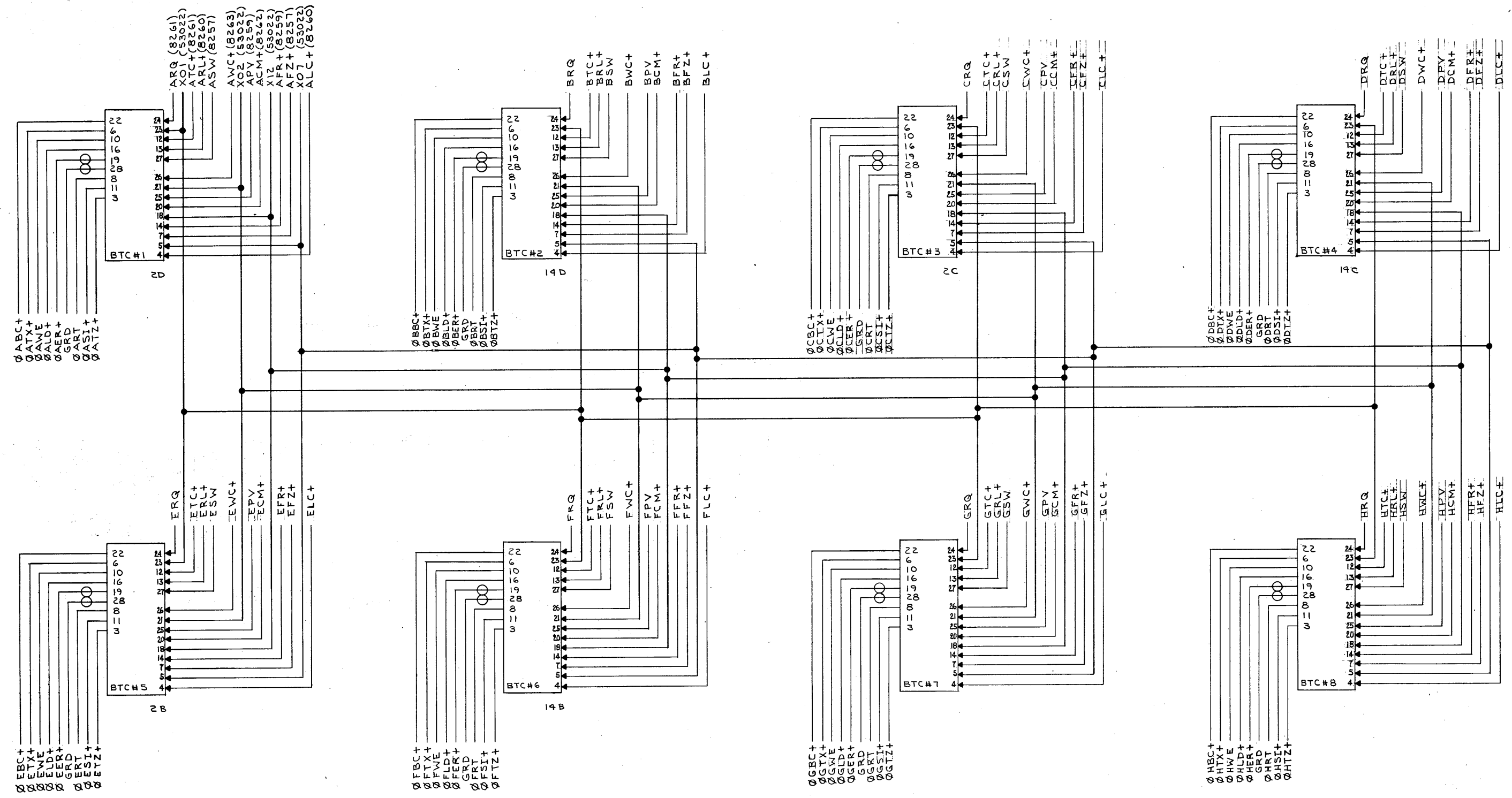
CODE IDENT NO. 20886

SIZE D 8258



NOTES:  
1. SEE SH. 1

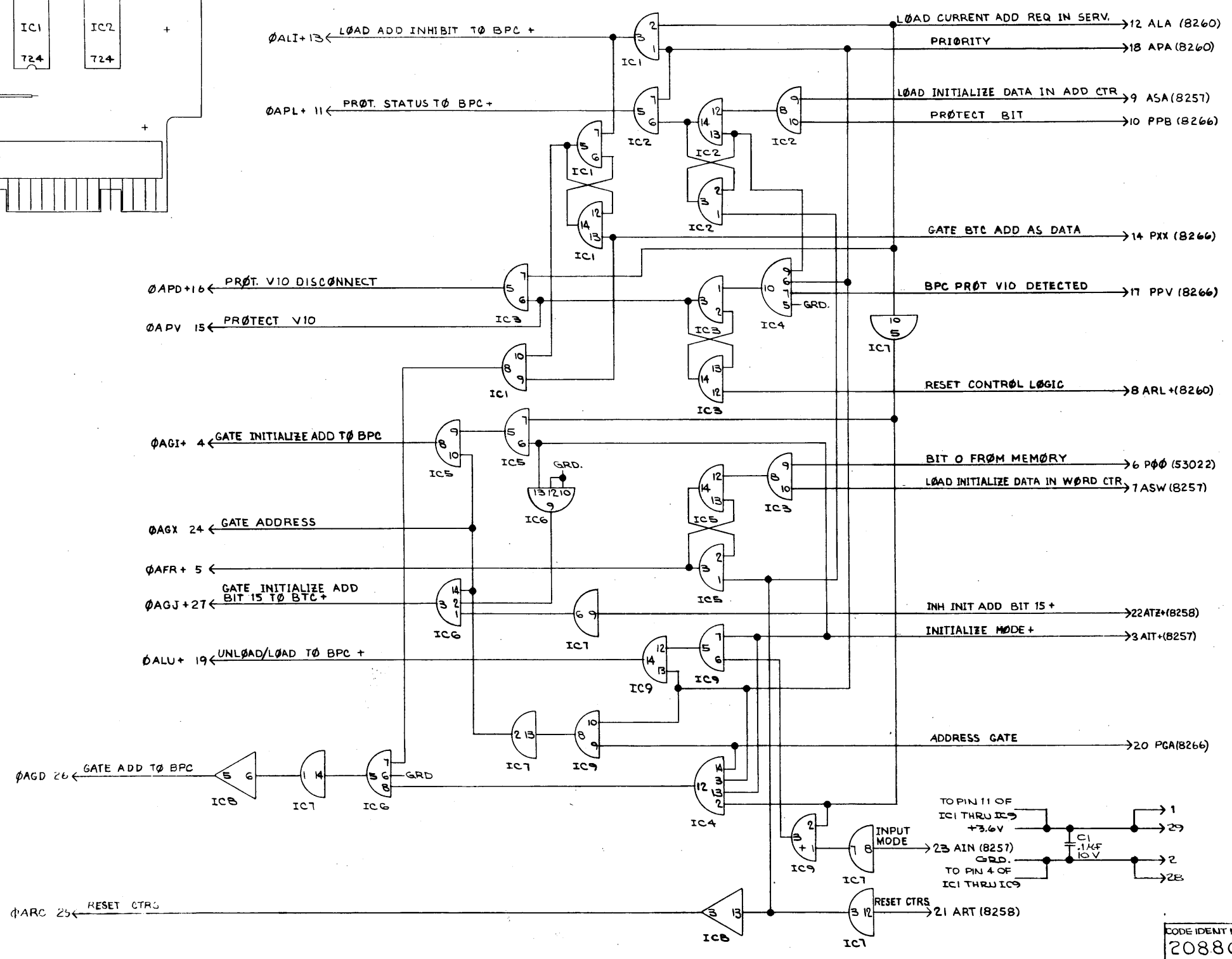
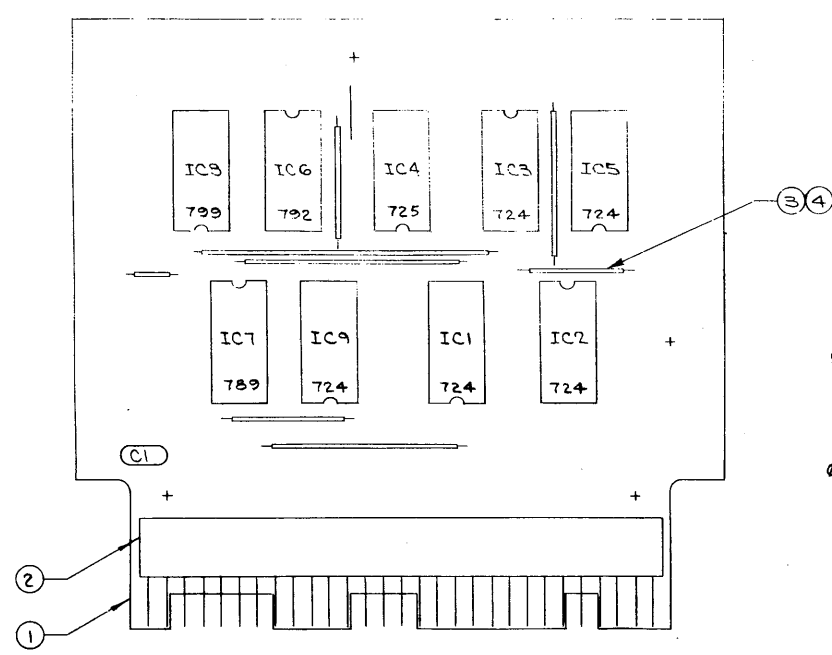
REV	DESCRIPTION	DATE	APP'D
D	8258		B
SEE SH. 1			



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR.	R. SANBORNE 3-19-67	SCHEMATIC & ASSEMBLY RTL CYCLE CONTROL IR2
EX.	RKM 3-24-67	
ENG.	<i>E. Villanti</i> 6-8-67	
PROJ. APP.	<i>W. [unclear]</i> 6/8/67	
CODE IDENT NO.	20886	REV
USED ON		D
		8258
		B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-943.  
 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8259		
A	67-310; CONNECTED PIN 13 ON IC2 TO PIN 9 ON IC4. PIN 2 ON IC2 WAS CONNECTED TO PIN 9 ON IC4 BY B-8/31/67 RKM	8/31/67	[Signature]
B	67-445; ADDRESSES AND LINE TITLES ADDED. SH72, REVISED CARD LOCATIONS. C.THEW 10-26-67	10/30/67	[Signature]



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
1	IC6	MC 799P	INTEGRATED CIRCUIT-MOTOROLA
1	IC7	MC 789P	
1	IC6	MC 792P	
1	IC4	MC 725P	
5	IC9, IC5, IC3, IC2, IC1	MC 724P	
1	C1	UK-10-104	CAPACITOR-.1uF+80-20%, 10V, CRL
4	AWG 24		SLEEVING-TEFLON, THINWALL
3	AWG 24		WIRE-SOLID COPPER, TINNED
2	00-7022-029-000-001		CONNECTOR-ELCO
1	SEL 943		PRINTED CIRCUIT (REV. SEE AS1140)

NO.	NAME	DATE	DESCRIPTION
DR.	F.L.SIENK	3-17-67	SCHEMATIC & ASSEMBLY RTL ADDRESS CONTROL IR 2
CL.	RKM	3-21-67	
ENG.	E. Villal...	6/1/67	

CODE IDENT NO  
20886

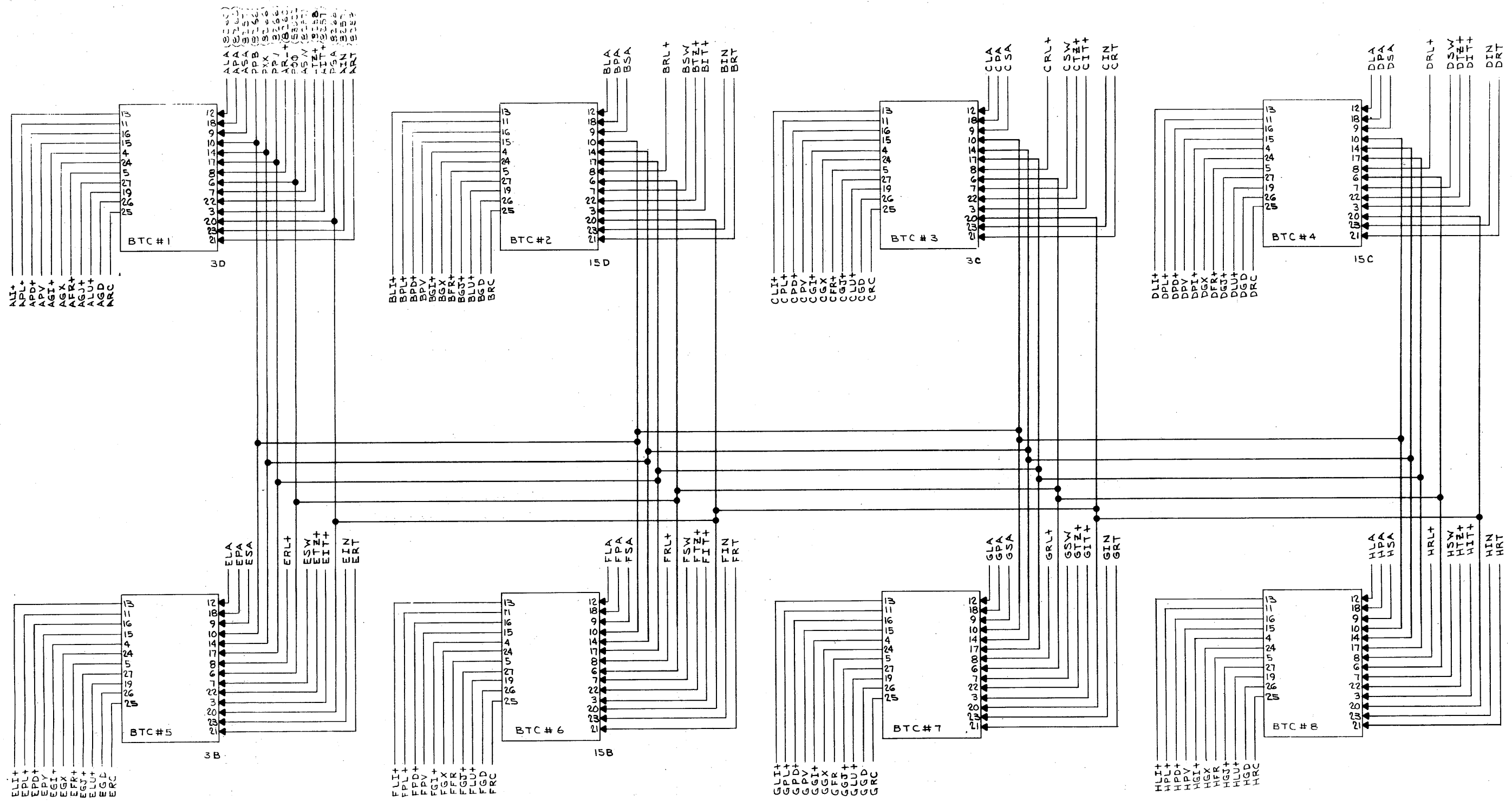
REV  
D

8259

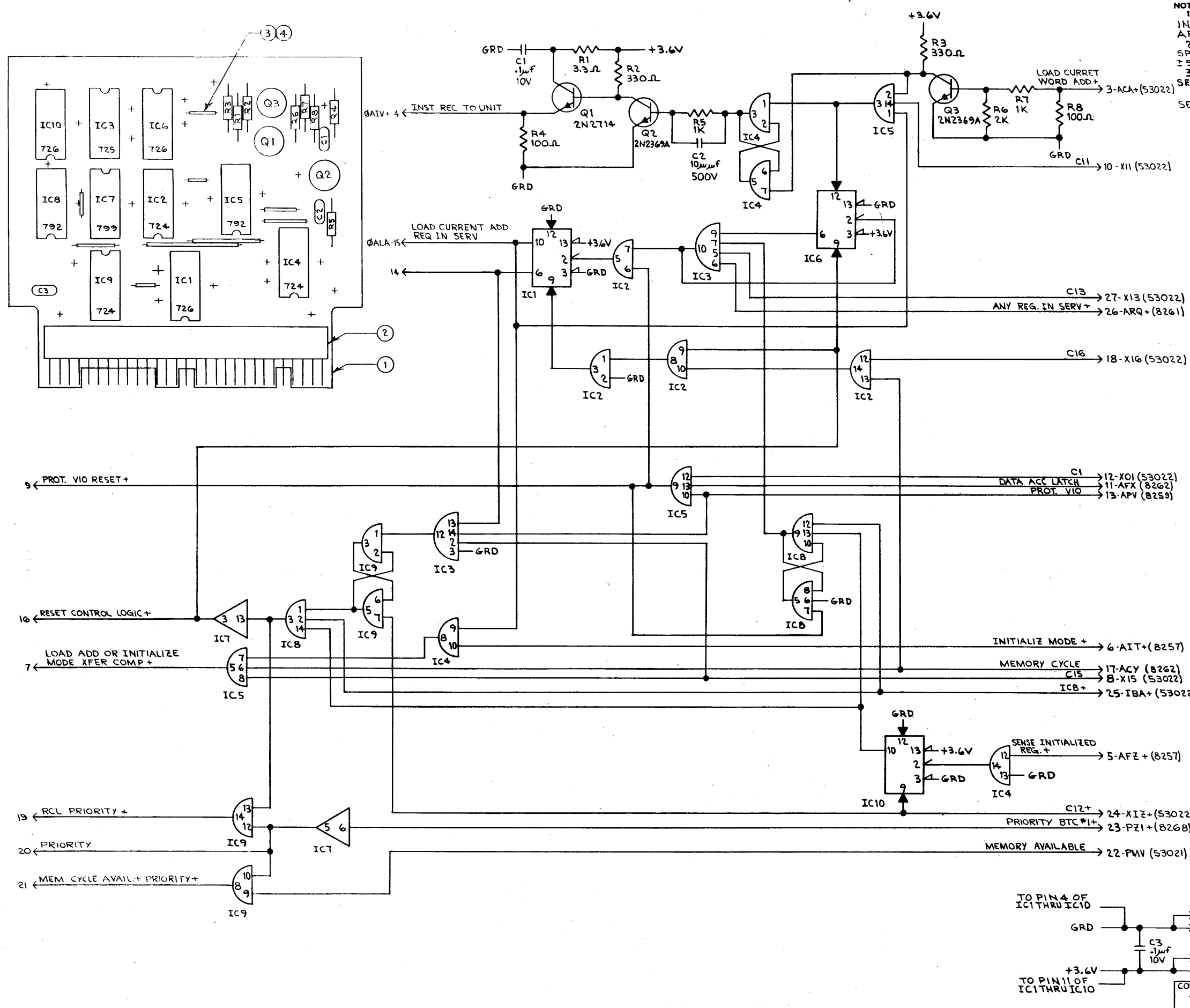


NOTES:  
1. SEE S. 1

REV	D	DESCRIPTION	DATE	APP'D
		8259		B
		SEE SH. 1		



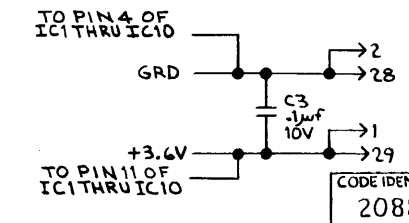
ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR	F.L. SIENA 3-17-67	SCHEMATIC & ASSEMBLY RTL ADDRESS CONTROL IR2
CR	RKM 3-21-67	
ENGR.	<i>E. P. ...</i>	
APP.	<i>...</i>	
CODE IDENT NO.	20886	SIZE
USED ON		D
		8259
		B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING DRAWING SEE D8600-944 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8260		C
A	651-313; PINS 2 & 5 OF IC3 WERE CONNECTED. B.J.B. 8/31/67	9/1/67	[Signature]
B	67-427; R1 WAS 3.3K IN LIST OF MATERIAL. RKM 10-12-67	10/13/67	[Signature]
C	67-445; ADDRESSES AND LINE TITLES ADDED. SMT. 2-CARD NUMBERS REVISED. AS. 10-26-67	11/16/67	[Signature]

1	R6	RCOTGF202J	RESISTOR-2K, ALLEN BRADLEY	
2	R7 R5	RCOTGF102J	RESISTOR-1K, [ ]	
2	R4 R4	RCOTGF101J	RESISTOR-100Ω, [ ]	
2	R3 R2	RCOTGF331J	RESISTOR-330Ω, [ ]	
1	R1	RCOTGF3R3J	RESISTOR-3.3Ω, ALLEN BRADLEY	
2	Q3 Q2	2N2369A	TRANSISTOR-FAIRCHILD	
1	Q1	2N2714	TRANSISTOR-G.E.	
1	IC7	MCT99P	INTEGRATED CIRCUIT-MOTOROLA	
2	IC8 IC5	MCT92P		
1	IC3	MCT25P		
3	IC9 IC4 IC2	MCT24P		
3	IC10 IC6 IC1	MCT26P		
1	C2	ID100		CAPACITOR-10μmf±10%, 500V, CRL
2	C3 C1	UK-10-104		CAPACITOR-μmf±80-20%, 10V, CRL
AR	4	AWG 24		SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24		WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001		CONNECTOR-ELCO
1	1	SEL 944	PRINTED CIRCUIT (REV. SEE A51140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	

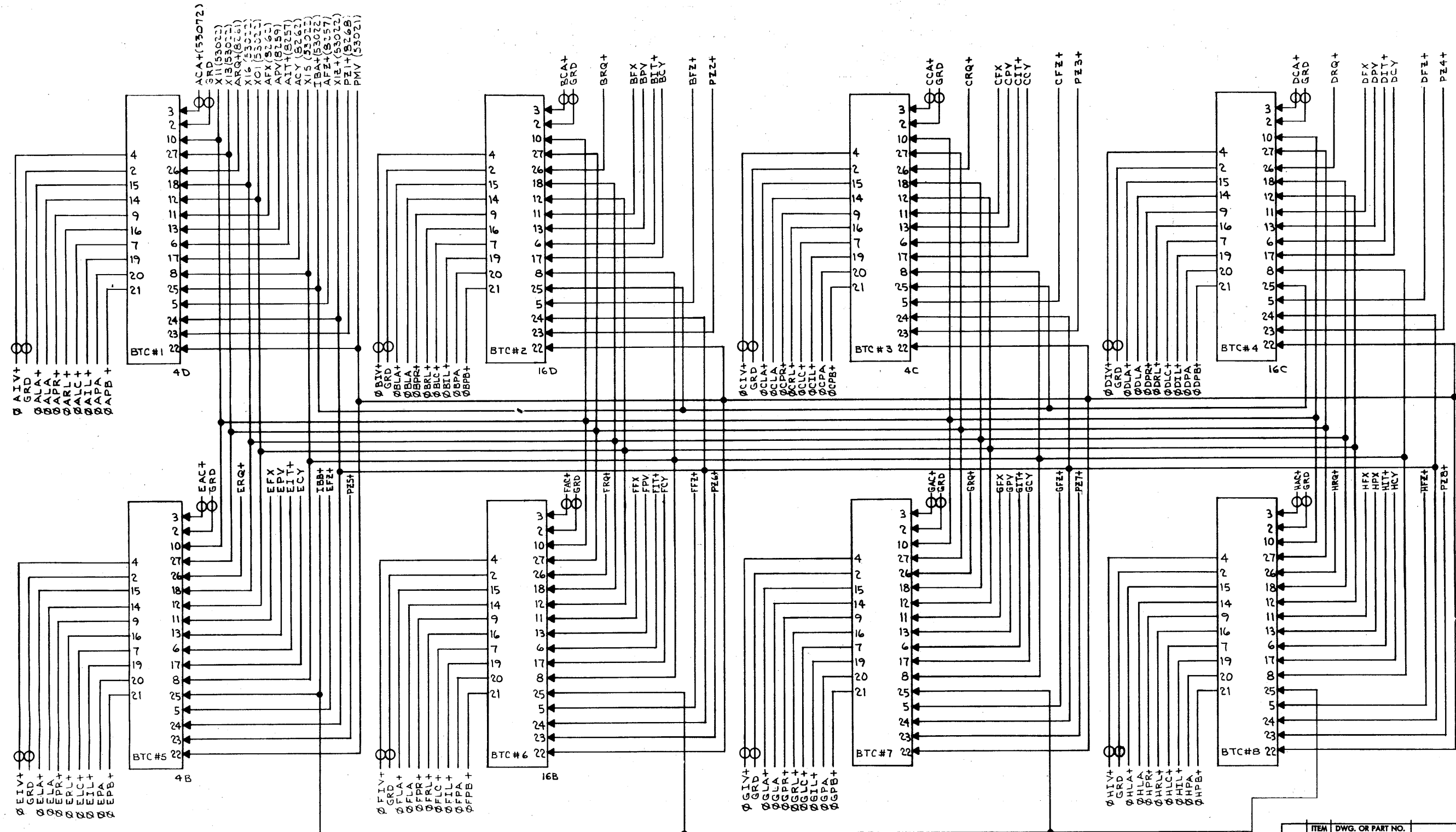


CODE IDENT NO. 20886

DE	RLWENNELL	3/17/67	SCHEMATIC & ASSEMBLY RTL LOAD ADDRESS CONTROL 1R2
CL	RKM	3-29-67	
ENGR.	E. Villanov	6-3-67	SIZE D 8260
PROJ. APP.	[Signature]	6/8/67	
USED ON	[Signature]	6/1/67	REV C

NOTES:  
1. SEE SHEET 1.

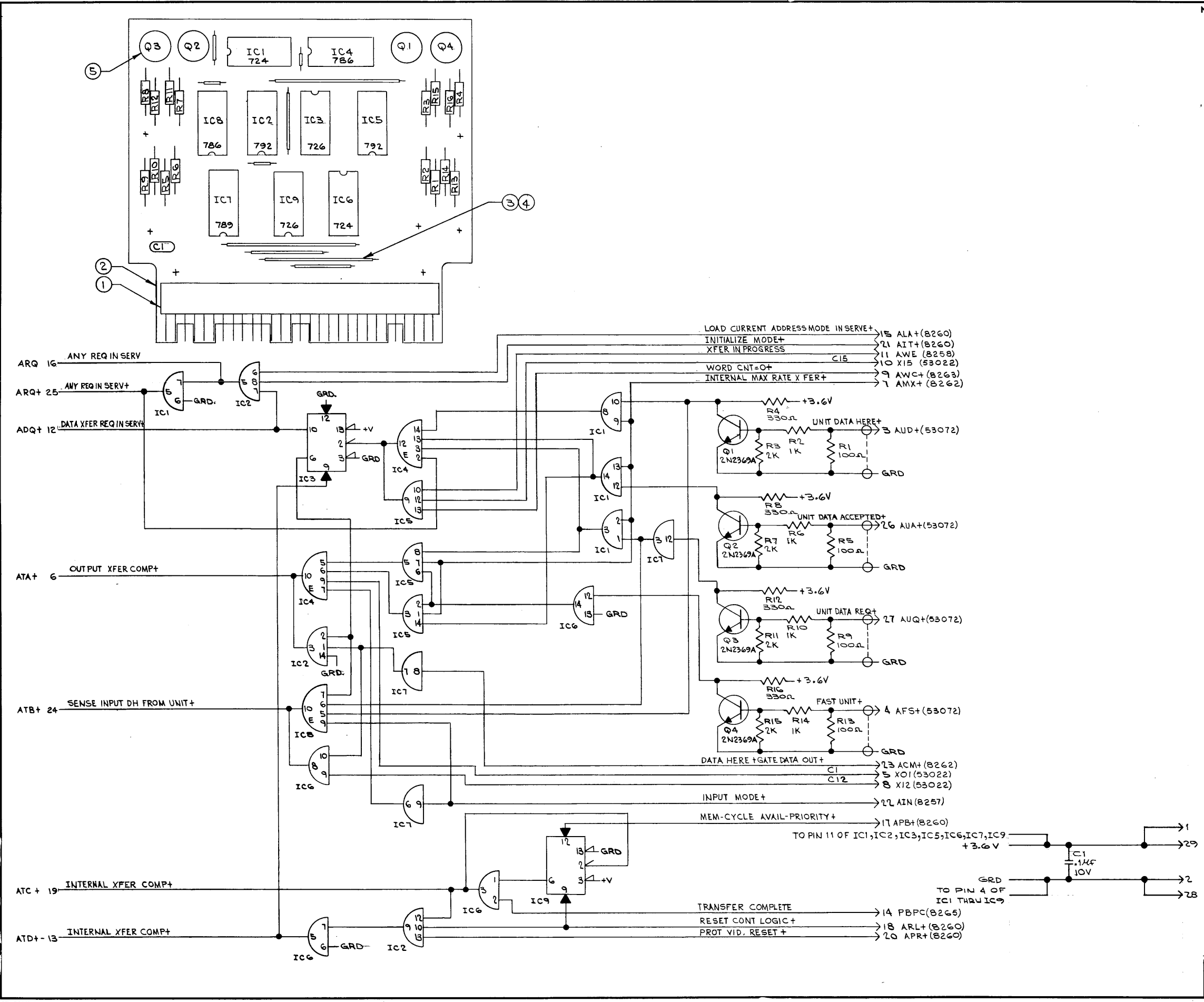
REV	D	DESCRIPTION	DATE	APP'D
		8260		C
		SEE SH. 1		



ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR	RL WENNEL 3/28/67	SCHEMATIC & ASSEMBLY RTL LOAD ADDRESS CONTROL IR2				
CR	RKM 3-29-67					
NO.	<i>R. Villante</i> 6-5-67					
APR.	<i>R. Villante</i> 6/8/67					
REV	<i>R. Villante</i> 6/8/67					
CODE IDENT. NO.	20886	SIZE	D	8260	REV	C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE #5%, 1/4W.  
 3. FOR DRILLING DWG. SEE D8600-945.  
 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APPR
D	8261		B
A	67-445; ADDRESSES & LINE TITLES ADDED. SHT 2-REVISED CARD NUMBERS. E.P.C. 10-26-67.	10/26/67	AW
B	68-199; DESTINATION OF PIN 26 ON SCHEMATIC WAS UNIT DATA HERE+.	4/19/68	RKM



REV	DESCRIPTION	DATE	APPR
4	R16, R12, R8, R4		
	RCOTGF331J	RESISTOR - 330Ω	ALLEN BRADLEY
4	R11, R7, R3		
	RCOTGF202J	-2K	
4	R14, R10, R6, R2		
	RCOTGF102J	-1K	
4	R13, R9, R5, R1		
	RCOTGF101J	RESISTOR - 100Ω	ALLEN BRADLEY
4	Q4, Q3, Q2, Q1		
	2N2369A	TRANSISTOR - FAIRCHILD	
1	IC7	MC 789P	
2	IC8, IC4	MC 786P	
2	IC9, IC3	MC 726P	INTEGRATED CIRCUIT - MOTOROLA
2	IC5, IC2	MC 792P	
2	IC6, IC1	MC 724P	
1	C1	UK-10-104	CAPACITOR - .1μf ± 80-20%, 10V, CRL
4	S	B10369	UNIPAD
AR	4	AWG 24	SLEEVING - TEFLON - THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-1022-027-000-001	CONNECTOR - ELCO
1	1	SEL 945	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

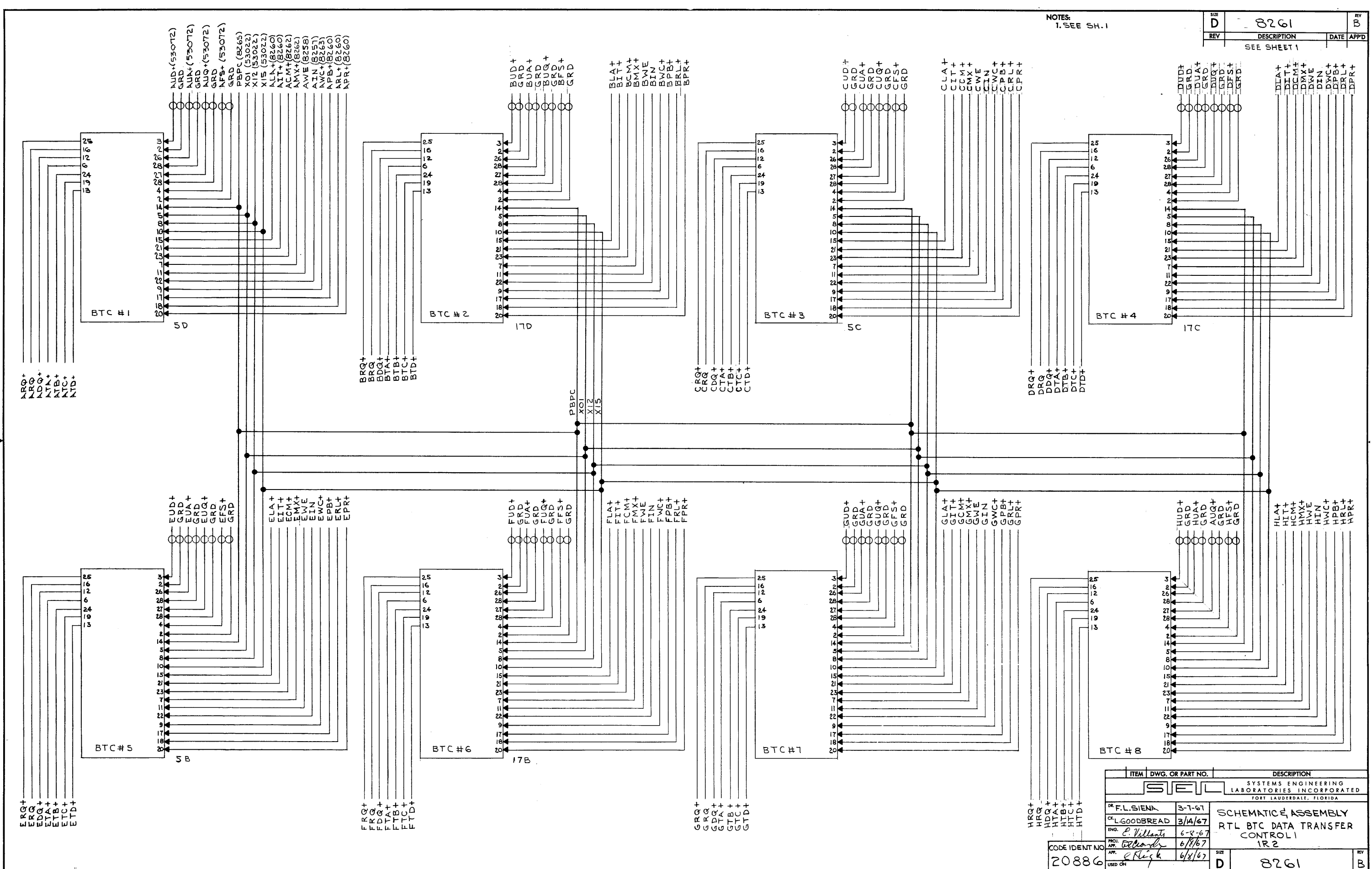
DR. F.L. SIENA 3-7-66  
 CL. L. GOODBREAD 3/14/67  
 ENG. E. Villanti 6-8-67  
 PROJ. DELONBY 6/8/67  
 APP. S. Kling 6/4/67

SCHEMATIC & ASSEMBLY  
 RTL BTC DATA  
 TRANSFER CONTROL  
 1R2

CODE IDENT NO	20886
REV	D
SIZE	8261
REV	B

NOTES:  
1. SEE SH. 1

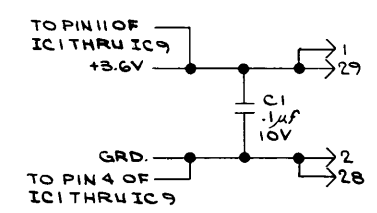
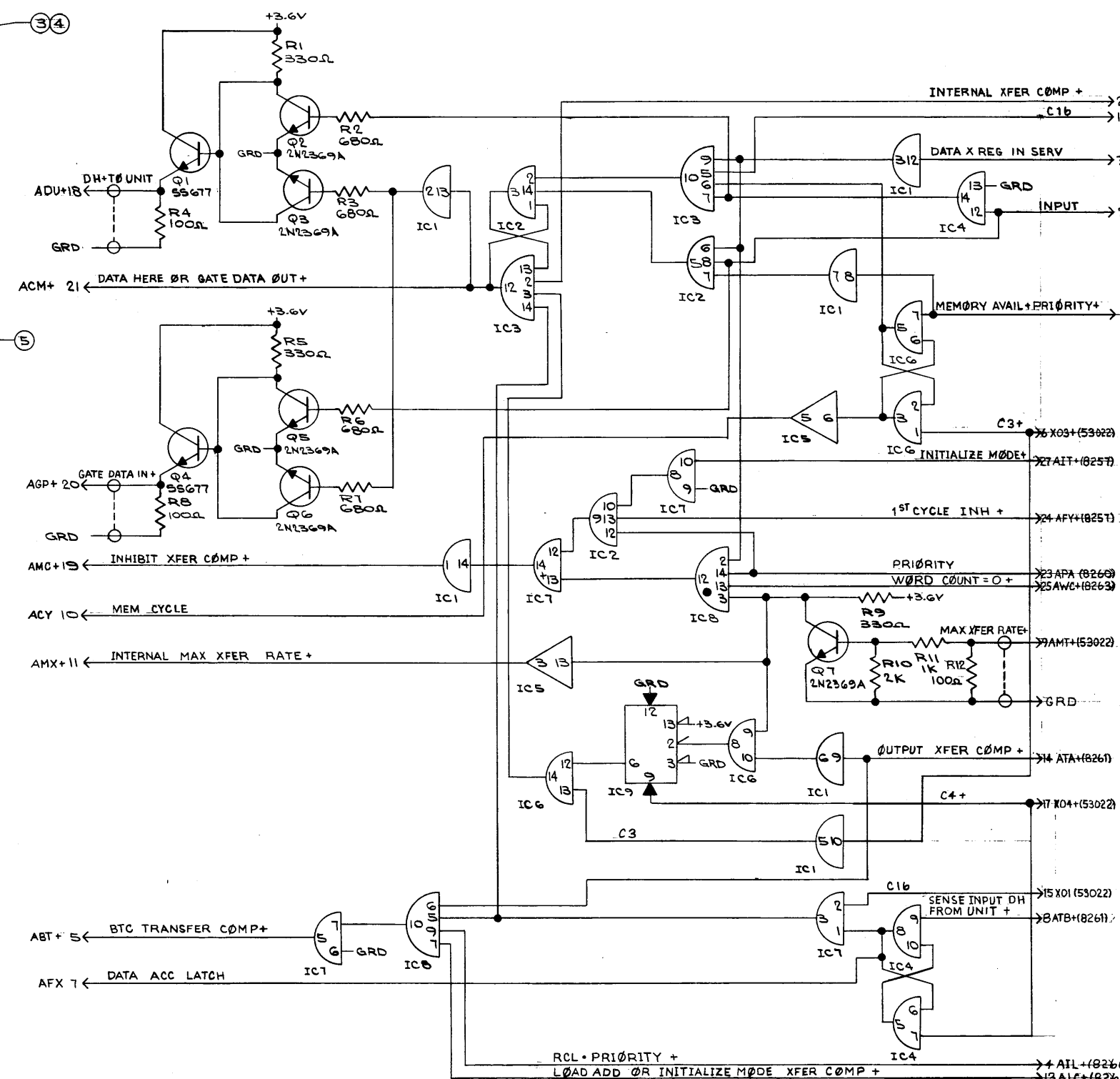
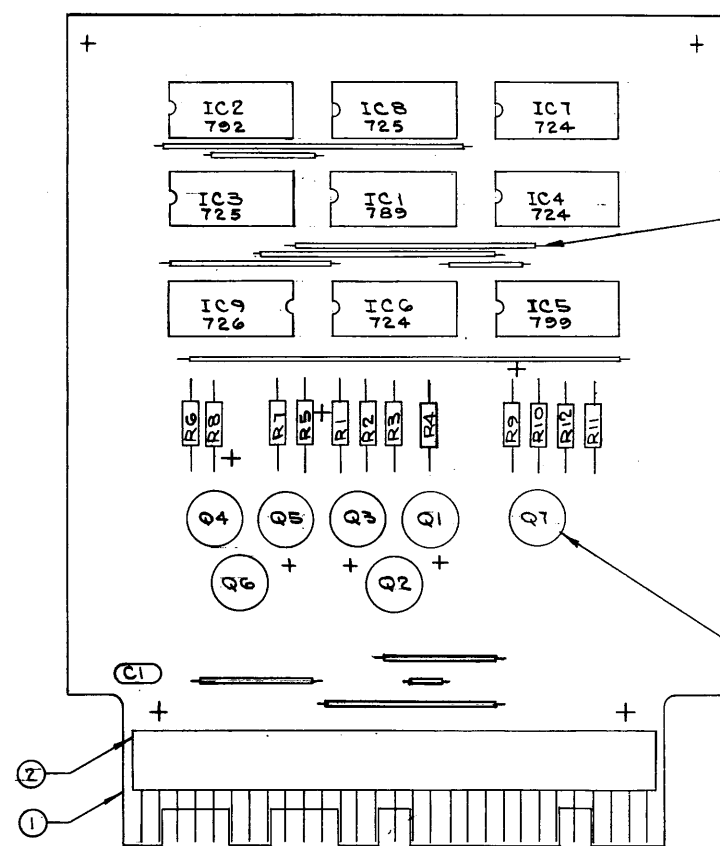
SIZE	D	REV	B
REV		DESCRIPTION	
	8261		
		DATE	APPD
SEE SHEET 1			



ITEM	DWG. OR PART NO.	DESCRIPTION			
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA					
DR. F.L. SIENA	3-7-67	SCHEMATIC ASSEMBLY RTL BTC DATA TRANSFER CONTROL 1R2			
CL. L. GOODBREAD	3/1/67				
ENG. P. Villanti	6-8-67				
APR. C. Riggs	6/8/67				
CODE IDENT NO	20886	SIZE	D	REV	B
USED ON		8261			

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE ±5%, 1/4W.  
 3. FOR DRILLING & DIMENSIONAL DWG. SEE DIS450.

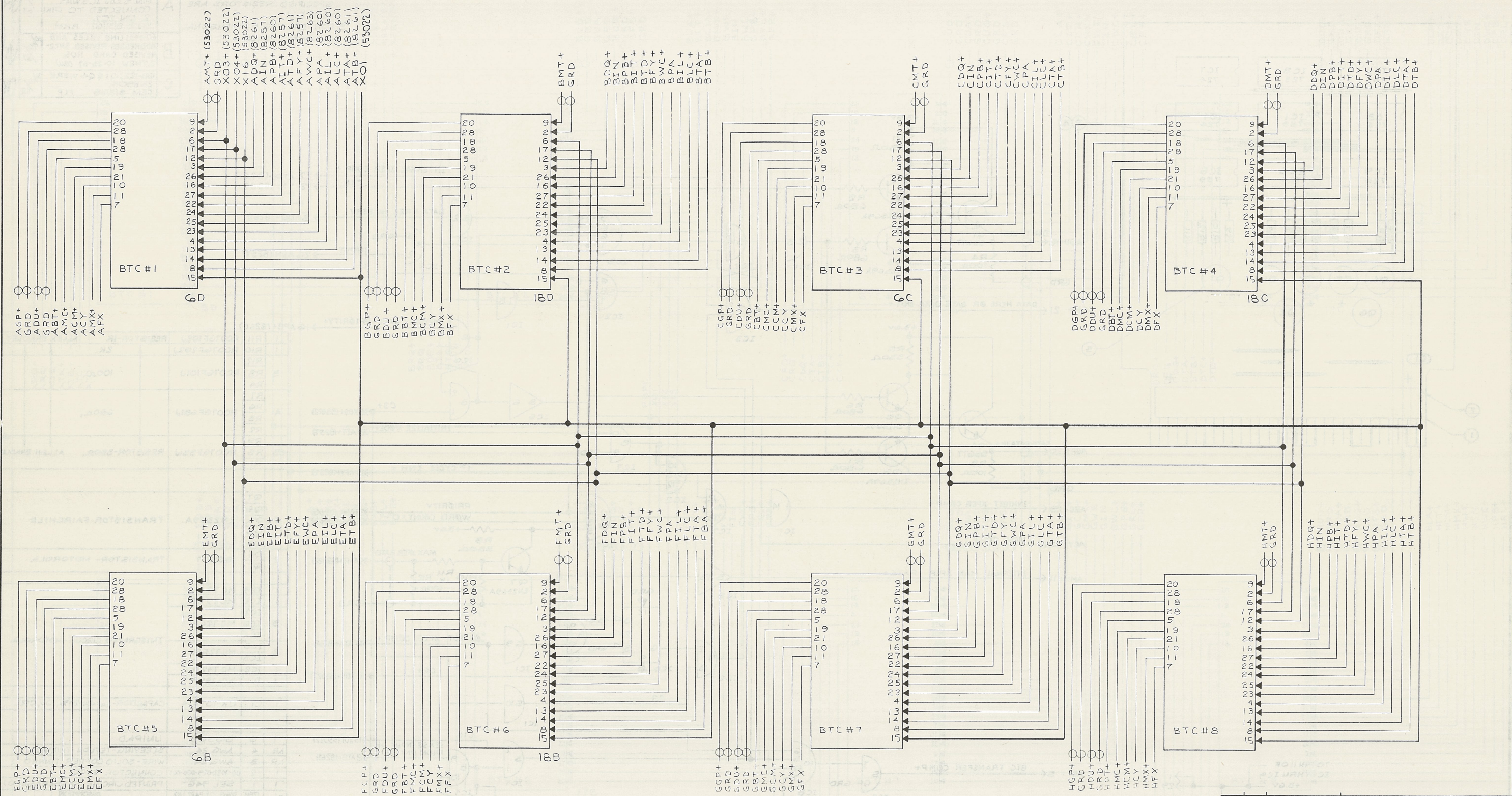
REV	DESCRIPTION	DATE	APP'D
D	8262		
A	67-314; ADDED PIN 15 ON SCHEMATIC & LOGIC PIN 5 ON IC3 WAS CONNECTED TO PIN 2 ON IC7.	6/1/67	
B	67-445; LINE TITLES AND ADDRESSES REVISED. SHT2- REVISED CARD NOS. C.THEW 10-26-67 (CM)	10/12/67	
C	68-122; Q1 & Q4 WERE 2N2369A. CEM 5/8/68 FLP	5/8/68	



QTY	REF	DESCRIPTION	MANUFACTURER	
1	R11	RC07GF102J	RESISTOR-1K ALLEN BRADLEY	
1	R10	RC07GF202J	2K	
3	R8, R4, R7	RC07GF101J	100Ω	
4	R6, R3	RC07GF681J	680Ω	
3	R9, R5, R1	RC07GF331J	RESISTOR-330Ω ALLEN BRADLEY	
5	Q7, Q6, Q3, Q2	2N2369A	TRANSISTOR-FAIRCHILD	
2	Q4, Q1	2N2369A	TRANSISTOR-MOTOROLA	
1	IC9	MC726P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC5	MC799P		
3	IC7, IC6, IC4	MC724P		
2	IC8, IC3	MC725P		
1	IC2	MC792P		
1	IC1	MC789P		
1	C1	UK-10-104		CAPACITOR-.1μf-80-20%, 10V, CRL
1	S	B10369		UNIPAD
AR	4	AWG 24		SLEEVING-TEFLON-TINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED	
1	2	00-1021-019-000-001	CONNECTOR-ELCO	
1	1	SEL 946	PRINTED CIRCUIT-(REV. SEE AS1140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	F.L. SIENK	3-13-67	SCHEMATIC & ASSEMBLY RTL-BTC- DATA TRANSFER CONTROL 2 1R2	
ENGR	C. GOODREAD	3/14/67		
CHKD	E. Villanti	6-8-67		
PROJ	DR	6/8/67		
APP'D	R. King	6/8/67		
CODE IDENT NO	20886			
USED ON	D	8262		

NOTES:  
1. SEE SH. 1

REV	D	8262	DATE	APP'D
DESCRIPTION	SEE SH. 1			



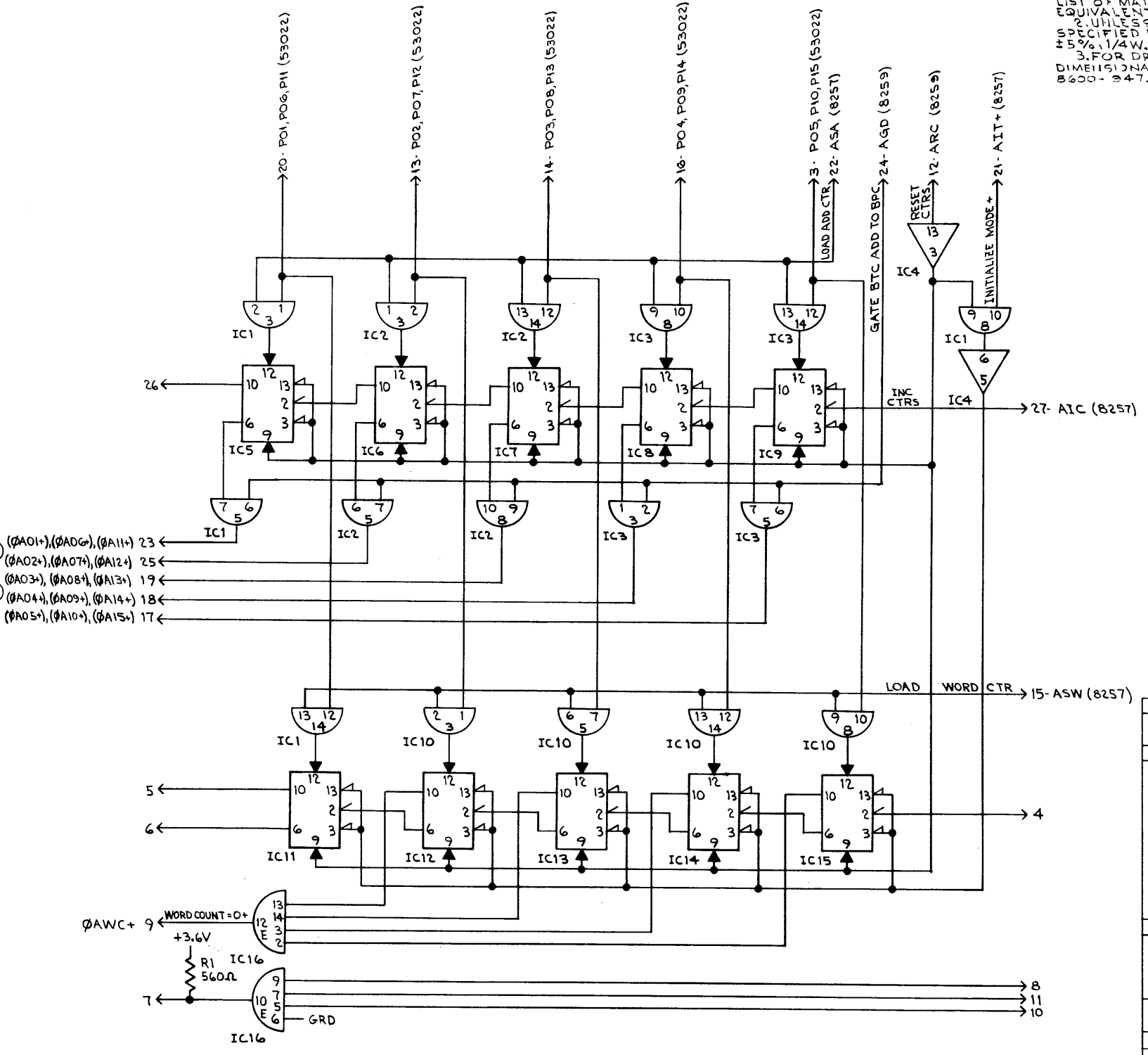
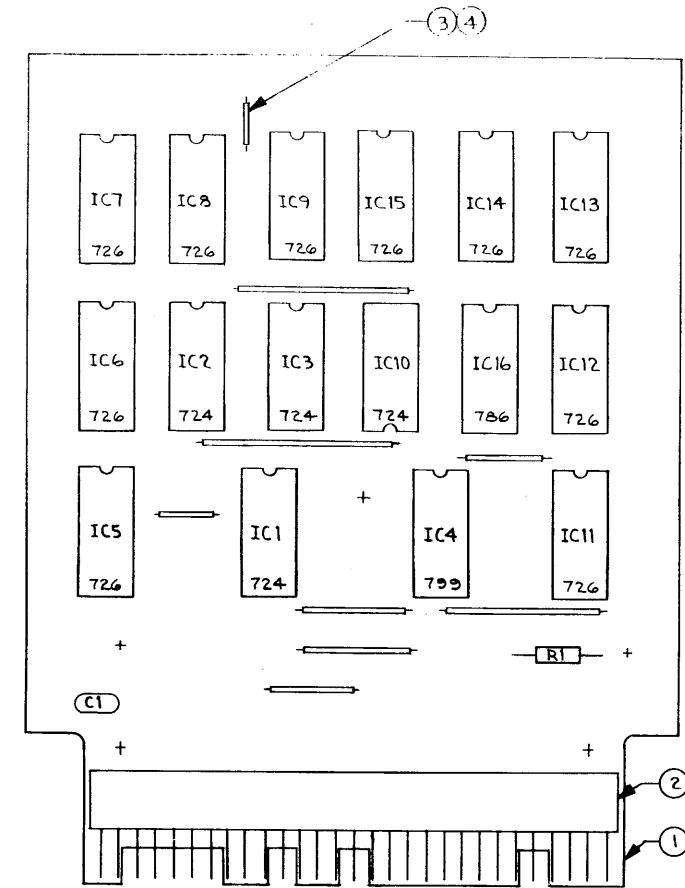
ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	FL SIENA 3-13-67	SCHEMATIC & ASSEMBLY RTL-BTC-DATA TRANSFER CONTROL 2 1R2
CE.	L. GOODREAD 3-14-67	
ENG.	F. ...	
PROJ. APP.	...	
APP.	...	
USED ON		

CODE IDENT NO.  
20886

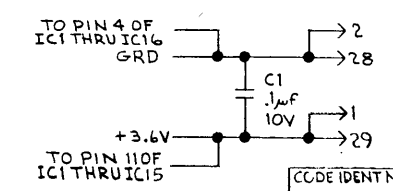
SIZE	D	8262	REV	C
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE #5% 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG SEE 8600-947.

REV	DESCRIPTION	DATE	APP'D
D	8263		
A	67-445; ADDRESSES AND LINE TITLES ADDED. AS 10/26/67	10/11/67	



ITEM	DWG. OR PART NO.	DESCRIPTION
1	R1	RC07GF561J RESISTOR-560Ω, ALLEN BRADLEY
1	IC16	MCT86P INTEGRATED CIRCUIT-MOTOROLA
10	IC15, IC14, IC13, IC12, IC11, IC9, IC8, IC7, IC6, IC5	MCT726P INTEGRATED CIRCUIT-MOTOROLA
1	IC4	MCT99P INTEGRATED CIRCUIT-MOTOROLA
4	IC10, IC3, IC2, IC1	MCT24P INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104 CAPACITOR-.1μF+80-20%, 10V, CRL
AR	4	AWG 24 SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24 WIRE-SOLID COPPER, TINNED
1	2	00-1022-029-000-001 CONNECTOR-ELCO
1	1	SEL 947 PRINTED CIRCUIT (REV. SEE AS1140)



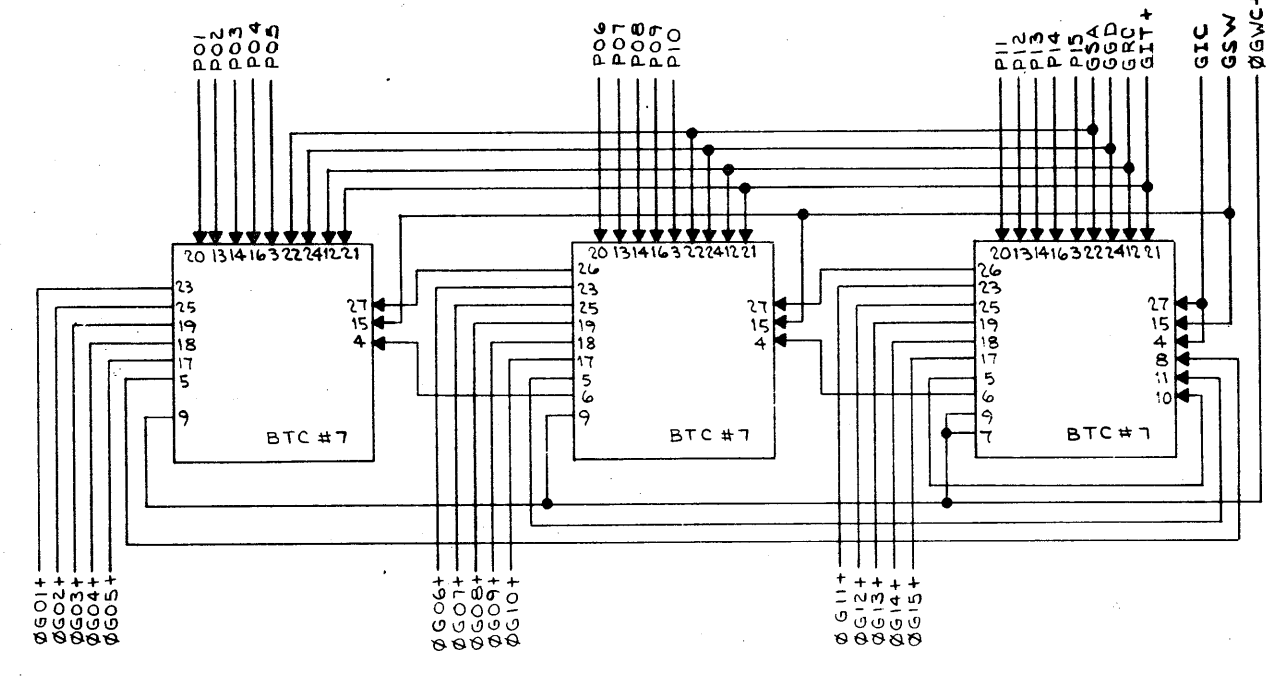
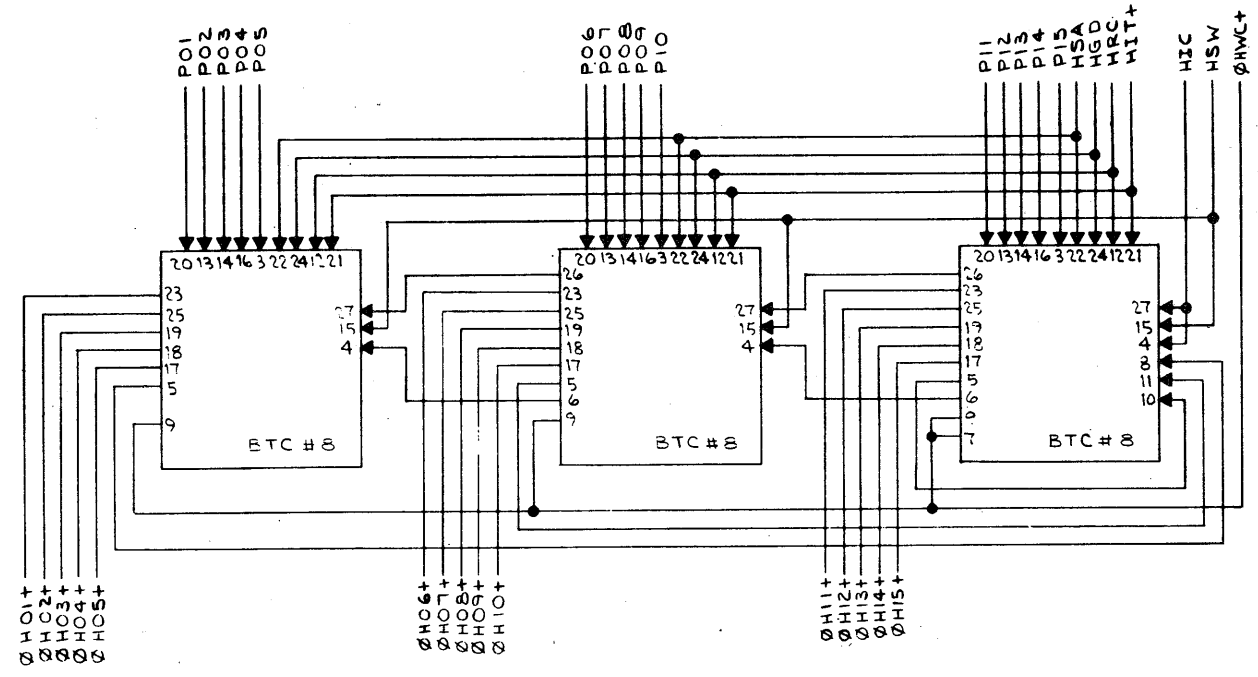
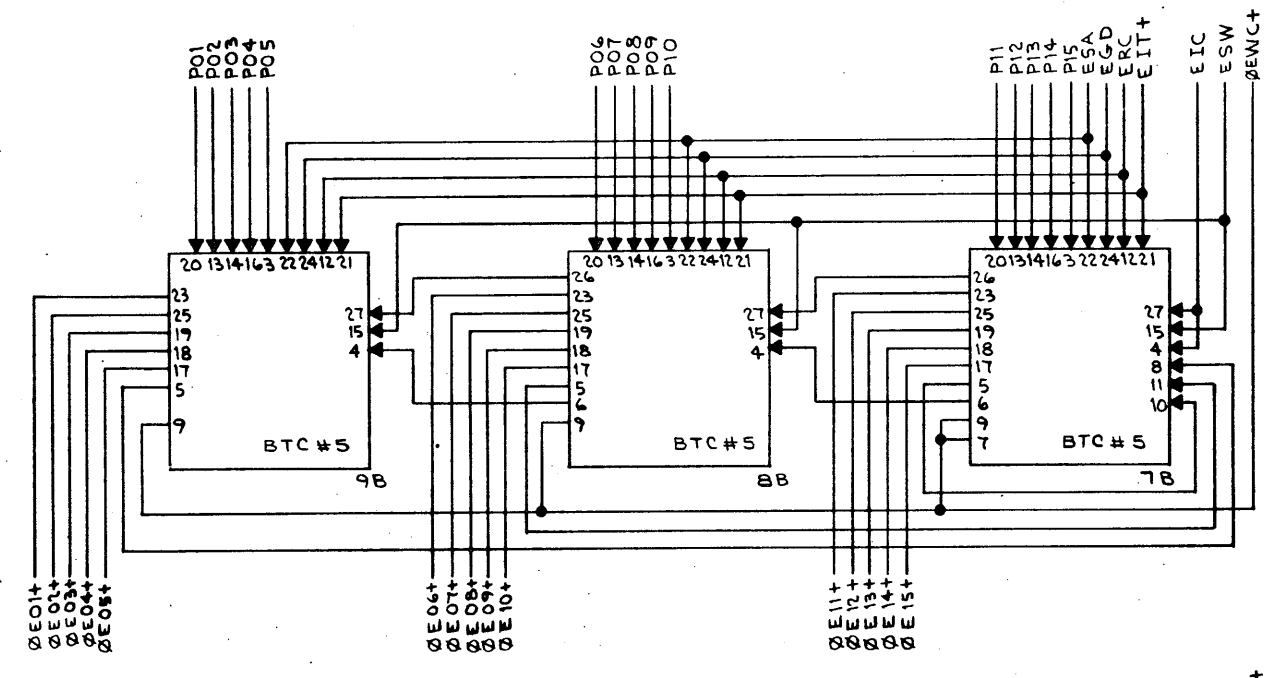
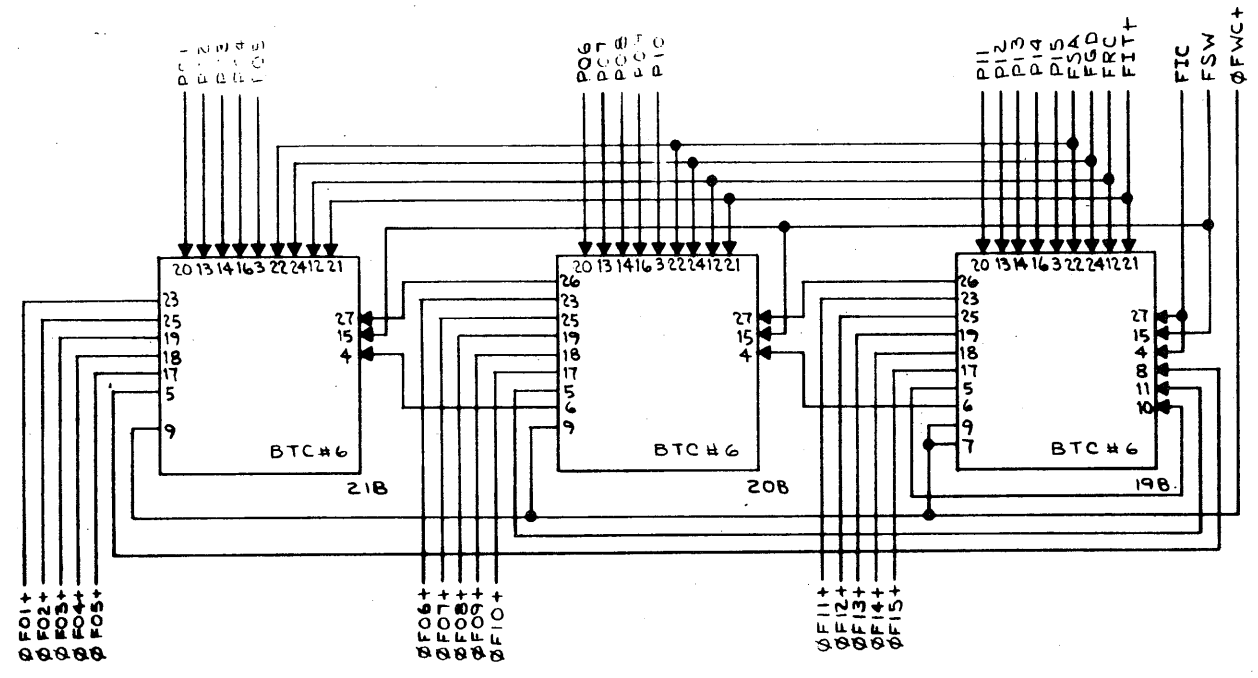
CCODE IDENT NO. 20886

DR	RLWENNELL	3/19/67	SCHEMATIC & ASSEMBLY RTL 5 BIT DUAL COUNTER 1R2	REV A
CK	RKM	3-30-67		
ENG.	C. J. Wynn	4/3/67		
APP.	W. J. Wynn	6/16/67		
REV			SIZE	D
				8263



NOTES:  
1. SEE SHEET 1.

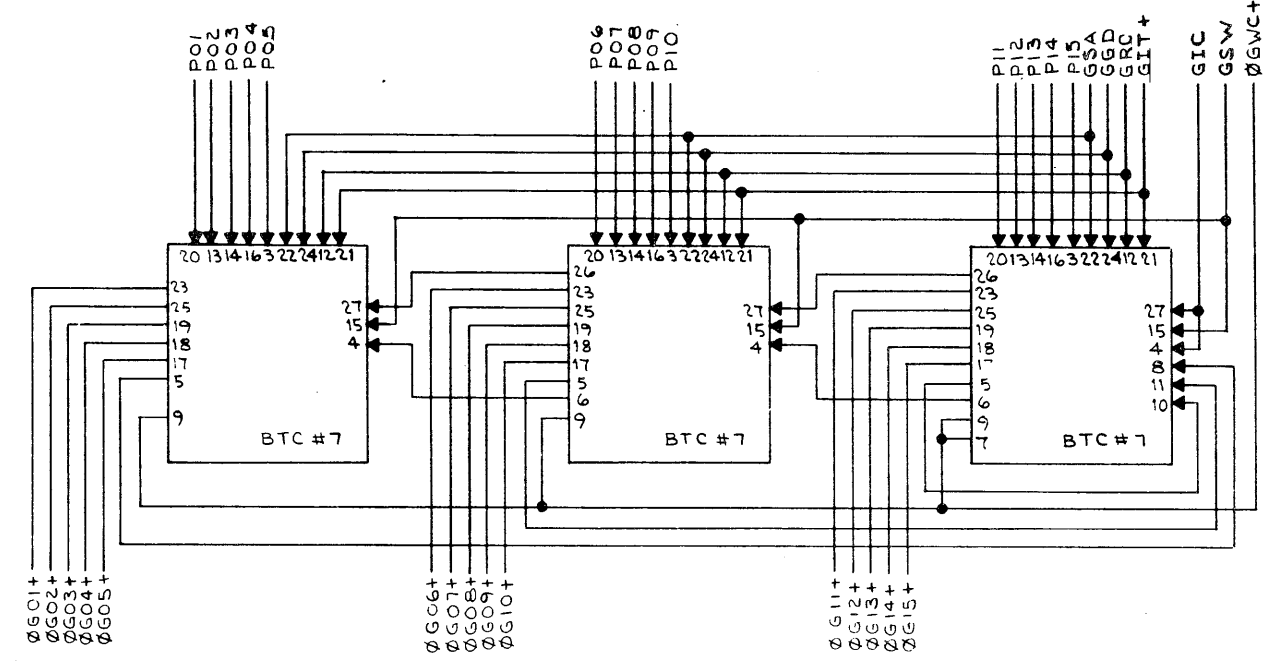
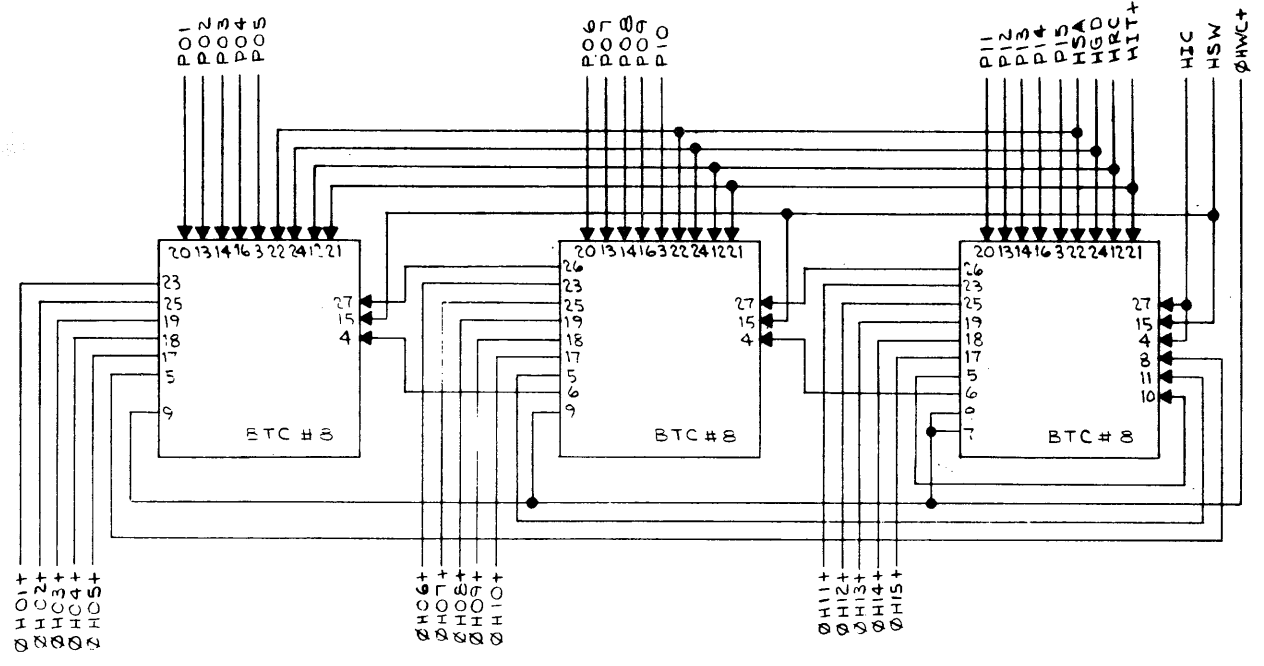
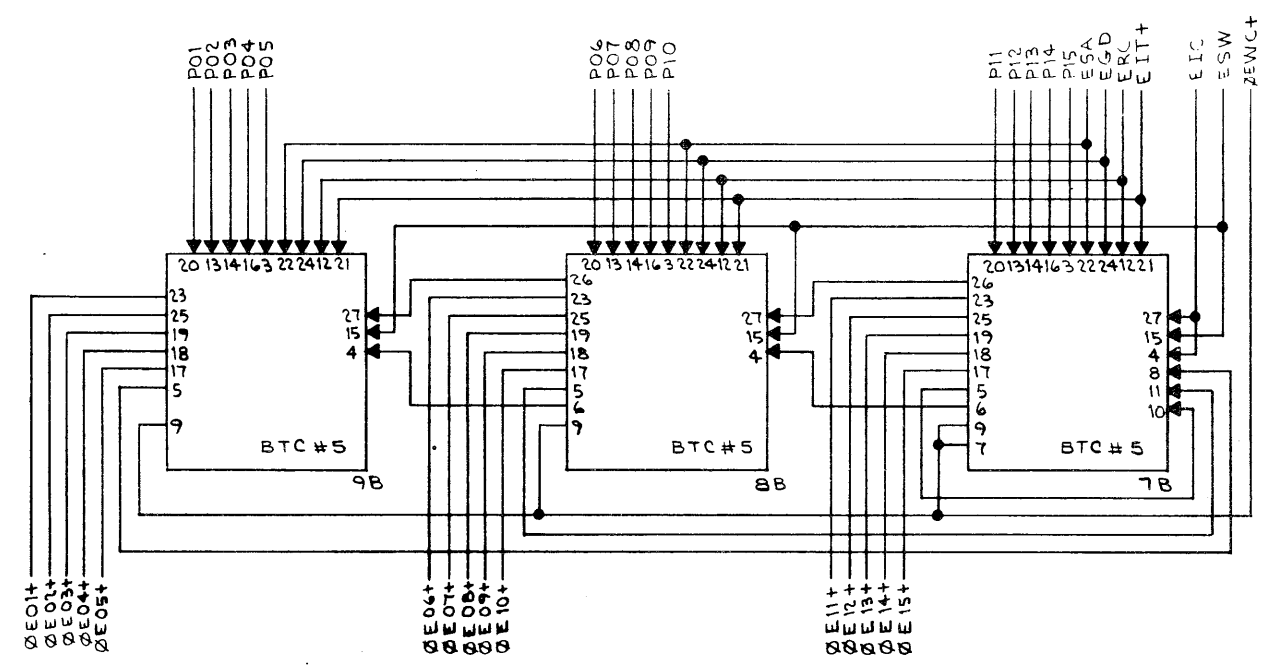
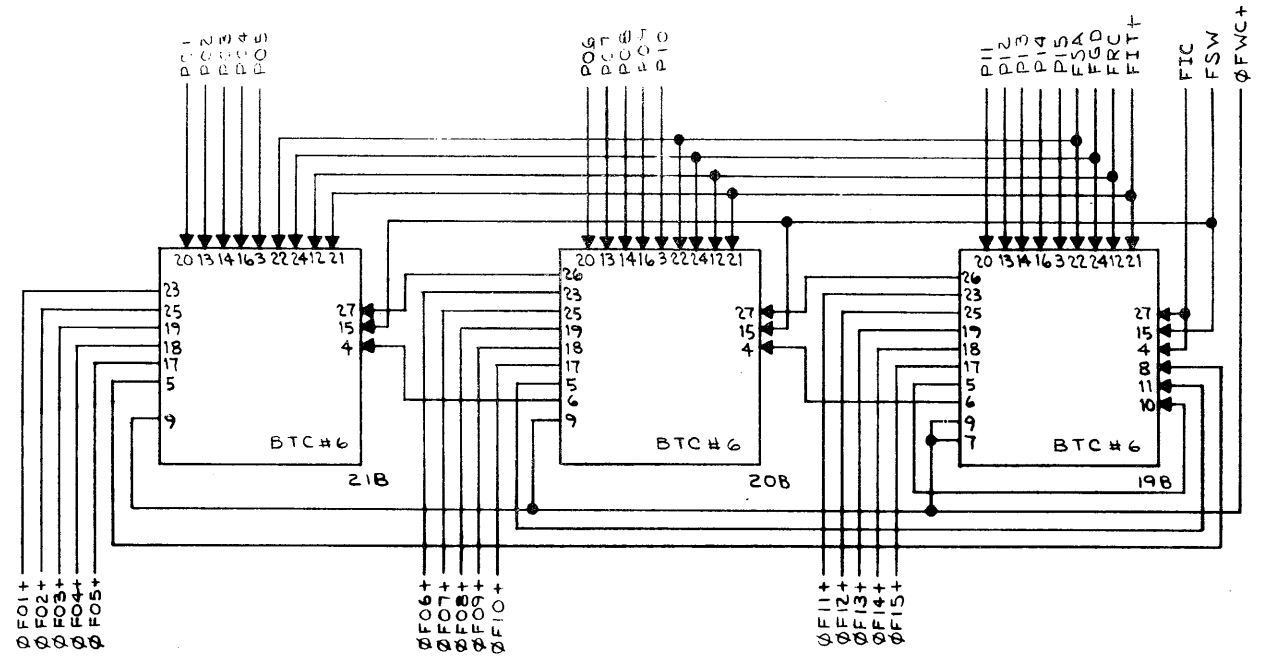
REV	D	8263	DATE	APP'D
		DESCRIPTION		
		SEE SHT. 1		



ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA						
DR.	R.L. WENNELL 3/30/67	SCHEMATIC & ASSEMBLY RTL BIT DUAL COUNTER IR2				
CL.	R.H.N.					
ENG.	<i>[Signature]</i> 4/5/67					
PROJ. APP.	<i>[Signature]</i> 4/11/67					
CODE IDENT. NO.	20886	SIZE	D	8263	REV	A
USED ON						

NOTES:  
1. SEE SHEET 1.

SIZE	D	8263	REV	A
REV		DESCRIPTION	DATE	APP'D
		SEE SHT. 1		

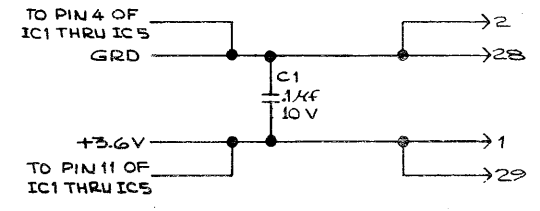
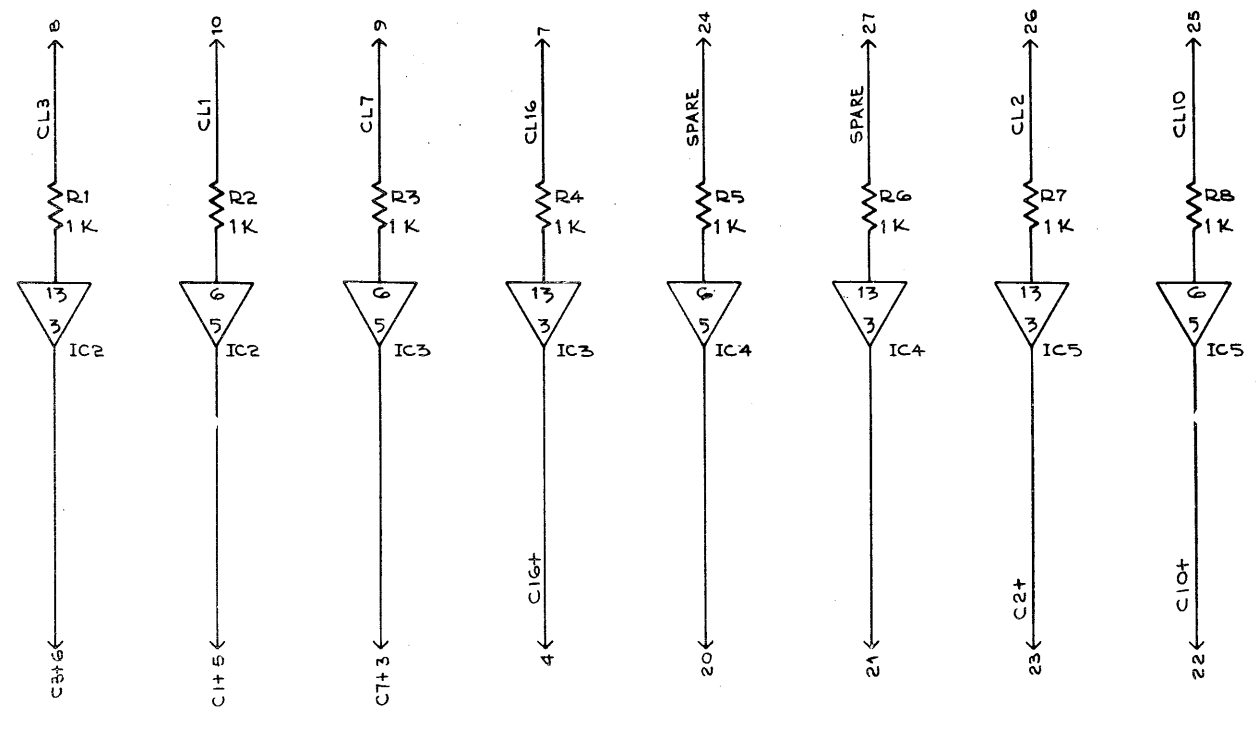
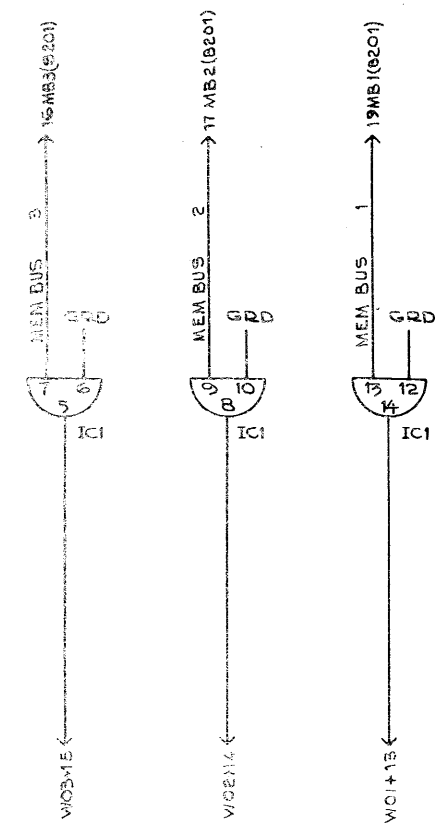
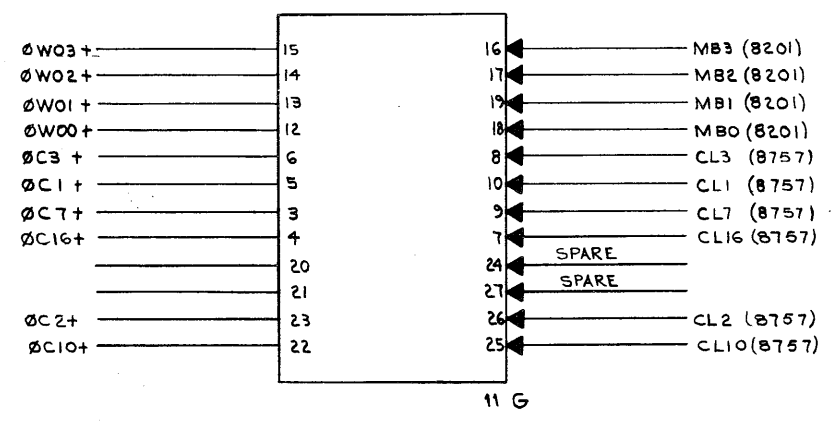
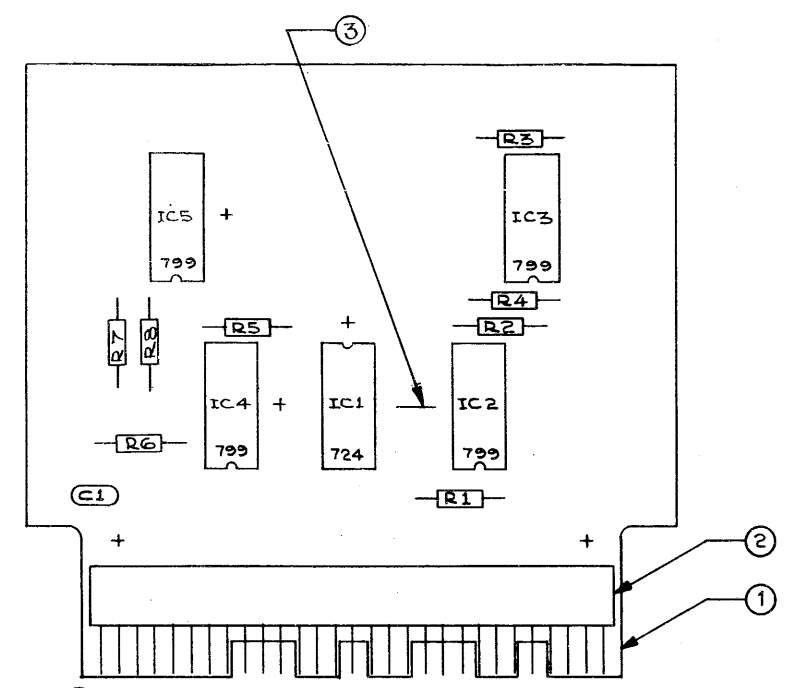


ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA				
DR.	RL WENNEL 3/30/67	SCHEMATIC & ASSEMBLY RTL 5 BIT SERIAL COUNTER IR2				
CE.	R.F.M.					
ENG.	J. Vellanti 6/5/67					
PROJ. APP.	W. J. ... 1/1/68					
CODE IDENT NO.	20886	SIZE	D	8263	REV	A
USED ON						



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.  
 3. FOR DRILLING DWG. SEE C 8600-987.  
 FOR DIMENSIONAL DWG. SEE C 8600

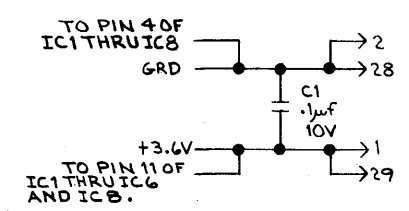
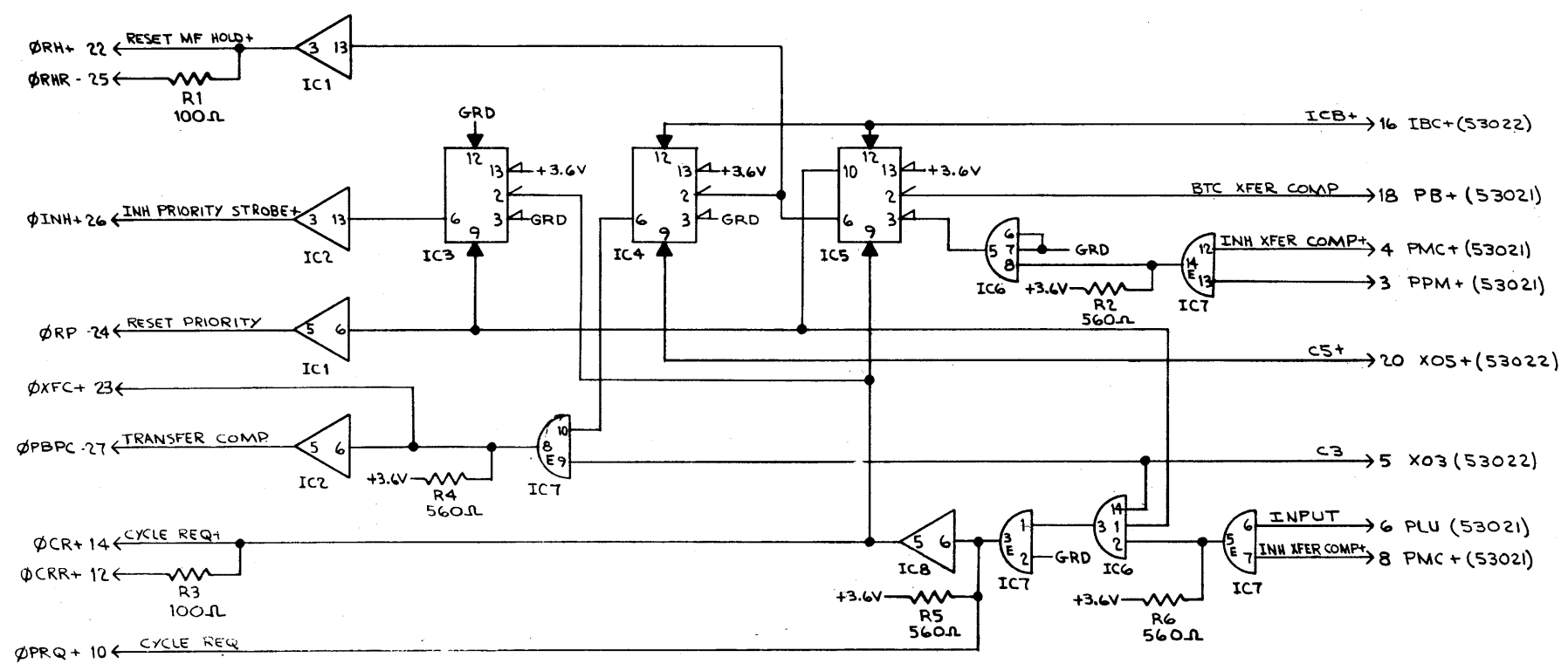
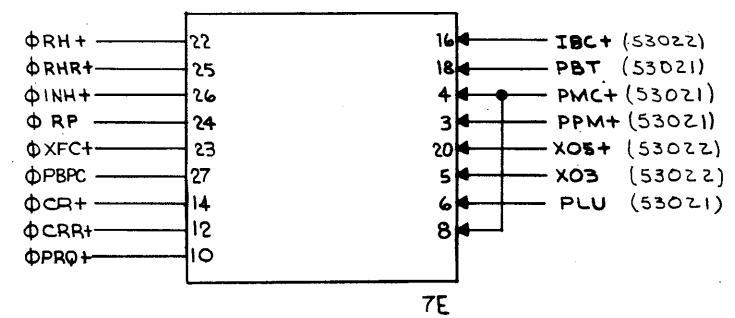
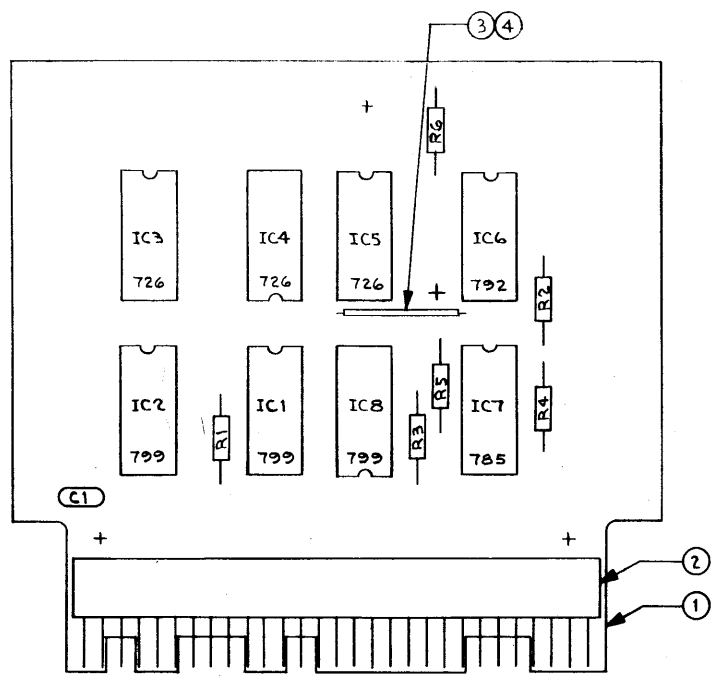
REV	DESCRIPTION	DATE	APP'D
D	8264		
A	67-197; ADDED LOGIC REPRESENTATION. RMT 6/20/67 RKM	6/20/67	
B	67-415; ADDRESSES REVISED. LINE TITLES ADDED & CARD 115 WAS 24 G. E.P.C. 10-25-67	10/23/67	



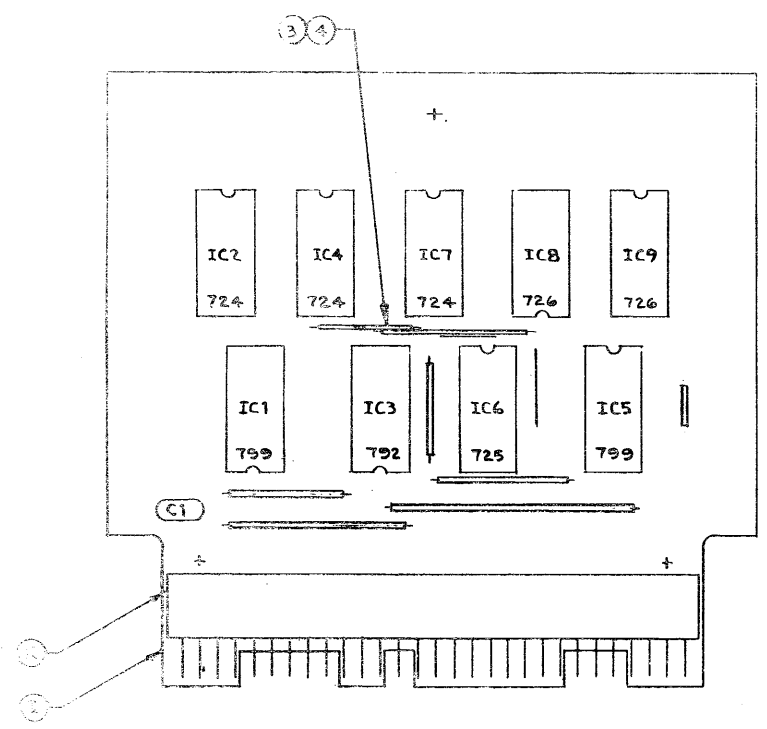
8	R8	THRU	RC07GF102J	RESISTOR - 1K, ALLEN BRADLEY	
	R1				
4	IC5	THRU	MC799P	INTEGRATED CIRCUIT-MOTOROLA	
	IC2				
1	IC1		MC724P		
1	C1		UK10-104	CAPACITOR - .144F +80-20%, 10V, CRL.	
AR	3	AWG. 24		WIRE - SOLID COPPER, TINNED	
1	2	00-7022-029-000-001		CONNECTOR - ELCO	
1	1	SEL 987		PRINTED CIRCUIT (REV. SEE A51140)	
-1	ITEM	DWG. OR PART NO.		DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA					
DR	16	B <sup>9</sup> YD	3-31-67	SCHEMATIC & ASSEMBLY RTL CLOCK BUFFERS	
DC		RKM	4-3-67		
ENGR.		<i>E. Villant</i>	6/5/67		
PROJ. APP.		<i>W. Co. Co.</i>	6/16/67		
APP.		<i>E. Klump</i>	6/15/67		
CODE IDENT NO.	20886			SIZE	D 8264
USED ON				REV	B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING DRAWING SEE D8600-963.  
 FOR DIMENSIONAL DWG SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8265		C
A	67-204; ADDED $\phi$ TO LOGIC OUTPUTS. BB 6-21-67 RKM	7/1/67	
B	67-312; ADDED OUTPUT PIN 23 TO SCHEMATIC & LOGIC. 5.1.B. 8-31-67 RKM	8/31/67	
C	67-445; ADDRESSES AND LINE TITLES ADDED. CARD NUMBER REVISED. AS. 10-26-67 CWW	10/26/67	

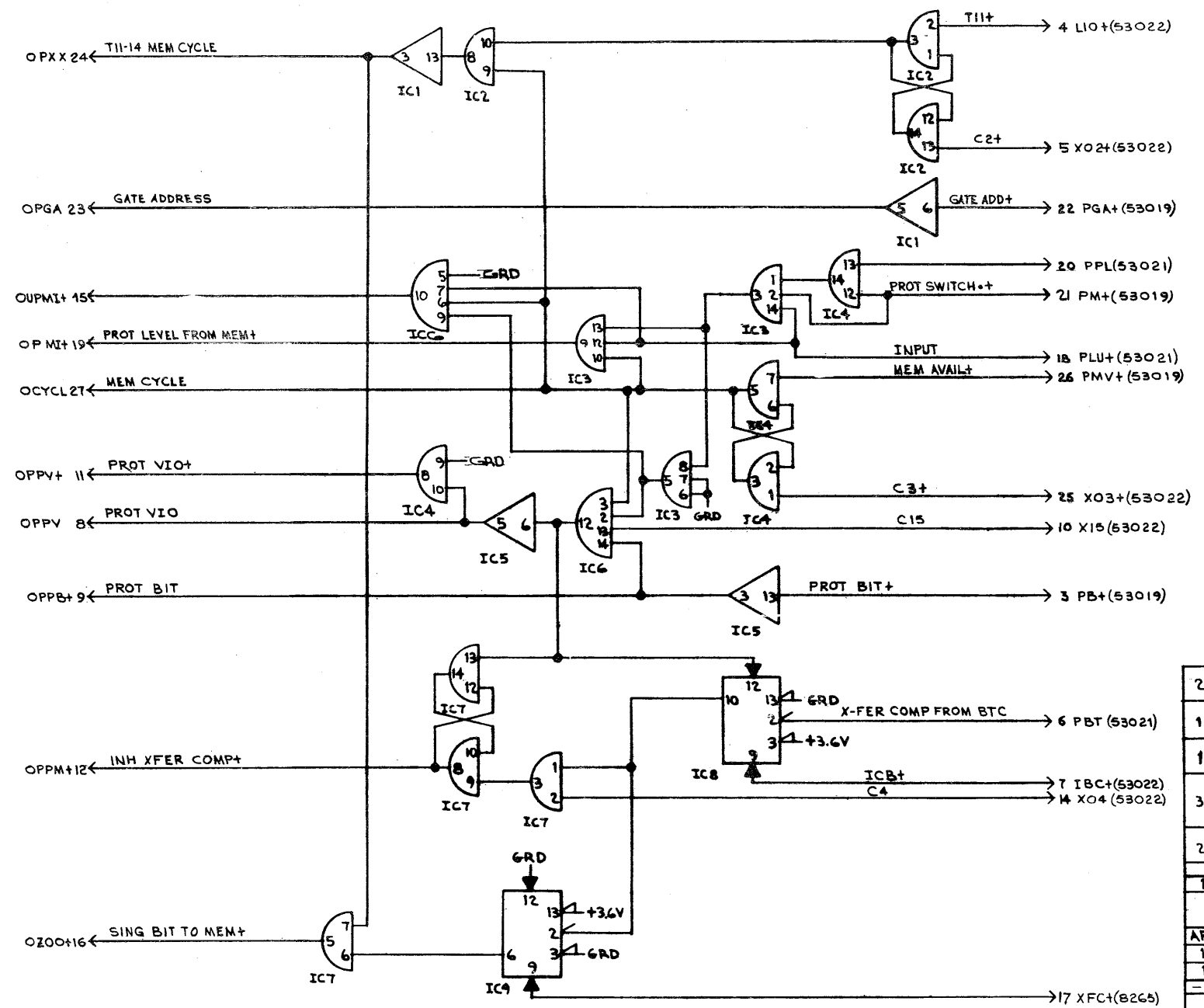


QTY	REF	DESCRIPTION	MANUFACTURER
4	R6 R5 R4 R2	RCOTGF561J	RESISTOR-560 $\Omega$ , ALLEN BRADLEY
2	R3 R1	RCOTGF101J	RESISTOR-100 $\Omega$ , ALLEN BRADLEY
1	IC7	MCT85P	INTEGRATED CIRCUIT-MOTOROLA
1	IC6	MCT92P	
3	IC5 IC4 IC3	MCT26P	
3	IC8 IC2 IC1	MCT99P	
1	C1	UK-10-104	CAPACITOR-1 $\mu$ F $\pm$ 80-20% 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	007022-029-000-001	CONNECTOR-ELCO
1	1	SEL 963	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	RL WENNELL	3/30/67	SCHEMATIC & ASSEMBLY RTL BPC CYCLE CONTROL IR2
CK	RKM	4-3-67	
ENG	C. V. HART	6-1-67	
APP	R. W. HART	6/9/67	
CODE IDENT NO.	20886	USED ON	DATE
SIZE	D	8265	REV
			C



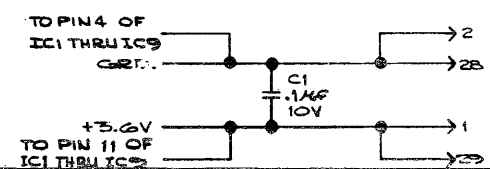
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4 W, 1%.  
 3. FOR DRILLING DWG SEE DB600-962 FOR DIMENSIONAL DWG SEE CB600

REV	D	8266	REV	B
REV	DESCRIPTION	DATE	APP'D	
A	GT-311; ADDED PINS 15 & 17 AND PINS 5, 6, 7, 10 OF IC6. RELOCATED BS10 OF IC4. ON LOGIC PIN 14 WAS L11. b.i.b. 8/31/67 RKM	7/1/67		
B	GT-445; ADDRESSES & LINES TITLES ADDED. CARD NUMBER REVISED E.P.C. 10-25-67 CAW	10/29/67		



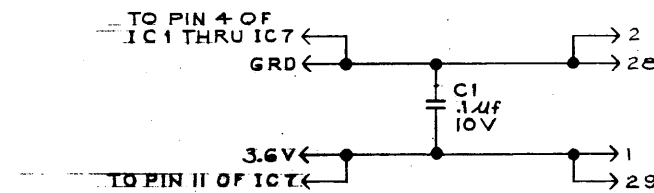
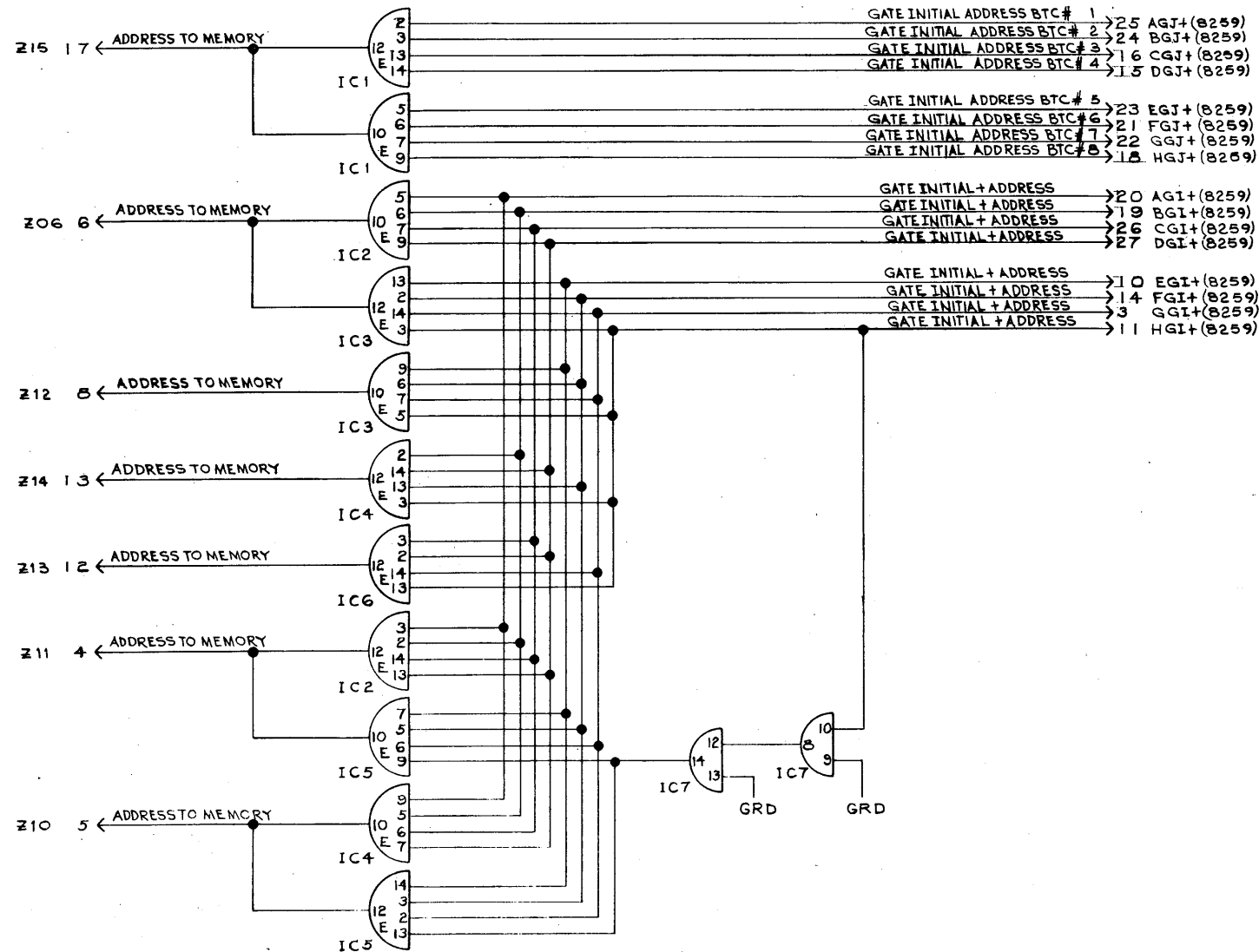
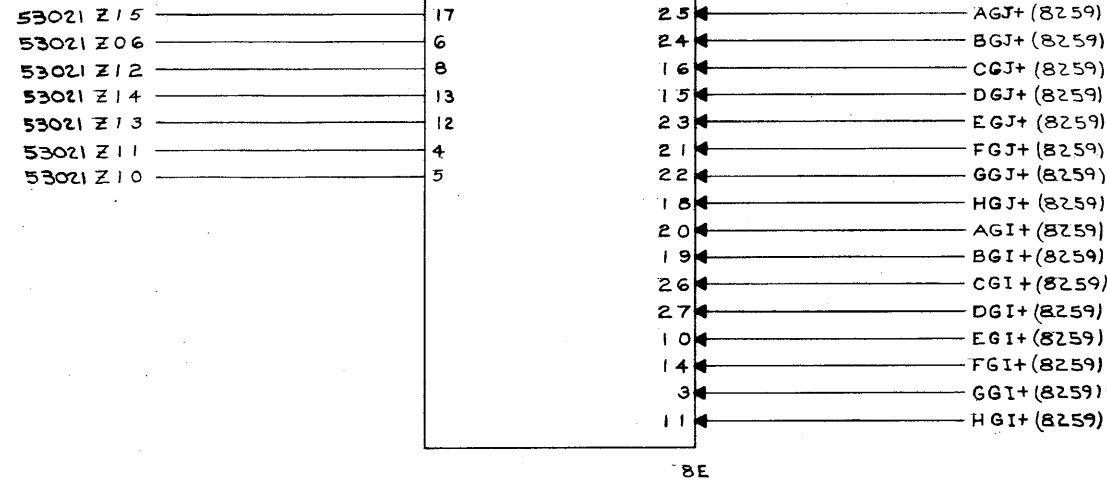
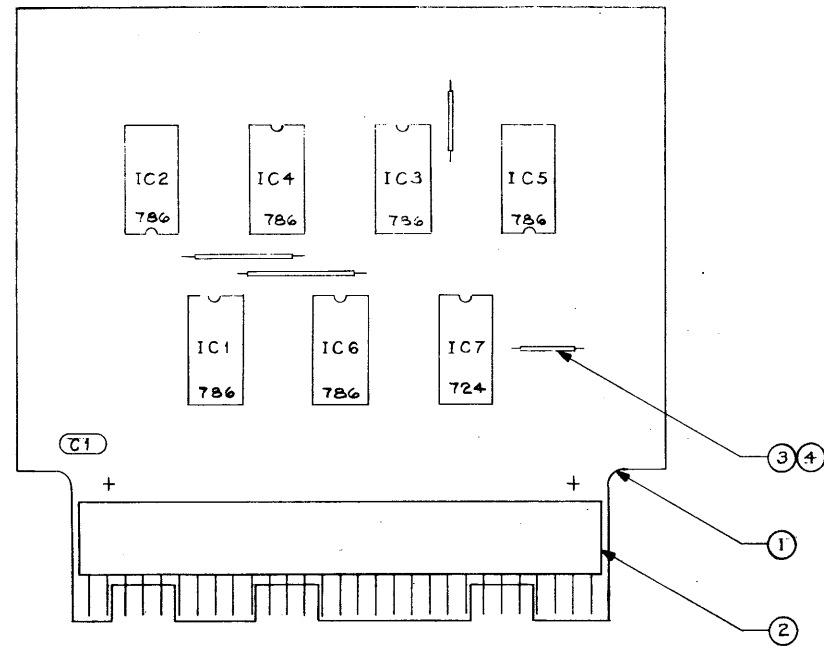
OPXX 24	4	L10+ (53022)
OPGA 23	5	X02+ (53022)
OPPMI+ 15	22	PGA+ (53019)
OPMI+ 19	20	PPL (53021)
OCYCL 27	21	PM+ (53019)
OPPV+ 11	18	PLU+ (53021)
OPPV 8	26	PMV+ (53019)
OPPB+ 9	25	X03+ (53022)
	10	X15 (53022)
	3	PB+ (53019)
	6	PBT (53021)
	7	IBC+ (53022)
	14	X04 (53022)
	17	XFC+ (8265)

2	IC9 IC8	MCT26P	
1	IC6	MCT25P	
1	IC3	MCT92P	INTEGRATED CIRCUIT-MOTOROLA
3	IC7 IC4 IC2	MC724P	
2	IC5 IC1	MCT99P	
1	C1	UK-10-104	CAPACITOR .1uF +80-20% JOWCR
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1 2	00-1022-029-000-001		CONNECTOR - ELCO
1 1	SEL 962		PRINTED CIRCUIT (FOR REV SEE A5140)
-	ITEM DWG. OR PART NO.		DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	R SANBORNE	3-20-67	
CK	RKM	3-24-67	
ENGR	E. Williams	4-5-67	
PROJ. MGR.	R. Williams	6/8/67	
APP.	R. Williams	6/1/67	
USED ON			
CODE IDENT NO	20886	SIZE	D
		REV	B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING & DIMENSIONAL DWG SEE 8200-961.

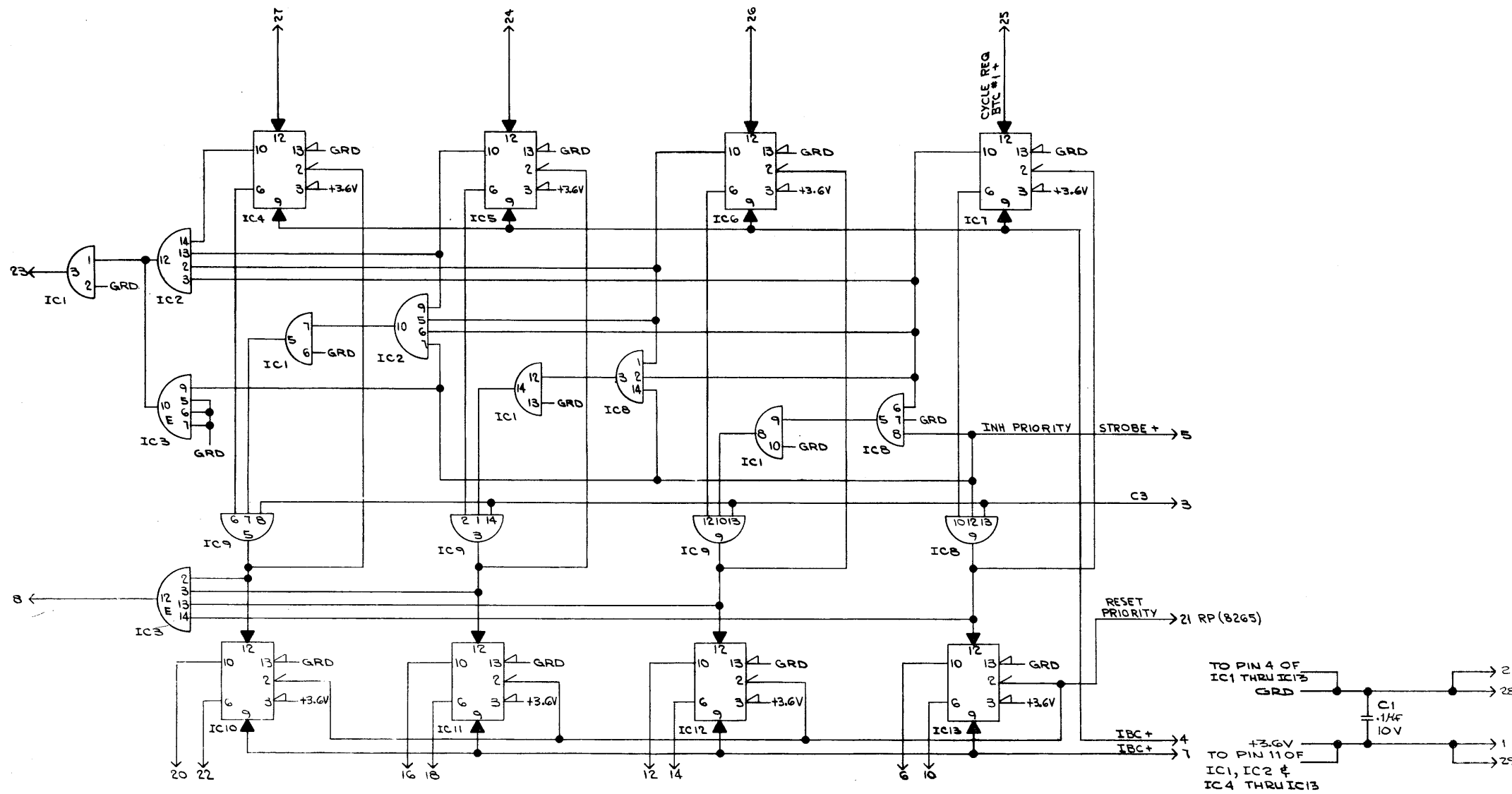
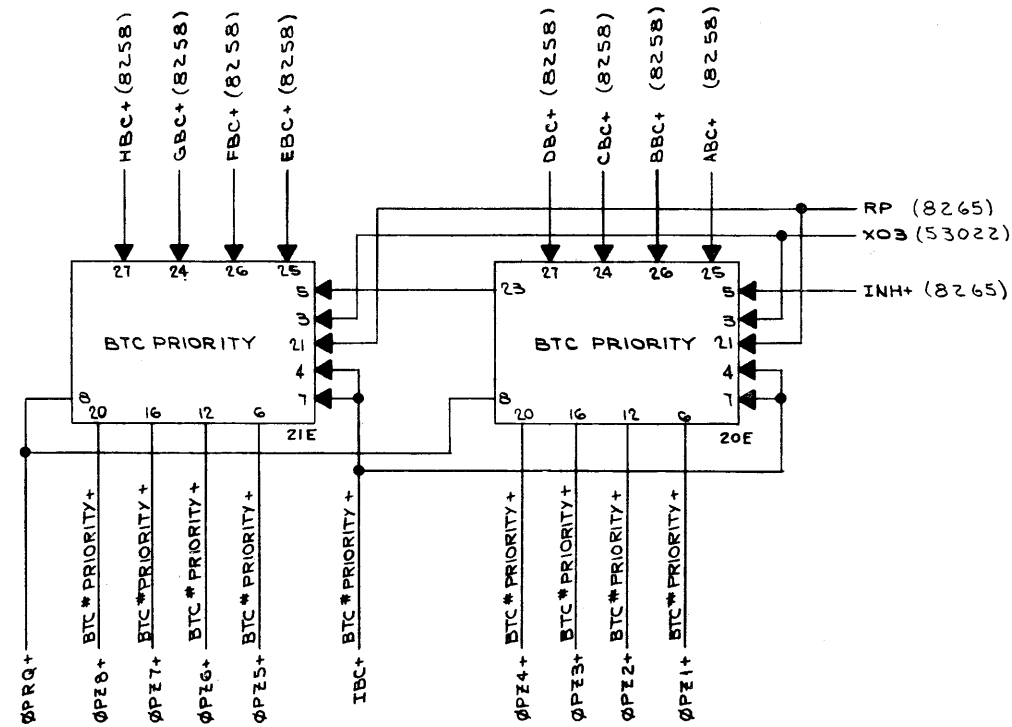
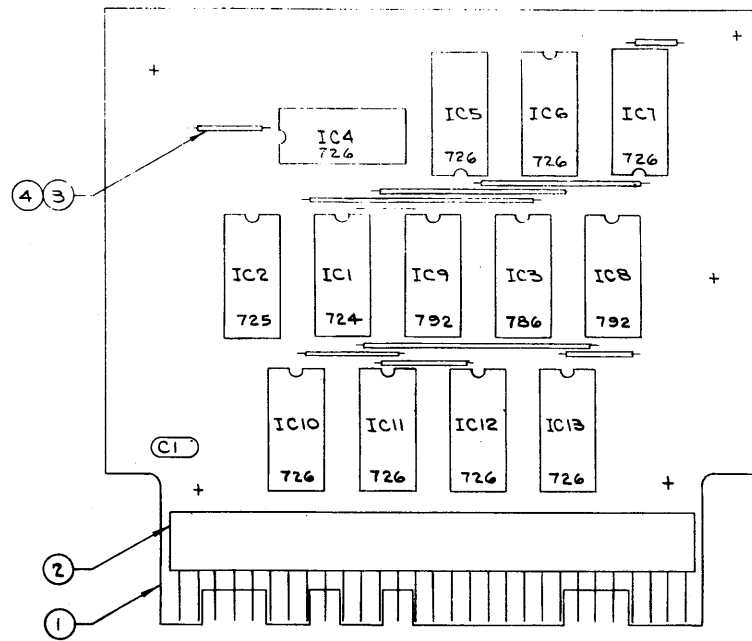
REV	D	8267	REV	A
DESCRIPTION	DATE	APP'D		
A	67-4451 ADDRESSES & LINE TITLES ADDED, CARD NUMBER REVISED. E.P.C. 10-25-67. <i>law</i>	10/26/67	<i>[Signature]</i>	



1	IC7	MC 724P	INTEGRATED CIRCUIT-MOTOROLA			
6	THRU IC1	MCT 86P	INTEGRATED CIRCUIT-MOTOROLA			
2	C1	UK10-104	CAPACITOR-1uF,±80-20%,10V, CRL			
AR 4	AWG 24	SLEEVING-TEFLON, THIN WALL (COLOR OPT)				
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED				
1	2	00-7022-029-000-00	CONNECTOR- ELCO			
1	1	SEL 961	PRINTED CIRCUIT (FOR REV. SEE AS140)			
-1	ITEM	DWG. OR PART NO.	DESCRIPTION			
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR	M. RICHARDS	3-30-67	SCHEMATIC ASSEMBLY RTL-INITIAL ADDRESS CONTROL 1R2			
CC	RKM	3-31-67				
ENG	E. Villanti	6/3/67				
PROJ	W. Williams	6/3/67				
APP	W. Williams	6/1/67				
CODE IDENT NO	20886	SIZE	D	8267	REV	A

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-964.  
 FOR DIMENSIONAL DWG. SEE C8600.

REV	DESCRIPTION	DATE	APP'D
D	8268		
A	67-204; ADDED Ø TO LOGIC OUTPUTS. BB 6-27-67 R.K.M.	7/12/67	
B	67-445; LINE TITLES ADDED AND CARD NUMBERS REVISED. AS. 10-26-67	10/26/67	



ITEM	DWG. OR PART NO.	DESCRIPTION
2	IC9, IC8, IC13, IC12, IC11, IC10, IC7, IC6, IC5, IC4	MC 792P
8	IC1, IC2, IC3	MC 726P
1	IC3	MC 786P
1	IC2	MC 725P
1	IC1	MC 724P
1	C1	UK-10-104 CAPACITOR-.1µF-80-20%,10V,CRL
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-1022-019-000-000 CONNECTOR- ELCO
1	1	SEL 964 PRINTED CIRCUIT (REV. SEE A51140)
-1		

DR.	DATE	DESCRIPTION
DR. F.L. SIENK	3-6-67	
CL. L. GOODREAD	3/14/67	
ENG. E. VILLANTI	6-5-67	
APP. R. C. BROWN	6/6/67	
APP. R. C. BROWN	6/12/67	

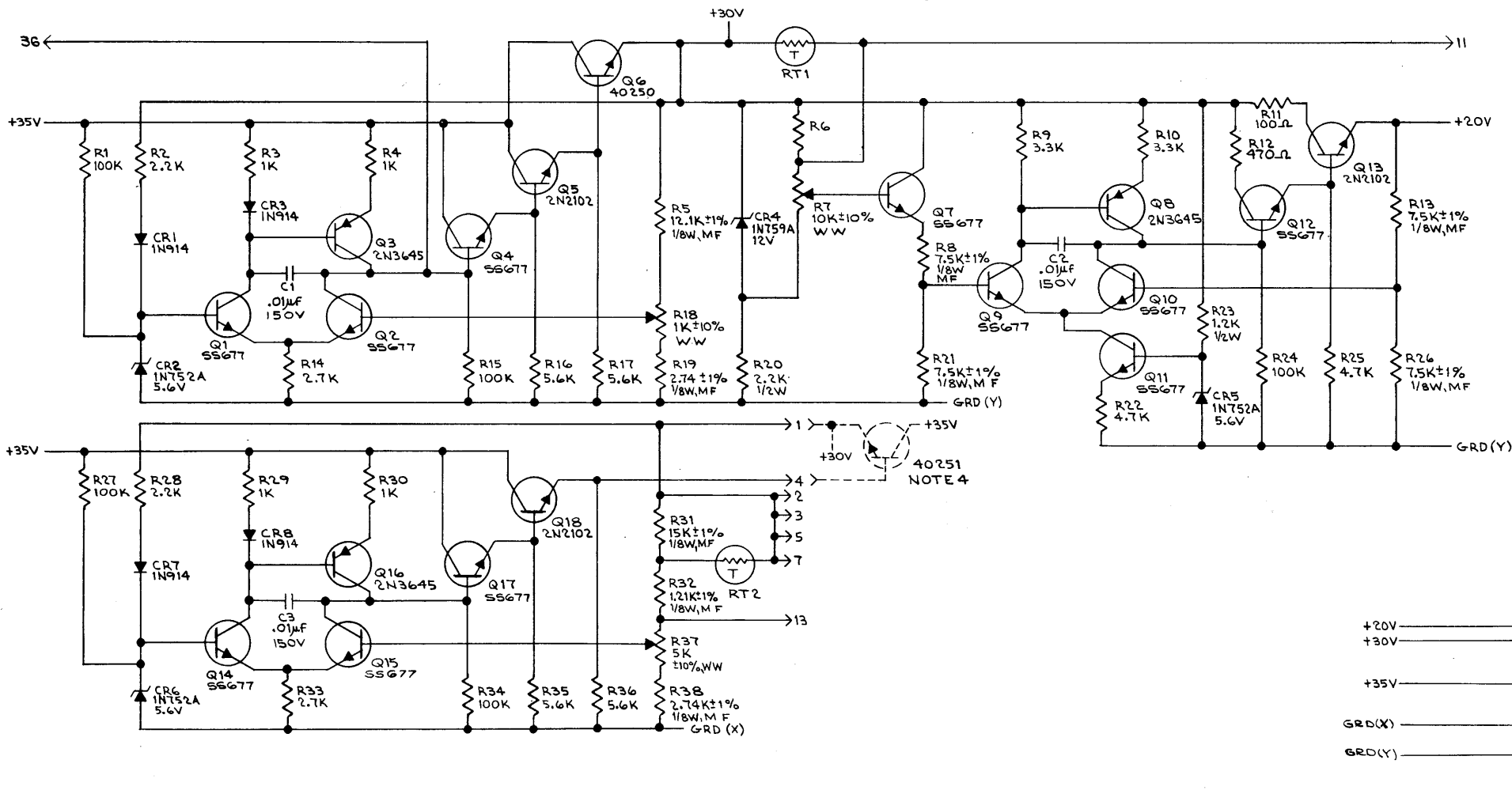
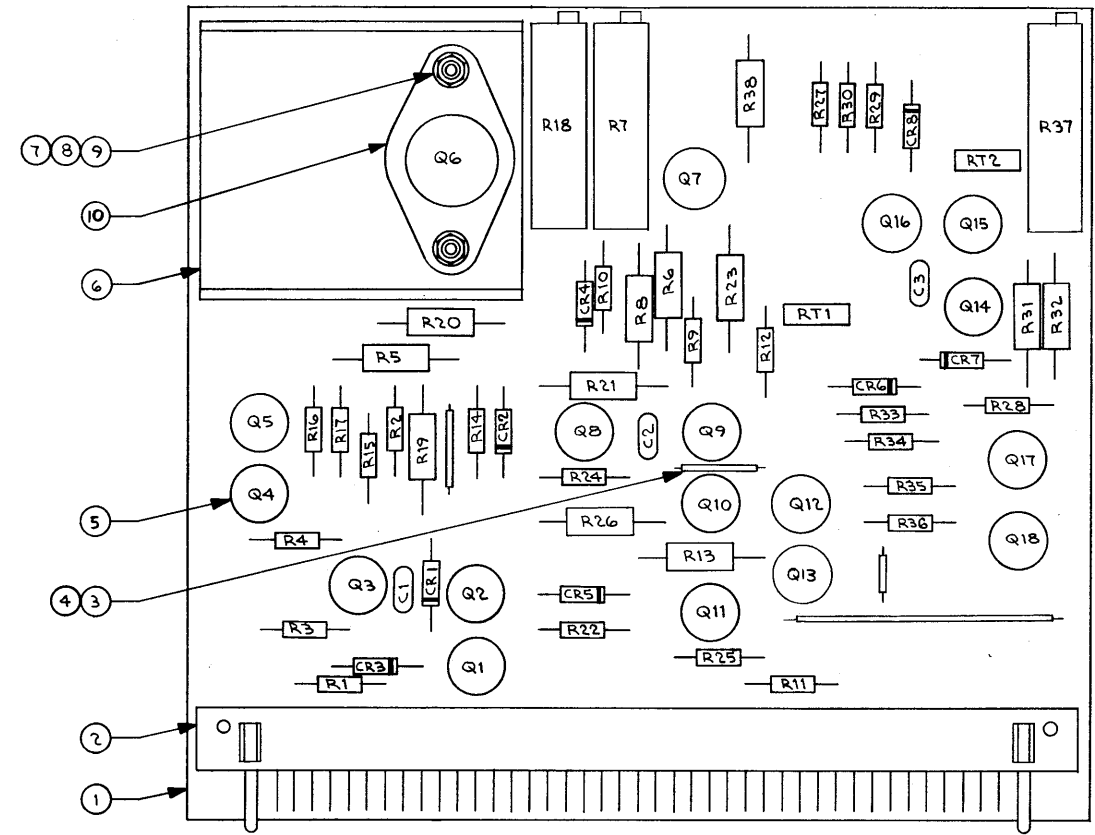
  

CODE IDENT NO.	SIZE	REV
20886	D	B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5% 1/4W.  
 3. FOR DRILLING & DIMENSIONAL DWG SEE C 15 213.  
 4. MOUNTED EXTERNALLY TO BOARD.

REV	DESCRIPTION	DATE	APPRD
D	8269		
A	67-469; REVISED ASSY TO AGREE WITH LATEST PC. CHANGE, FLP 11-7-67	11/7/67	
B	68-12; ADDED -2, RT2 WAS 5.74K RKM 1-13-68	1/13/68	
C	68-122; Q1,2,4,7,9,10,11,12,14,15 & RT WERE 2N3904, CEM 3/8/68	3/13/68	



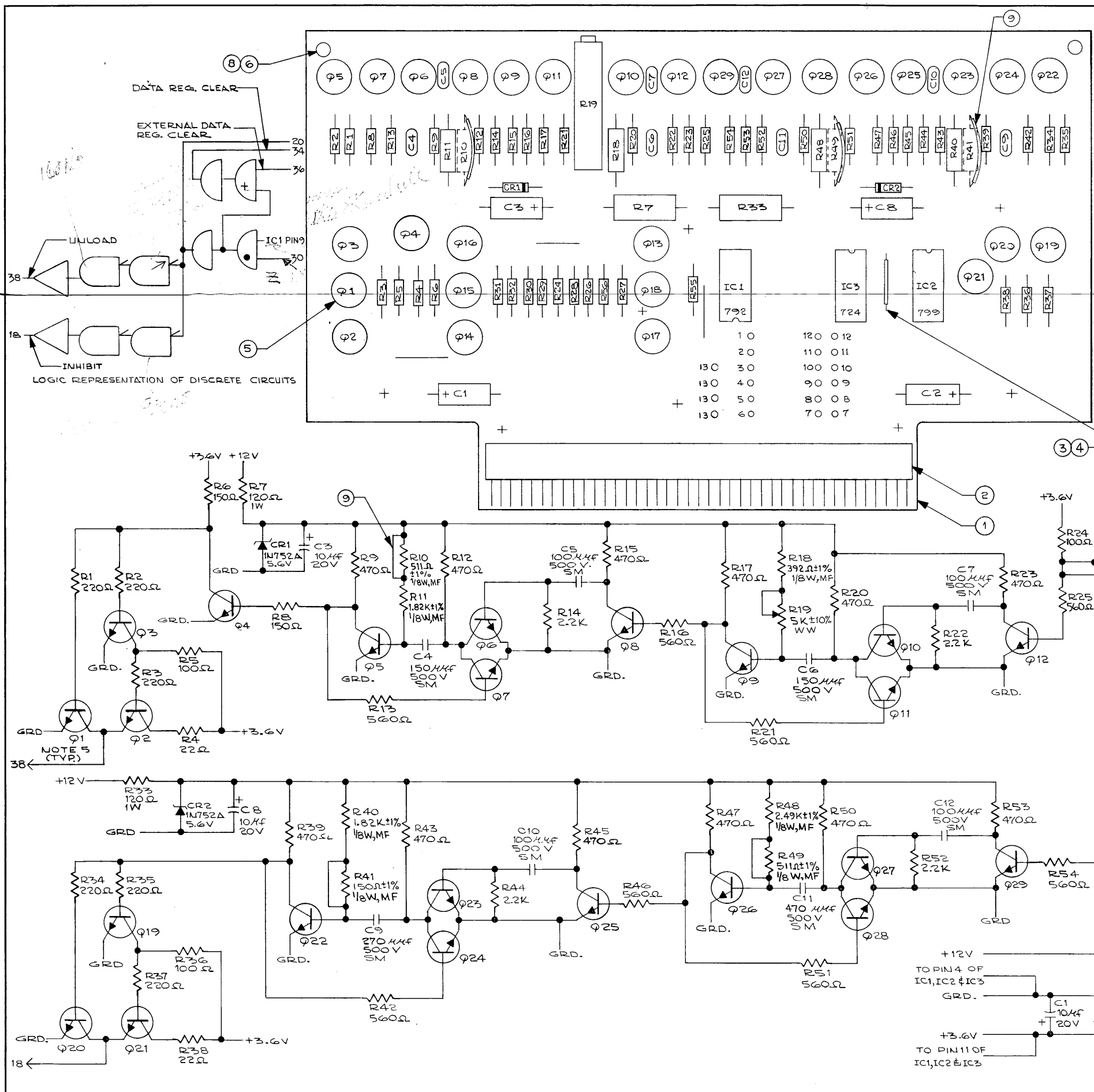
1	1	RT2	RL 2651	THERMISTOR-57.4K±10%, 0.37.8%, KEYSTONE
1	1	RT1	RL 28E1	THERMISTOR-25.7K±10%, 0.37.8%, KEYSTONE
1	1	R6	RN60	RESISTOR-41.9K±1%, 1/8W, 50PPM/°C, MF, W.L.
1	1	R37	200P-1-502	POTENTIOMETER-5K, 10%, WW, BOURNS
1	1	R32	RN60	RESISTOR-1.2K±1%, 1/8W, 50PPM/°C, MF, W.L.
1	1	R31	RN60	RESISTOR-15 K±1%, 1/8W, 50PPM/°C, MF, W.L.
1	1	R23	RC20GF122J	RESISTOR-12K, 1/2W, ALLEN BRADLEY
2	2	R225	RCOTGF472J	RESISTOR-4.7K, ALLEN BRADLEY
1	1	R20	RC20GF222J	RESISTOR-22K, 1/2W, ALLEN BRADLEY
2	2	R1938	RN60	RESISTOR-2.74K±1%, 1/8W, 50PPM/°C, MF, W.L.
1	1	R18	200P-1-102	POTENTIOMETER-1K ±10%, WW, BOURNS
4	4	R3536 R16,17	RCOTGF562J	RESISTOR-5.6K, ALLEN BRADLEY
2	2	R433	RCOTGF272J	RESISTOR-2.7K
1	1	R12	RCOTGF471J	RESISTOR-470Ω
1	1	R11	RCOTGF101J	RESISTOR-100Ω
2	2	R9,10	RCOTGF332J	RESISTOR-3.3K, ALLEN BRADLEY
4	4	R2126 R8,13	RN60	RESISTOR-7.5K±1%, 1/8W, 50PPM/°C, MF, WARD LEONARD
1	1	RT	200P-1-103	POTENTIOMETER-10K ±10%, WW, BOURNS
1	1	R6	RN60	RESISTOR-49.9K±1%, 1/8W, 50PPM/°C, MF, W.L.
1	1	R5	RN60	RESISTOR-12.1K±1%, 1/8W, 100PPM/°C, MF, W.L.
4	4	R2930 R3,4	RCOTGF102J	RESISTOR-1K, ALLEN BRADLEY
2	2	R28 R2	RCOTGF222J	RESISTOR-2.2K, ALLEN BRADLEY
5	5	R34 R4,7 R1,15	RCOTGF104J	RESISTOR-100K, ALLEN BRADLEY
1	1	Q6	40250	TRANSISTOR- RCA
3	3	Q18 Q5,13	2N2102	TRANSISTOR- RCA
3	3	Q16 Q3,8	2N3645	TRANSISTOR- FAIRCHILD
11	11	Q15,17 Q12,14 Q11 Q9,10 Q4,7 Q1,2	SS677	TRANSISTOR- MOTOROLA
1	1	CR4	1N759A	DIODE-12V ZENER, MOTOROLA
4	4	CR7,8 CR1,3	1N914	DIODE-CLEVITE
3	3	CR6 CR2,5	1N752A	DIODE-56V ZENER, MOTOROLA
3	3	C3 C1,2	DDM103	CAPACITOR-.01μf±50%, 150V, CRL
1	1	10		WASHER- INSULATED, MICA
2	2	9		NUT-#4-32, ESNA
2	2	8		SCREW-#4-32x3/16, RD HD, S/S
2	2	7		WASHER-#4, SHAKE PROOF, INT. TOOTH
1	1	6	B13426	HEAT SINK
17	17	5	B10369	UNIPAD
AR	AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	1	2	00-7023-041-000-001	CONNECTOR-ELCO
1	1	1	SEL 966	PRINTED CIRCUIT (REV. SEE A51140)
-2	-1	ITEM	DWG. OR PART NO.	DESCRIPTION

RESISTOR  
 TRANSISTOR  
 LOGIC

CODE IDENT NO.  
 20886

DR	CHK	ENG	APP	USED ON	DATE	DESCRIPTION
DR. R. L. WENNEL	5/4/67	RKM	6-5-67		5-22-67	SCHMATIC & ASSEMBLY
					6-16-67	RTL LINE DRIVER, CURRENT DRIVER
					6/16/67	AND INHIBIT DRIVER REGULATOR

REV	DESCRIPTION	DATE	APPRD
D	8269		



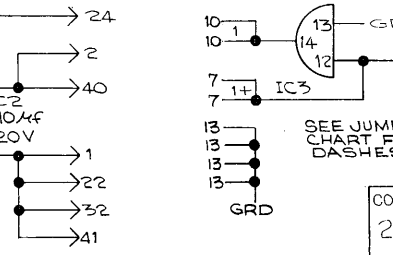
5 THE VALUES OF THE FOLLOWING RESISTORS MAY BE CHANGED IN TEST TO OPTIMIZE TIMING: R10, R11, R18, 40, 41, 48 & 49.

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$  1/4 W.  
 3. FOR DRILLING & DIMENSIONAL DWG. SEE C1518B  
 4. TRANSISTORS ARE 2N2369A UNLESS OTHERWISE SPECIFIED.

JUMPER CHART

DASH NO.	UNIT NO.	1	2	3	4	5	6
-1	-	-	-	-	-	-	-
-2	4K#1	8	9	7	7	8	9
-4	12K#2	8	12	7	7	8	12
-5	16K#2	8	12	13	13	8	12
-6	20K#3	11	9	7	7	11	9
-7	24K#3	11	9	13	13	11	9
-8	28K#4	11	12	7	7	11	12
-9	32K#4	11	12	13	13	11	12

QTY	REF. DESIGNATION	DESCRIPTION	DATE	APP'D
1	R48	RNGO		
1	R41	RNGO		
6	R23,32	RC07GF391J		
1	R19	Z00P-1-502		
1	R18	RNGO		
4	R44,52	RC07GF222J		
8	R21,25	RC07GF561J		
2	R11,40	RNGO		
2	R10,49	RNGO		
12	R50,53			
12	R45,47			
12	R39,43			
12	R20,23			
12	R15,17			
12	R9,12			
2	R17,33	RC32GF121J		
2	R6,8	RC07GF151J		
6	R30,36			
6	R26,29			
2	R43,38	RC07GF220J		
6	R35,37			
6	R33,34	RC07GF221J		
1	R1,2			
29	Q29	2N2369A		
1	IC3	MC724P		
1	IC2	MC799P		
1	IC1	MC792P		
2	CR1,2	1N752A		
1	C11	DM-19-471J		
1	C9	DM-19-271J		
4	C10,12	DM-19-101J		
2	C4,6	DM-19-151J		
4	C3,8	150D106X0020B2		
3	J9	JUMPER		
2	B8	SPACER-#4-40, NYLON		
2	J7	SEE CHART JUMPER		
2	G6	SCREW-#6-32x1/2, NYLON		
29	S5	BIO369		
AR	4	AWG 24		
AR	3	AWG 24		
1	2	0097022-041-000001		
1	1	SEL956		

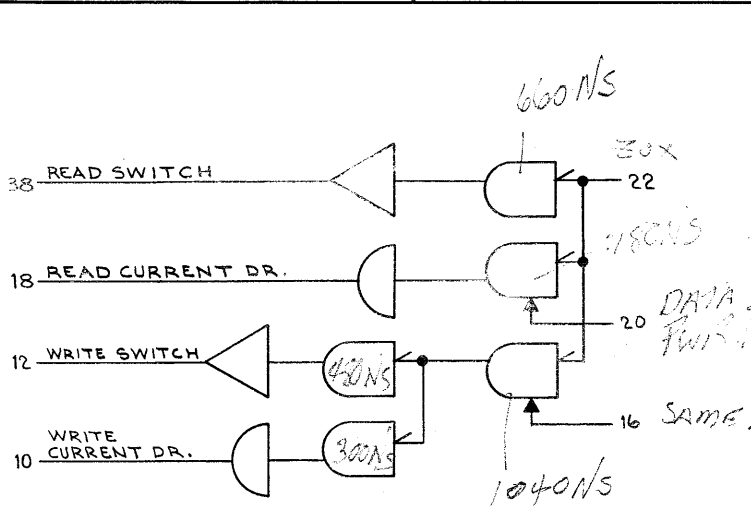
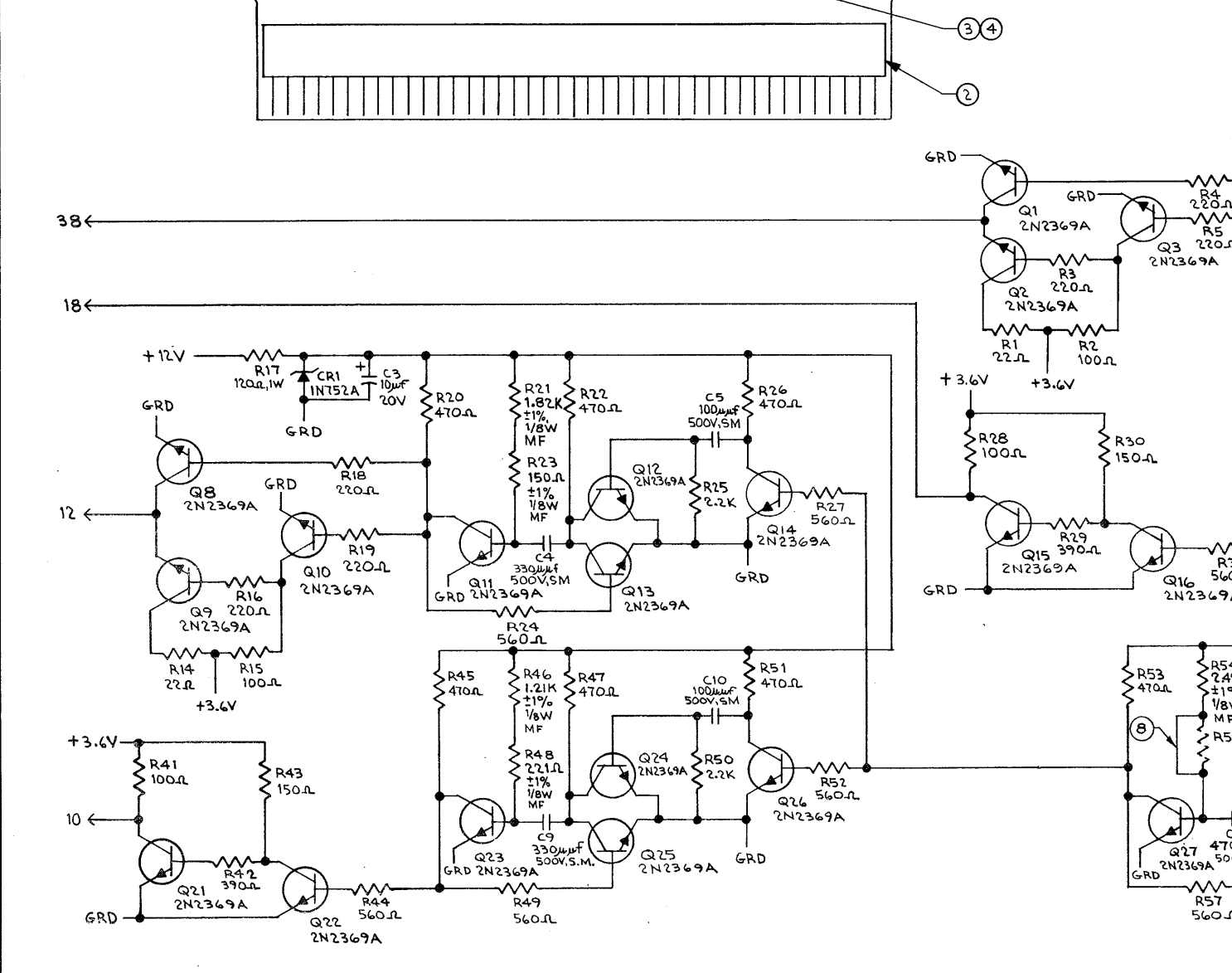
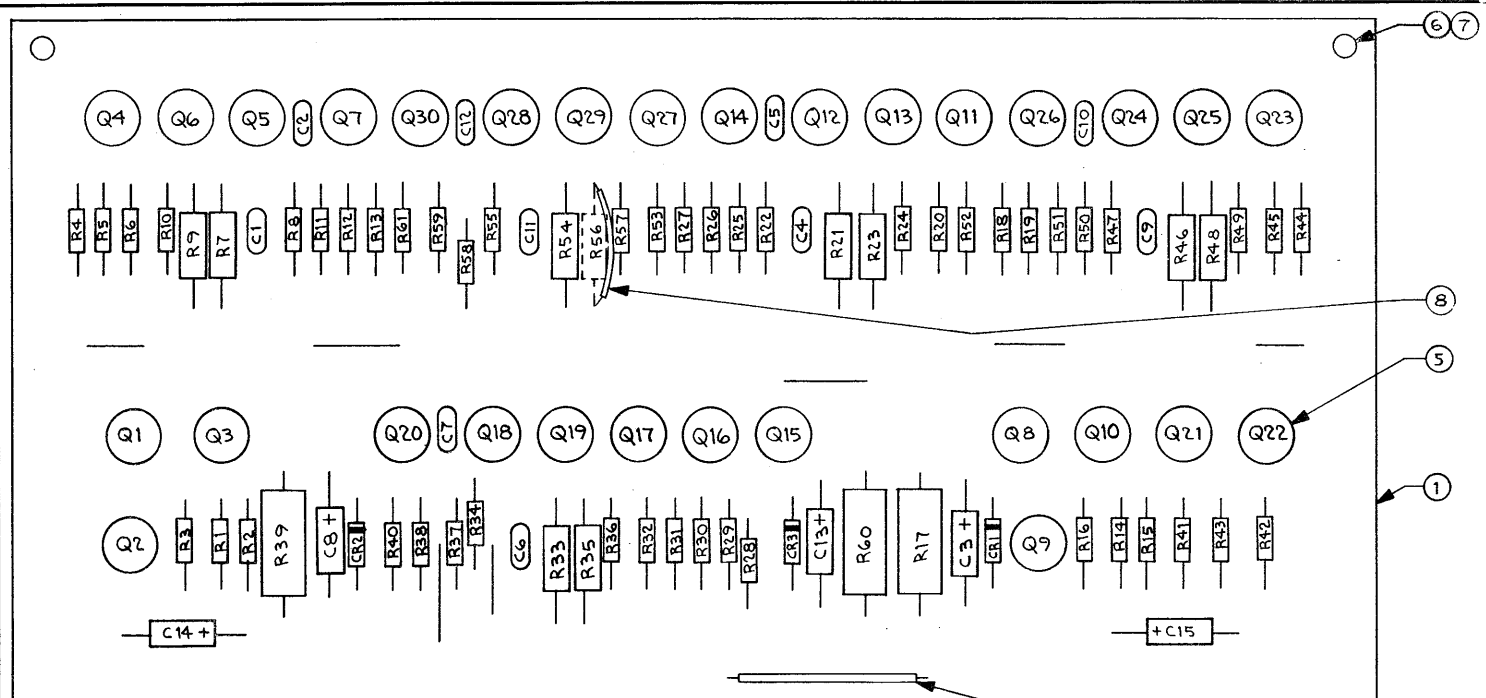


ITEM	DWG. OR PART NO.	DESCRIPTION
1 THRU 9		
DR.	B. BYD	4-11-67
CK.	RKM	4-19-67
ENG.	R. M.	6-5-67
PROJ. APP.	W. H. P.	6/10/67
APP.	W. H. P.	6/10/67
USED ON		

CODE IDENT NO. 20886

SIZE D 8 2 7 0

REV D



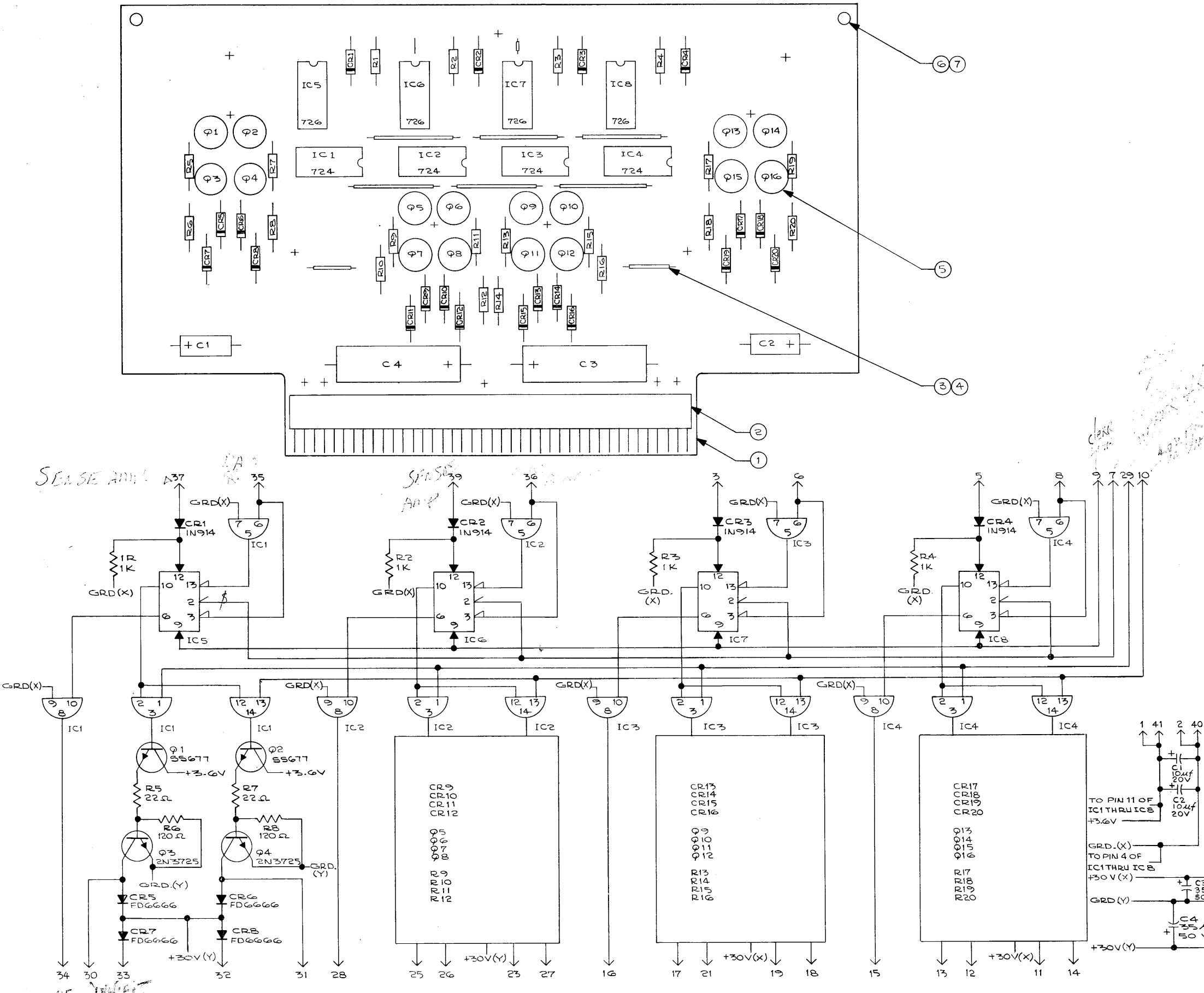
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4$ W.  
 3. FOR DRILLING & DIMENSIONAL DRAWING SEE C15189.  
 4. THE VALUES OF THE FOLLOWING RESISTORS MAY BE CHANGED IN TEST TO OPTIMIZE TIMING: R7, R9, R21, R23, R33, R35, R46, R48, R54 & R56.

REV	D	8271	REV	B
DESCRIPTION	DATE	APP'D		
A	67-411; ADDED ITEM 7, ITEM 6 WAS 1165 BUMPER RKM 10-9-67	10/1/67		
B	68-14; ADDED ITEM 8 & NOTE 4. DELETED R56 IN DASH 1. R7 WAS 2.49K, R9 WAS 150 $\Omega$ , R35 WAS 1.21K, R46 WAS 1K, RKM 1-15-68	1/16/68		

1	R56	RN60	RESISTOR-22 $\Omega$ ±1%, 1/8W±50PPM/°C, MF, WL
1	R48		
2	R30,43	RCOTGF151J	RESISTOR-150 $\Omega$ , ALLEN BRADLEY
2	R29,42	RCOTGF391J	RESISTOR-390 $\Omega$ , ALLEN BRADLEY
3	R60	RC326F121J	RESISTOR-120 $\Omega$ , 1W, ALLEN BRADLEY
5	R58		
5	R37,50	RCOTGF222J	RESISTOR-2.2K, ALLEN BRADLEY
12	R11,25		
12	R57,61	RCOTGF561J	RESISTOR-560 $\Omega$ , ALLEN BRADLEY
12	R49,52		
12	R40,44		
12	R31,36		
12	R24,27		
12	R10,13		
1	R54		RESISTOR-2.49K±1%, 1/8W±50PPM/°C, MF, W.L.
1	R35		RESISTOR-1K±1%, 1/8W±50PPM/°C, MF, W.L.
1	R23	RN60	RESISTOR-150 $\Omega$ ±1%, 1/8W±50PPM/°C, MF, W.L.
3	R33		RESISTOR-1.82K±1%, 1/8W±50PPM/°C, MF, W.L.
3	R9,21		
2	R7,46		RESISTOR-1.21K±1%, 1/8W±50PPM/°C, MF, W.L.
15	R59		
15	R53,55		
15	R47,51	RCOTGF471J	RESISTOR-470 $\Omega$ , ALLEN BRADLEY
15	R38,45		
15	R32,34		
15	R22,26		
15	R12,20		
15	R6,8		
6	R18,19	RCOTGF221J	RESISTOR-220 $\Omega$ , ALLEN BRADLEY
4	R28,41	RCOTGF101J	RESISTOR-100 $\Omega$ , ALLEN BRADLEY
2	R2,15	RCOTGF220J	RESISTOR-22 $\Omega$ , ALLEN BRADLEY
30	Q30 THRU Q1	2N2369A	TRANSISTOR - FAIRCHILD
3	CR3	1N752A	DIODE-5.6V, ZENER, MOTOROLA
1	CR1,2	DM-19-471J	CAPACITOR-470 $\mu$ F±5%, 500V, SM, ARCO
5	C15		
5	C13,14	150D106X0020B2	CAPACITOR-10 $\mu$ F±20%, 20V, SPRAGUE
5	C12		
5	C7,10	DM-19-101J	CAPACITOR-100 $\mu$ F±5%, 500V, SM, ARCO
5	C2,5		
4	C6,9	DM-15-331J	CAPACITOR-330 $\mu$ F±5%, 500V, SM, ARCO
1	8		JUMPER
2	7		SPACER-#4-40 NYLON
2	6		SCREW-#6-32x1/2, NYLON
30	5	B10369	UNIPAD-
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-041-000-001	CONNECTOR-ELCO
1	1	SEL 957	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

CODE IDENT NO. 20886  
 REV D 8271

REV	DESCRIPTION	DATE	APPROV
D	8272		
A	67-399; ADDED - 3. RKM 10/2/67 GFW	10/2/67	
B	67-411; ADDED ITEMS 6 & 7. RKM 10-9-67 UC	10/9/67	
C	67-513; DELETED CR5 THRU CR16 ON DASH 2 WAC 11-21-67 RKM	11/21/67	
D	68-122; Q1, 2, 5, 6, 9, 10, 13 & 14 WERE 2N3904. CEM 3/8/68 FLP	3/8/68	

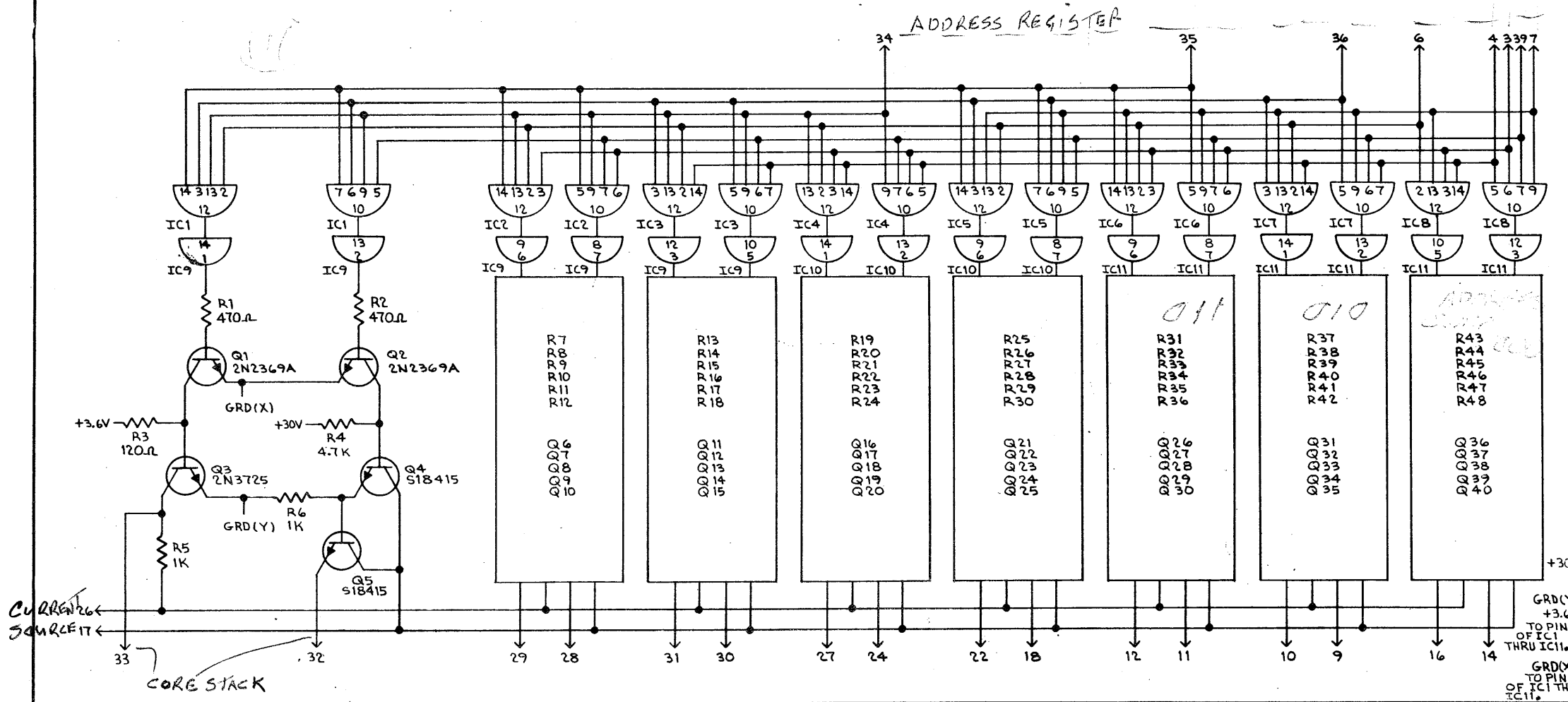
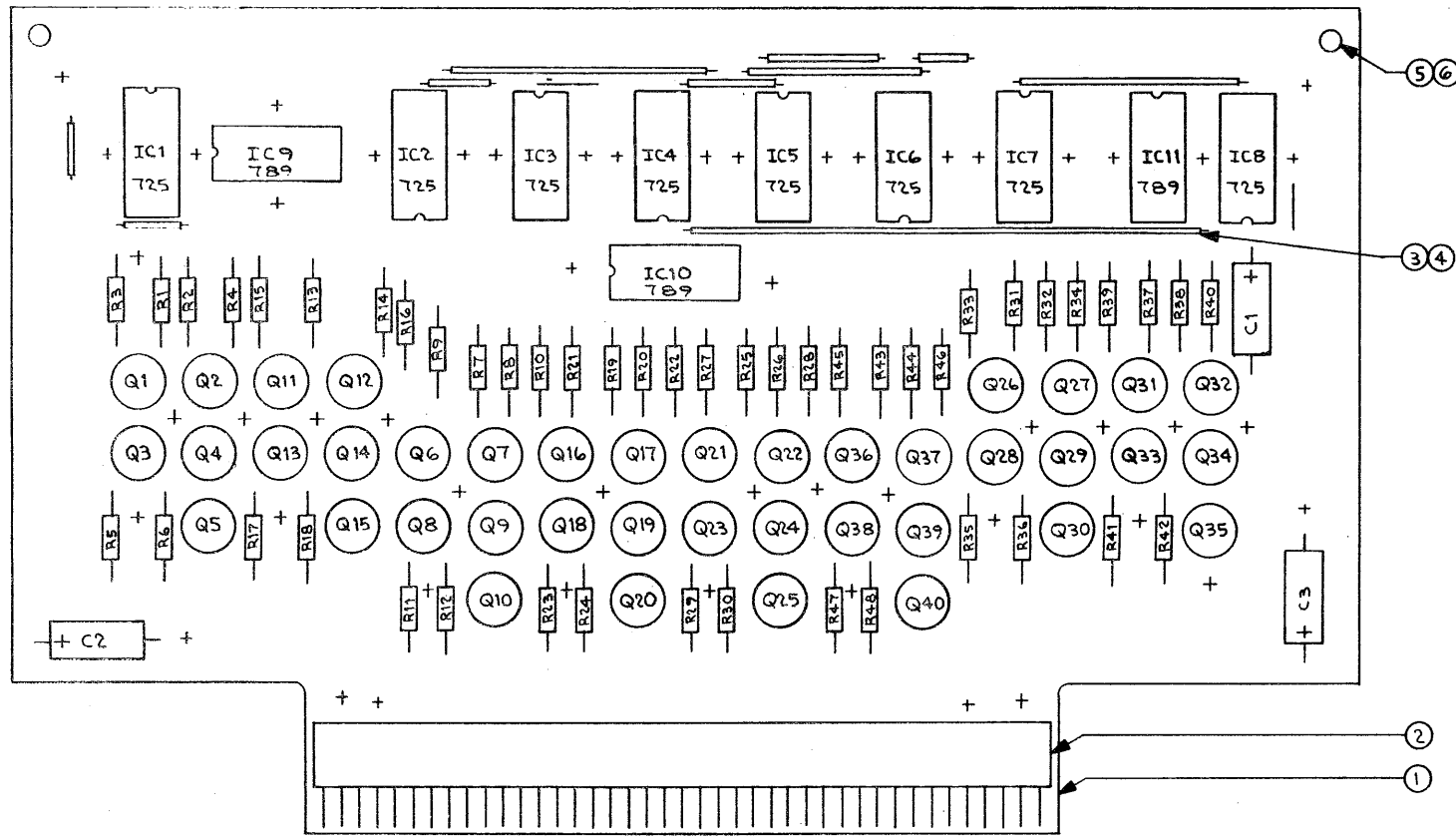


QTY	DESCRIPTION	DATE	APPROV
1	RC07GF21J RESISTOR-120Ω, ALLEN BRADLEY		
1	RC07GF220J RESISTOR-22Ω, ALLEN BRADLEY		
1	RC07GF102J RESISTOR-1K, ALLEN BRADLEY		
1	2N3725 TRANSISTOR-FAIRCHILD		
1	55677 TRANSISTOR-MOTOROLA		
3	MC726P INTEGRATED CIRCUIT-MOTOROLA		
3	MC724P INTEGRATED CIRCUIT-MOTOROLA		
2	FD6666 DIODE-FAIRCHILD		
2	IN914 DIODE-CLEVITE		
1	TE1306 CAPACITOR-35.4μf±20% 50V SPRAGUE		
1	TE1306 CAPACITOR-35.4μf±20% 20V SPRAGUE		
1	150D10GX0020B2 CAPACITOR-10μf±20% 20V SPRAGUE		
1	150D10GX0020B2 CAPACITOR-10μf±20% 20V SPRAGUE		
2	SPACER-#4-40, NYLON		
2	SCREW-#6-32 x 1/2, NYLON		
8	B10369 UNIPAD -		
AR	AWG 24 SLEEVING-TIFLON, THINWALL		
AR	AWG 24 WIRE-SOLID COPPER, TINNED		
1	CONNECTOR - ELCO		
1	PRINTED CIRCUIT (SEE REV. A51140)		

DR. D. J. BOYD	4-24-67	SCHEMATIC & ASSEMBLY RTL QUAD DATA REGISTER & INHIBIT DRIVER
CK. RKM	5-3-67	
PROJ. APP. <i>[Signature]</i>	6-5-67	CODE IDENT NO. 20886
APP. <i>[Signature]</i>	4/5/67	
SIZE	D	8272

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE C15175.

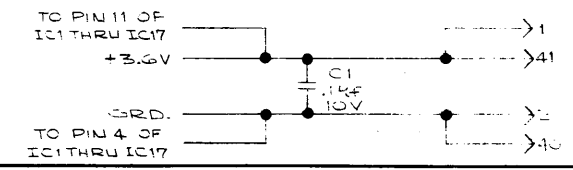
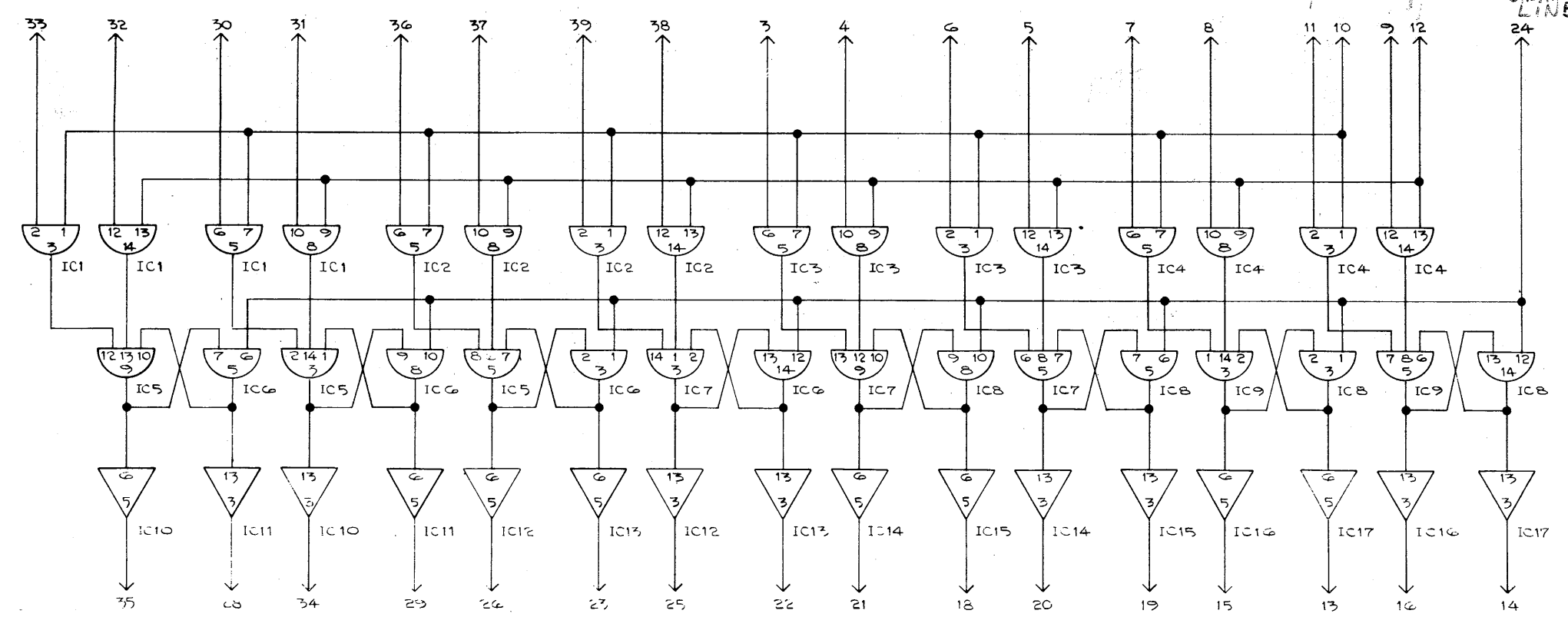
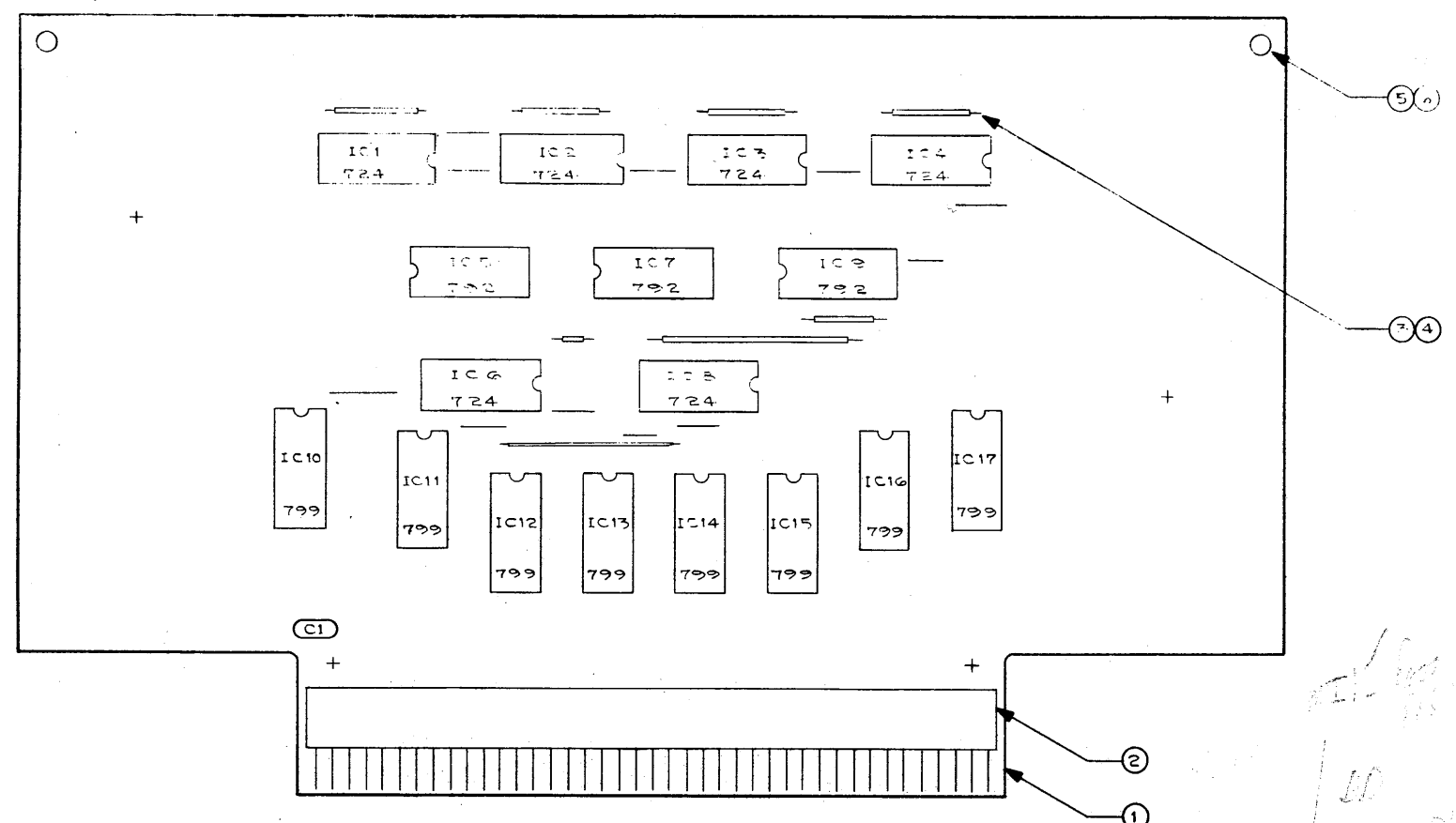
REV	D	8273	REV	A
DESCRIPTION	DATE	APP'D		
67-411; ADDED ITEMS	10/19/67	[Signature]		
8 #s.				
RKM 10-6-67 UC				



16	R4748 R4142 R3526 R2930 R2324 R1718 R1112 R5,6 R4044 R2834 R1672 R410 R3945 R2733 R1521 R3,9 R4344 R3738 R3132 R2526 R1920 R1314 R7,8 R1,2	RC07GF102J RC07GF472J RC07GF121J RC07GF471J	RESISTOR-1K, ALLEN BRADLEY RESISTOR-4.7K RESISTOR-120Ω RESISTOR-470Ω, ALLEN BRADLEY
16	Q3940 Q3435 Q2930 Q2425 Q1920 Q1415 Q910 Q4,5	S18415	TRANSISTOR-FAIRCHILD
8	Q3338 Q2833 Q2328 Q1823 Q1318 Q8,13	2N3725	TRANSISTOR-FAIRCHILD
16	Q3637 Q3132 Q2627 Q2122 Q1617 Q1112 Q6,7 Q1,2	2N2369A	TRANSISTOR-FAIRCHILD
3	IC11 IC910	MCT89P	INTEGRATED CIRCUIT-MOTOROLA
8	IC78 IC56 IC34 IC12	MCT25P	
2	C2,3	150D106X0020B2	CAPACITOR-10μF±20%, 20V, SPRAGUE
1	C1	150D475X0050B2	CAPACITOR-4.7μF±20%, 50V, SPRAGUE
2	6		SPACER-#4-40, NYLON
2	5		SCREW-#6-32X1/2, NYLON
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-D41-000-001	CONNECTOR-ELCO
1	1	SEL 954	PRINTED CIRCUIT (REV. SEE A5114-0)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
			SEI SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR.	R.L. WENHELL	4/14/67	SCHEMATIC & ASSEMBLY RTL READ/WRITE MATRIX AND LINE DRIVERS
CK.	RKM	4-19-67	
ENG.	[Signature]	6/3/67	
PROJ. APP.	[Signature]	6/16/67	
APP.	[Signature]	6/10/67	CODE IDENT. NO. 20886
USED ON			REV D 8273

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS.  
 2. ALL EQUIVALENTS, UNLESS SPECIFIED OTHERWISE, SHALL BE APPROVED BY THE DESIGN ENGINEER.  
 3. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

REV	DESCRIPTION	DATE	APP'D
D	8 2 7 4		
A	67-411; ADDED ITEMS 5&6. RKM 10-6-67	10/9/67	[Signature]
B	67-467; CHG'D ASSY TO ASSEE WITH LATEST PC BACKGROUND, SEL953B, TB 11-2-67. F.L.P.	11/6/67	[Signature]



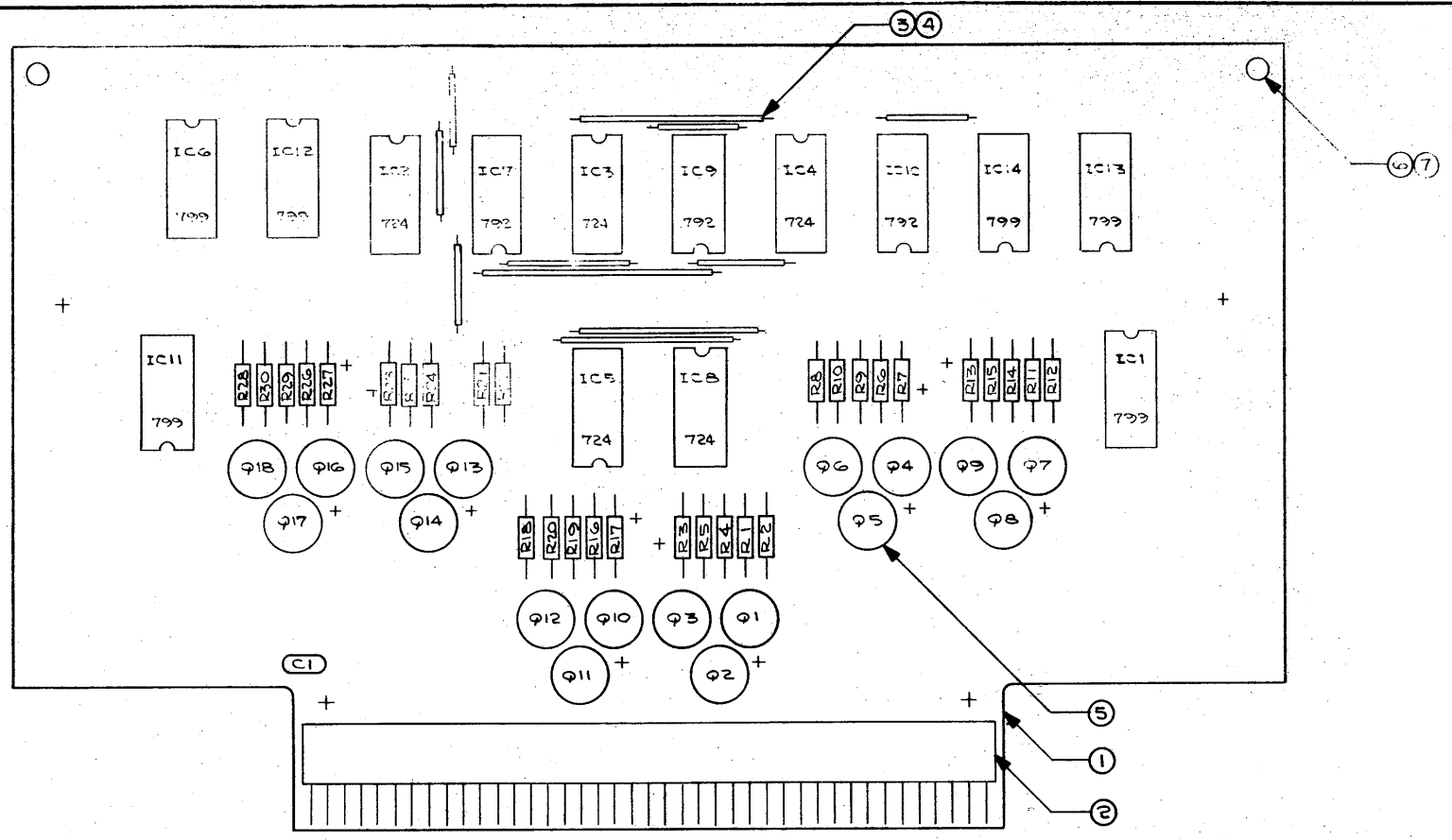
QTY	DESCRIPTION	REF. DES.	VALUE	UNIT
8	THRU IC10	MC799P		
3	IC7, IC8, IC9	MC792P		
6	IC5, IC6, IC12	MC724P		
1	C1	UK-10-104	CAPACITOR .14F+80-20%, 10V, CARL.	
2	6		SPACER-#4-40, NYLON	
5	5		SCREW-#6-32X1/2, NYLON	
AK	4	AWG. 24	SLEEVING-TEFLON, THINWALL.	
AK	3	AWG. 24	WIRE-SOLID COPPER, TINNED.	
1	2	00-7022-041-000-00	CONNECTOR - ELCO	
1	1	SEL953	PRINTED CIRCUIT (REV. SEE A51140)	

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DESIGNED BY	BOYD 4-20-67
CHECKED BY	K.M. 4-24-67
ENGINEER	[Signature]
PROJECT	SEL953
DATE	4/20/67
APPROVED BY	[Signature]
DATE	4/20/67
SIZE	D 8 2 7 4
REV	B

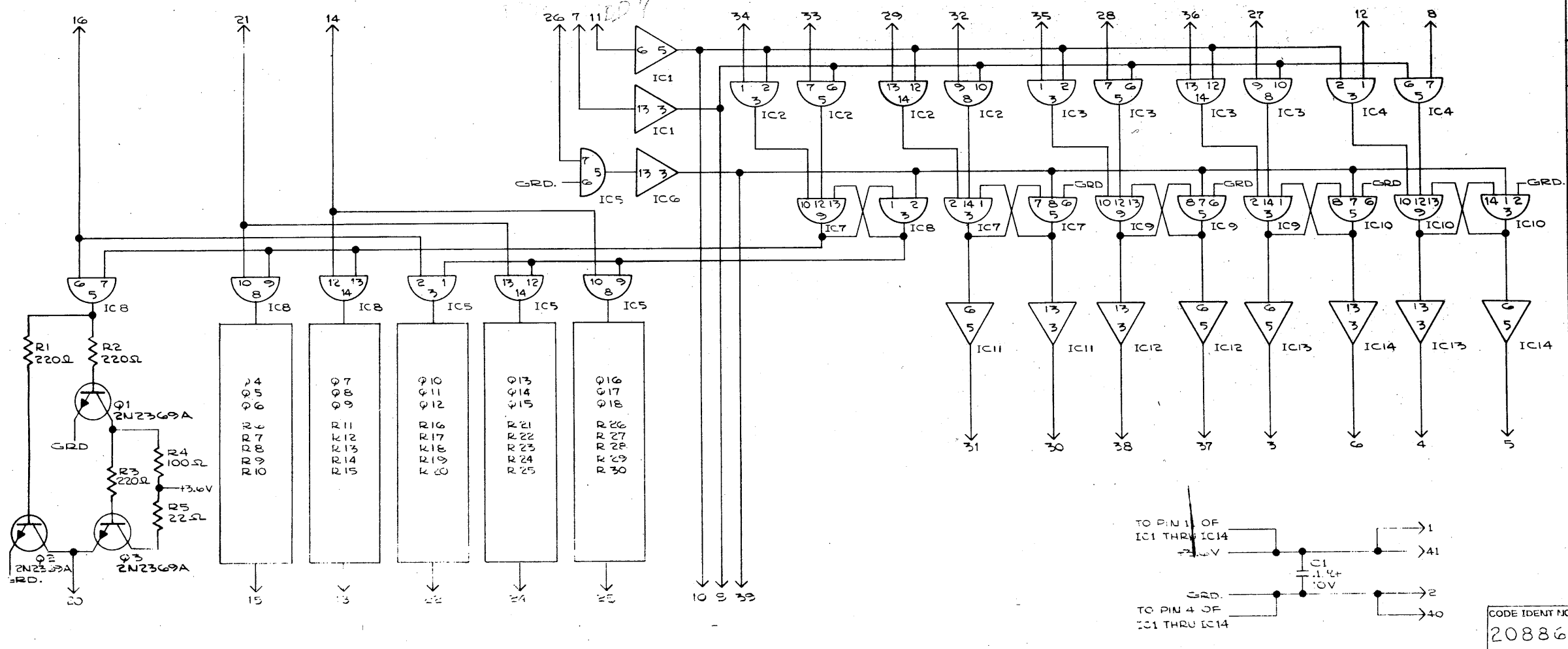
20858

NOTES:  
 1. ALL ITEMS AS SPECIFIED UNLESS OTHERWISE APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING DIMENSIONS SEE C15173

REV	DESCRIPTION	DATE	APP'D
D	8275		
A	67-411; ADDED ITEM 7. ITEM 6 WAS 1169 BUMPER RKM 10-6-67	11/6/67	[Signature]
B	67-468; CHG'D ASSY TO AGREE WITH LATEST P.C. BACKGROUND. SEL 952B; JWM 11-3-67	11/6/67	[Signature]



*bits 3-7*

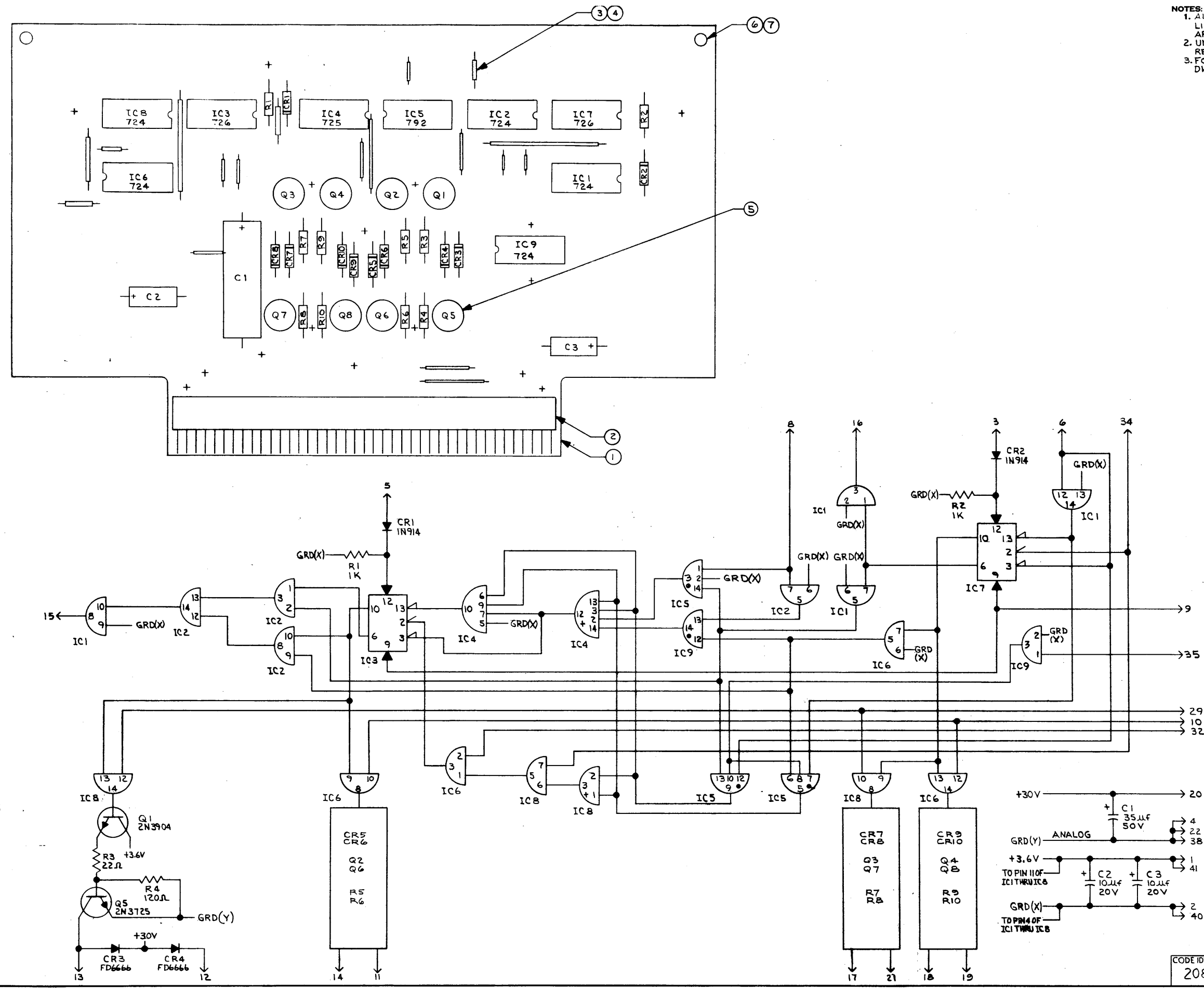


6	R25,20 R15,20 R5,10	RC07GF220J	RESISTOR-22Ω, ALLEN BRADLEY
6	R4,19 R4,9	RC07GF101J	RESISTOR-100Ω, ALLEN BRADLEY
18	R27,28 R27,16 R27,22 R27,18 R27,14 R11,12 R7,8 R3,6 R1,2	RC07GF220J	RESISTOR-220Ω, ALLEN BRADLEY
18	Q18 THRU Q1	2N2369A	TRANSISTOR- FAIRCHILD.
3	IC10 IC9 IC7	MC792P	INTEGRATED CIRCUIT-MOTOROLA
5	IC8 IC4,5 IC2,3	MC724P	INTEGRATED CIRCUIT-MOTOROLA
6	IC13,14 IC11,2 IC1,6	MC799P	INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104	CAPACITOR-.1μF±80-20%,10V,CRL.
2	7		SPACER-#4-40, NYLON
2	6		SCREW-#6-32x1/2, NYLON
18	5	B10369	UNIPAD
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER,TINNED
1	2	00-7072-041-000-000	CONNECTOR- ELCO
1	1	SEL 952	PRINTED CIRCUIT-(REV SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	bj. BOYD	4-28-67	SCHMATIC & ASSEMBLY
α	RKM	5-3-67	RTL 5BIT MEMORY ADDRESS
ENG.	R. [Signature]	6/3/67	REGISTER & 8K CONTROL
APP.	[Signature]	6/6/67	
APV.	[Signature]	6/11/67	
CODE IDENT NO	20886		
USED ON			

*Location 137*

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE C15200.

REV	DESCRIPTION	DATE	APP'D
D	8276		
A	67-411; ADDED ITEM 7. ITEM 6 WAS 1165 BUMPER RKM 10-6-67 LCC	10/9/67	[Signature]

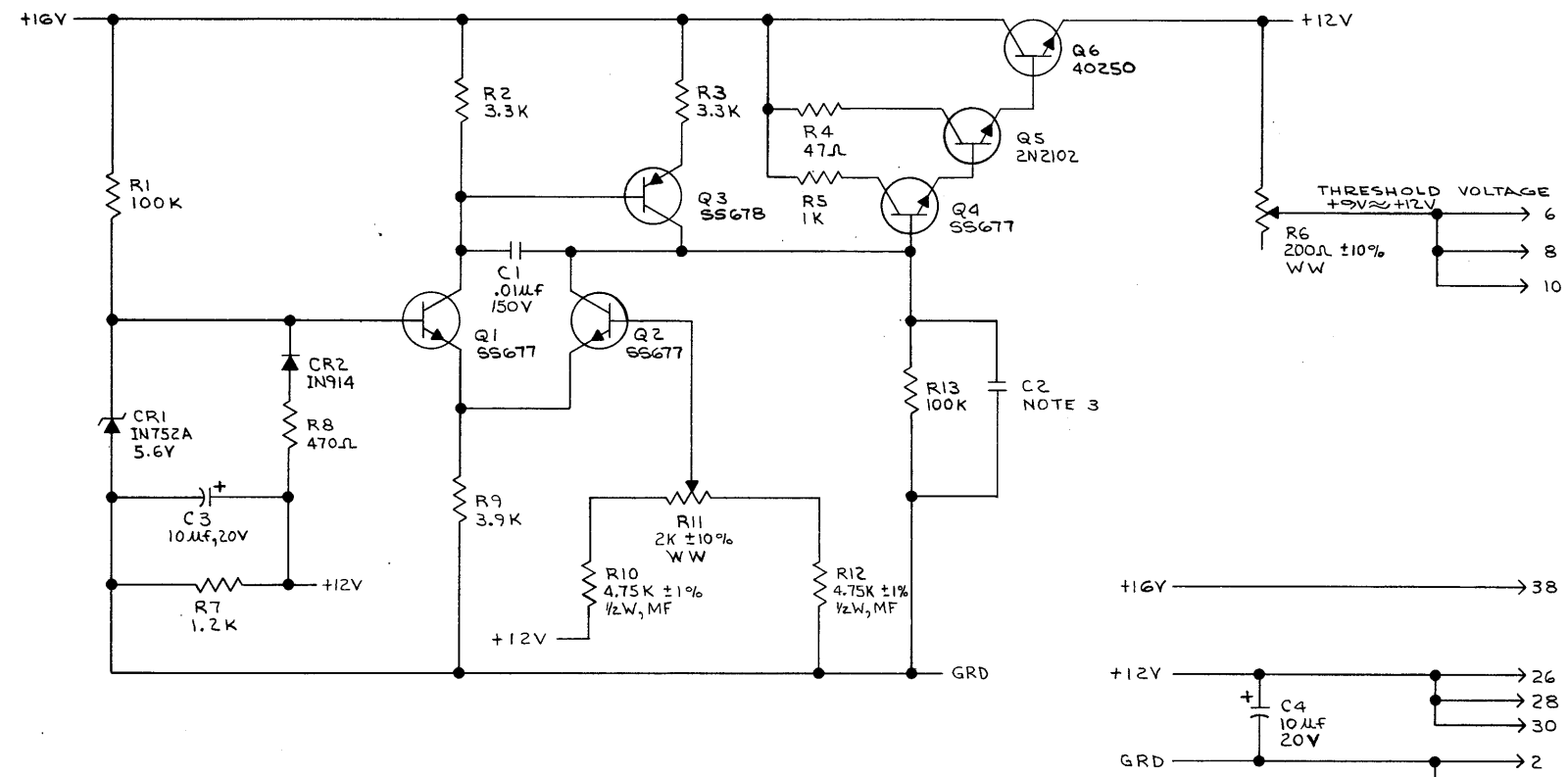
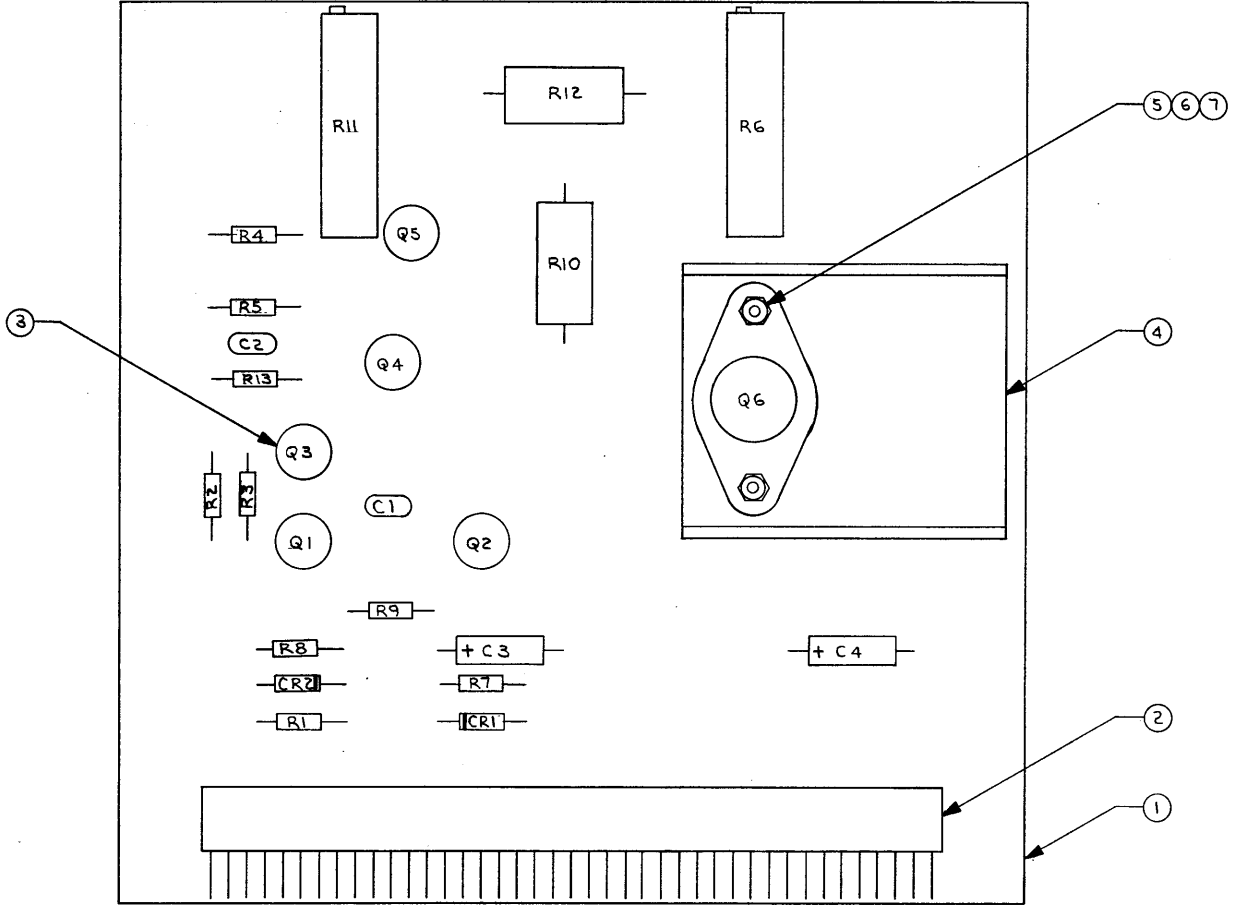


4	R10 R6 R4	RC07GF121J	RESISTOR-120Ω, ALLEN BRADLEY
4	R7 R5 R3	RC07GF220J	RESISTOR-22Ω, ALLEN BRADLEY
2	R2 R1	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
4	Q8 Q7 Q6 Q5	2N3725	TRANSISTOR- FAIRCHILD
4	Q4 Q3 Q2 Q1	2N3904	TRANSISTOR- MOTOROLA
1	IC5	MC792P	INTEGRATED CIRCUIT-MOTOROLA
1	IC4	MC725P	INTEGRATED CIRCUIT-MOTOROLA
2	IC7 IC3	MC724P	INTEGRATED CIRCUIT-MOTOROLA
5	IC9 IC8 IC6 IC2 IC1	MC724P	INTEGRATED CIRCUIT-MOTOROLA
8	CR10 CR9 CR8 CR7 CR6 CR5 CR4 CR3	FD6666	DIODE- FAIRCHILD
2	CR2 CR1	1N914	DIODE-CLEVITE
2	C3 C2	150D10GX0020B2	CAPACITOR-10μF ±20%, 20V, SPRAGUE
1	C1	TE-1306	CAPACITOR-35μF ±20%, 50V, SPRAGUE
2	7		SPACER-#4-40, NYLON
2	6		SCREW-#6-32x1/2, NYLON
8	5	B10369	UNIPAD-
AR	4	AWG24	SLEEVING- TEFLON, THINWALL
AR	3	AWG24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-041-000-001	CONNECTOR-ELCO
1	1	SEL 959	PRINTED CIRCUIT (FOR REV SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	B. HALL	4-14-67	SCHEMATIC & ASSEMBLY
ENGR.	RKM	4-25-67	RTL MEMORY PARITY &
ENGR.	C. H. HART	9-7-67	PROTECT BIT DATA
ENGR.	C. H. HART	9/7/67	REGISTERS & INHIBIT DRIVERS
APP.	C. H. HART	9/7/67	
USED ON			
CODE IDENT NO.	20886	SIZE	8276
		REV	A



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4W$ .  
 3. SELECT AT TEST.  
 4. FOR DRILLING AND DIMENSIONAL SEE C15212

REV	D	8277	REV	A
REV	A	DESCRIPTION	DATE	APPD
		68-122; Q1, 2 & 4 WERE 2N3904, Q3 WAS 2N3906	3/13/68	N
		CEM 3/8/68	FLP	

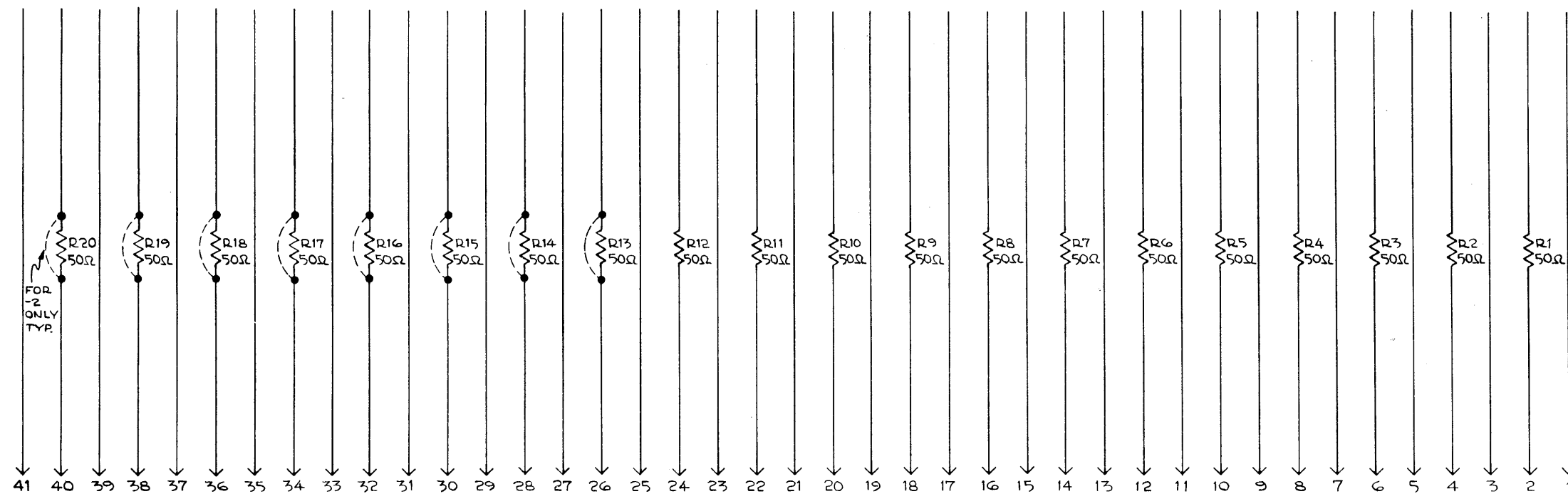
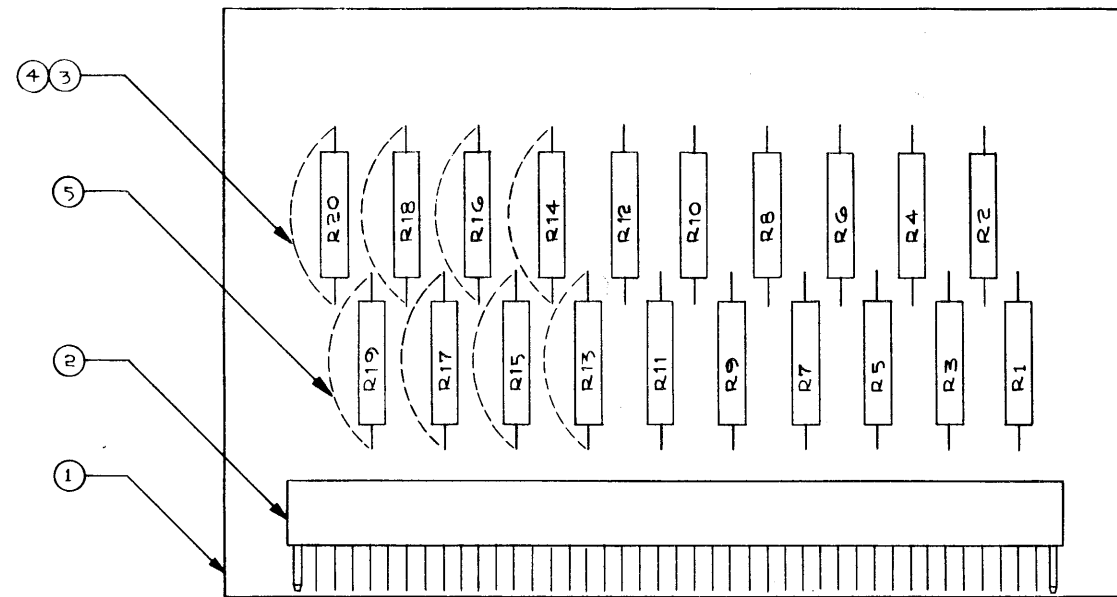


1	R11	200P-1-202	POTENTIOMETER-2K $\pm 10\%$ , WW, BOURNS
2	R12	RN70	RESISTOR-4.75K $\pm 1\%$ , $1/2W$ , $\pm 150$ PPM/C
	R10		M. F., WARD LEONARD
1	R9	RC07GF392J	RESISTOR-3.9K, ALLEN BRADLEY
1	R8	RC07GF471J	RESISTOR-470 $\Omega$ , ALLEN BRADLEY
1	R7	RC07GF122J	RESISTOR-1.2K, ALLEN BRADLEY
1	R6	200P-1-201	POTENTIOMETER-200 $\Omega$ $\pm 10\%$ , WW, BOURNS
1	R5	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
1	R4	RC07GF470J	RESISTOR-47 $\Omega$ , ALLEN BRADLEY
2	R3	RC07GF332J	RESISTOR-3.3K, ALLEN BRADLEY
2	R2	RC07GF104J	RESISTOR-100K, ALLEN BRADLEY
1	Q6	40250	TRANSISTOR-RCA
1	Q5	2N2102	TRANSISTOR-RCA
1	Q3	5567B	TRANSISTOR-MOTOROLA
3	Q2	55677	TRANSISTOR-MOTOROLA
	Q1		
1	CR2	1N914	DIODE-CLEVITE
1	CR1	1N752A	DIODE-5.6V, ZENER, MOTOROLA
2	C4	150D106X0020B2	CAPACITOR-10 $\mu$ F $\pm 20\%$ , 20V, SPRAGUE
1	C2	NOTE 3	CAPACITOR-NOTE 3
1	C1	DDM103	CAPACITOR-.01 $\mu$ F, $\pm 40-60\%$ , 150V, RFL
2	7		NUT-# 4-40, ESNA
4	6		WASHER-# 4-SHAKE PROOF, INT. TOOTH
2	5		SCREW-# 4-40X 9/16, RD HD, S/S
1	4	B13426A	HEAT SINK
5	3	B10369	UNIPAD
1	2	00-7022-021-000-001	CONNECTOR-ELCO
1	1	SEL 965	PRINTED CIRCUIT(FOR REV SEE AS1140)

		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR	B. HALL	4-10-66	SCHEMATIC & ASSEMBLY RTL +12V AND THRESHOLD REGULATOR
CC	RKM	4-19-67	
ENG.	R. Hill	6-5-67	
PROJ. APP.	W. C. ...	6/6/67	
APP.	J. K. ...	6/5/67	
CODE IDENT NO.	20886	SIZE	D
USED ON			8277

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING AND DIMENSIONAL DWG. SEE C-15401.  
 3. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 1\%$ , 3W.

REV	D	8278	DATE	APP'D
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8	R20 THRU R13	N 3	RESISTOR-50Ω, OMTRONICS
12	R12 THRU R1	N 3	
8	5		JUMPER
AR	4	AWG. 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG. 24	WIRE-SOLID COPPER, TINNED
1	1	2	00-7023-041-000-001 CONNECTOR - ELCO
1	1	1	SEL 979 PRINTED CIRCUIT (FOR REV. A51140)
-2	-1	ITEM	DWG. OR PART NO. DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. b. BOYD	3-10-67
CL. GOODBREAD	3/14/67
ENGR. R. Jell	3-27-67
PROJ. APP. J.C.C.	3/27/67
APP. J.C.C.	3/27/67
USED ON	

SCHEMATIC & ASSEMBLY  
 INHIBIT RESISTORS

REV	D	8278
-----	---	------

C

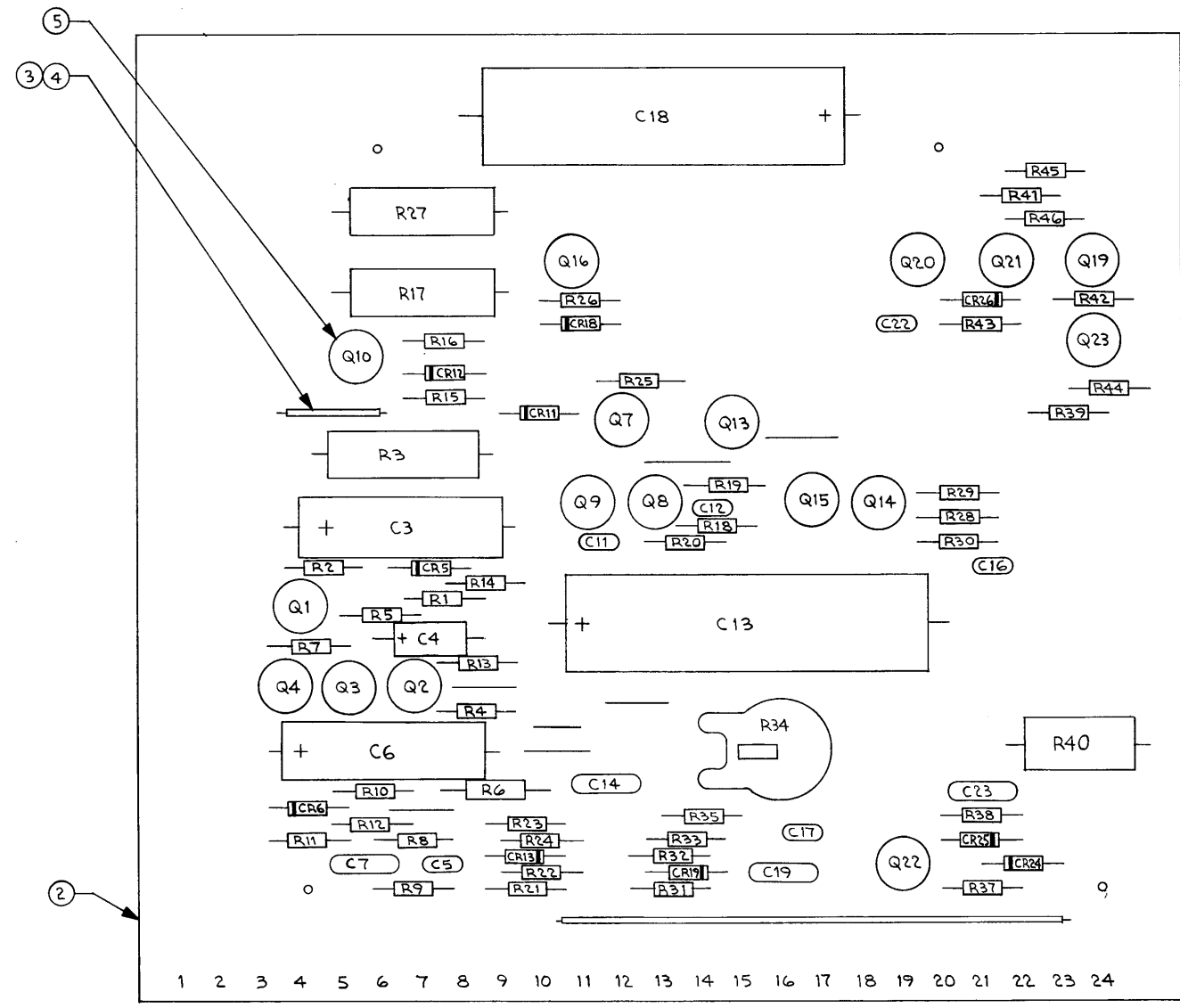
C

C

4. 1N971B MAY BE USED IN PLACE OF 1N4750.  
5. SCHEMATIC ALSO SHOWN ON D53140.

NOTES:  
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.  
3. FOR DRILLING & DIM DWG SEE C15473

REV	DESCRIPTION	DATE	APP'D
D	8279		E
C	67-388; VALUE OF C22 WAS .022 $\mu$ F, 150V. RKM 10-5-67 GFW	10/15/67	
D	67-436; Q20 & Q21 WERE SHOWN AS NPN'S. RKM 10-19-67 -UG	10/20/67	
E	67-520; R27 WAS .2 $\Omega$ . WAC 11-21-67 RKM	11/21/67	



1	Q23	2N3645	TRANSISTOR-FAIRCHILD
1	Q22	2N2102	TRANSISTOR-RCA
9	Q16 Q1415 Q9,10 Q4,8 Q2,3	SS677	TRANSISTOR-MOTOROLA
6	Q21 Q19,20 Q7,13 Q1	SS678	TRANSISTOR-MOTOROLA
1	CR26	1N753A	DIODE-6.2V, ZENER, MOTOROLA
2	CR24,25	1N4004	DIODE-MOTOROLA
2	CR13,19	1N759A	DIODE-12V, ZENER, MOTOROLA
2	CR12,18	1N914	DIODE-CLEVITE
1	CR11	1N749A	DIODE-4.3V, ZENER, MOTOROLA
1	CR6	1N966B	DIODE-16V, ZENER, MOTOROLA
1	CR5	1N4750 NOTE 4	DIODE-27V, ZENER, MOTOROLA
2	C13,18	39D50T6030FLO	CAPACITOR-500 $\mu$ F, 30V, SPRAGUE
1	C22	1D203	CAPACITOR-.022 $\mu$ F $\pm 10\%$ , 500V, CRL
4	C19,23 C7,14	5C13	CAPACITOR-1 $\mu$ F $\pm 20\%$ , 25V, SPRAGUE
1	C4	150D475X0050B2	CAPACITOR-4.7 $\mu$ F $\pm 20\%$ , 50V, SPRAGUE
2	C3,6	TE1306	CAPACITOR-35 $\mu$ F-10 $\pm 75\%$ , 50V, SPRAGUE
5	C17 C12,16 C5,11	DDM103	CAPACITOR-.01 $\mu$ F $\pm 60\%$ -40% $\pm 150$ V, CRL
17	5	B10369	UNIPAD
AR	4	AWG 24	SLEEVEING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	SEL 982	PRINTED CIRCUIT-(REV. SEE A51140)

1	R40	BWH	RESISTOR-1 $\Omega$ , 2W, WW, IRC
1	R37	RC07GF270J	RESISTOR-.27 $\Omega$ , ALLEN BRADLEY
1	R34	MTC-4	POTENTIOMETER-1K $\pm 30\%$ , MALLORY
1	R33	RC07GF272J	RESISTOR-.27K, ALLEN BRADLEY
1	R29	RC07GF152J	RESISTOR-.15K,
4	R32,25 R2,23	RC07GF222J	-2.2K,
4	R42,46 R21,31	RC07GF472J	-4.7K,
1	R19	RC07GF561J	-560 $\Omega$ , ALLEN BRADLEY
1	R17	PW5	-.2 $\Omega$ $\pm 10\%$ , 5W, IRC
2	R25 R15	RC07GF821J	-820 $\Omega$ , ALLEN BRADLEY
2	R43,38 R1,3	RC07GF562J	-5.6K, ALLEN BRADLEY
1	R13	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

2	R12,45	RC07GF392J	RESISTOR-3.9K, ALLEN BRADLEY
3	R44 R10,11	RC07GF332J	-3.3K, ALLEN BRADLEY
1	R9	RC07GF682J	-6.8K, ALLEN BRADLEY
4	R30,43 R8,20	RC07GF100J	-10 $\Omega$ , ALLEN BRADLEY
1	R6	RC20GF222J	-2.2K, 1/2W, ALLEN BRADLEY
9	R39,41 R24,28 R18,24 R7,16 R5	RC07GF102J	-1K, ALLEN BRADLEY
1	R4	RC07GF101J	-100 $\Omega$ , ALLEN BRADLEY
2	R3,27	PW5	-.1 $\Omega$ $\pm 10\%$ , 5 W, IRC
1	R2	RC07GF122J	-1.2K, ALLEN BRADLEY
1	R1	RC07GF471J	RESISTOR-470 $\Omega$ , ALLEN BRADLEY
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

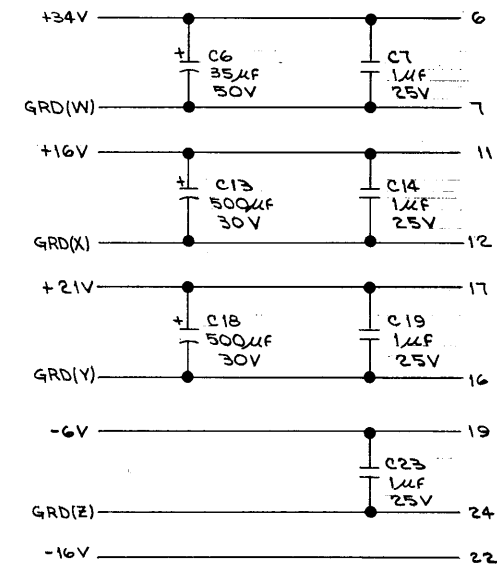
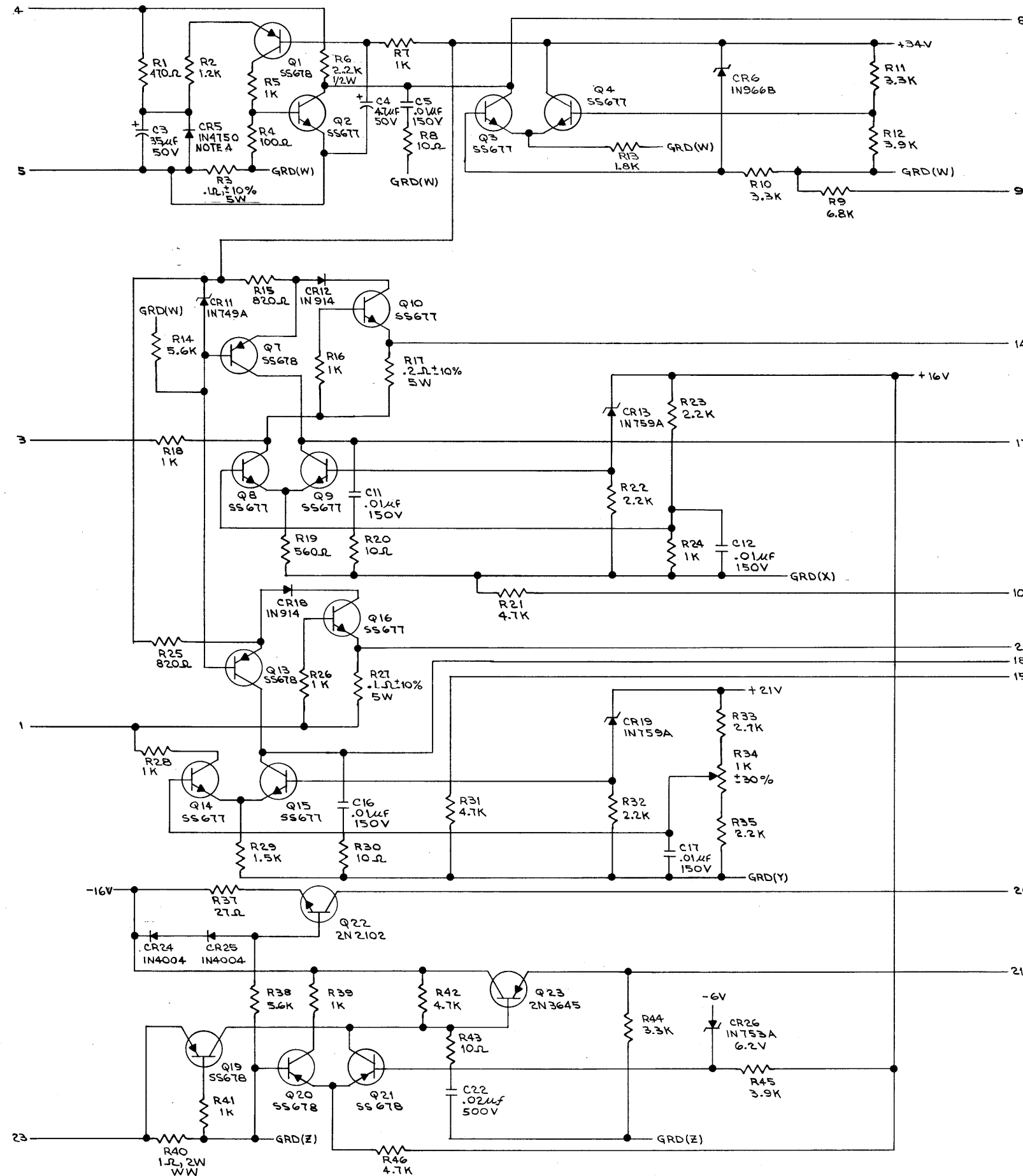
CODE IDENT NO  
20886

DR	DATE	DESCRIPTION
DR. RLWENNELL	4/24/67	SCHMATIC & ASSEMBLY
CK RKM	4-28-67	MEMORY
ENG. JTB	5/24/67	POWER SUPPLY
PROJ. M. J. ...	5/24/67	
APP. ...	5/24/67	
USED ON		

REV	DESCRIPTION	DATE	APP'D
D	8279		E

NOTES:  
1. SEE SH.1

SIZE	D	8279	REV.	E
REV.		DESCRIPTION	DATE	APPD
		SEE SH.1		

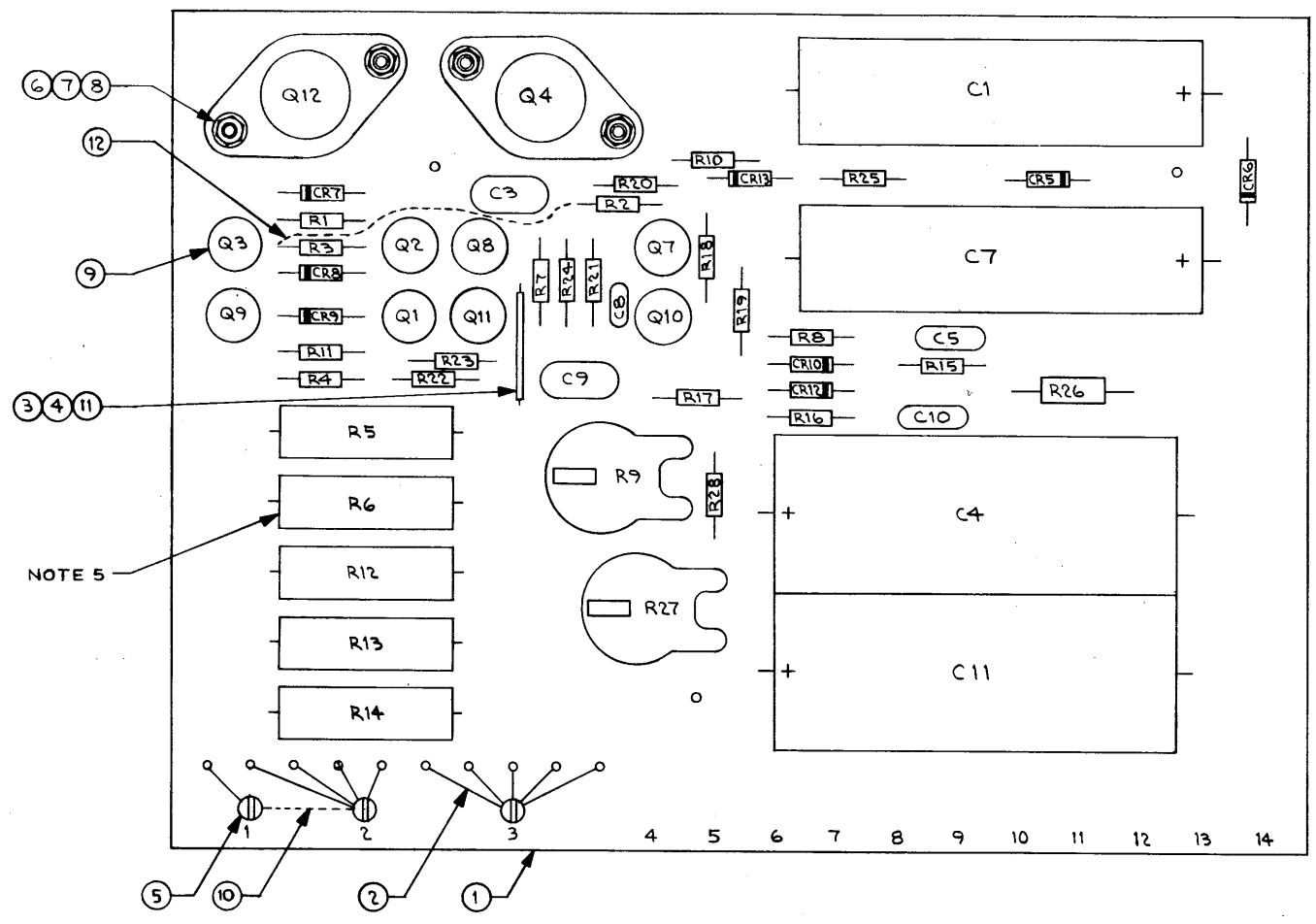


ITEM	DWG. OR PART NO.	DESCRIPTION	
<b>Systems Engineering Laboratories</b>			
6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DR R.L.W.	4-19-67	SCHEMATIC & ASSEMBLY MEMORY POWER SUPPLY	
CHK R.K.M.	4-28-67		
ENGR G.E.B.	5-24-67		
PROJ W.C.ROWDER	5-24-67		
APPD L.KLINGER	5-24-67		
NEXT ASSY			
CODE IDENT NO.		SIZE	REV.
20886		D	E
		8279	

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DRAWING SEE C 15471.  
 4.

5. R5, R6, R12, R13 & R14 ARE TO BE MOUNTED WITH SPACE BETWEEN COMPONENT & BOARD.

REV	D	8280	DATE	APP'D
REV	A	67-243; DELETED NOTE 4 & ALL COMPONENTS NOT CONNECTED TO CARD.	7/24/67	RKM



1	1	Q12	40250	TRANSISTOR - RCA
3	3	Q10, Q9, Q8, Q7	55677	TRANSISTOR-MOTOROLA
1	1	Q1	55678	TRANSISTOR-MOTOROLA
1	1	CR13	1N752A	DIODE-5.6V,ZENER,MOTOROLA
1	1	CR12, CR10	1N754A	DIODE-6.8V,ZENER,MOTOROLA
1	1	CR9, CR8	1N914	DIODE-CLEVITE
1	1	CR7	1N749A	DIODE-4.3V,ZENER,MOTOROLA
2	2	CR5,6	1N4004	DIODE-MOTOROLA
1	1	C8	UK10-104	CAPACITOR-.1 $\mu$ F $\pm$ 80%-20%,10V,CRL
1	1	C10, C5	5C13	CAPACITOR-1 $\mu$ F $\pm$ 20%,.25V,SPRAGUE
1	1	C11, C4	39D2586-010G14	CAPACITOR-.250 $\mu$ F,10V,SPRAGUE
1	1	C9, C3	601PE	CAPACITOR-.033 $\mu$ F $\pm$ 20%, 50V,MYLAR GOODALL
2	2	C1,7	39D5076030FL4	CAPACITOR-500 $\mu$ F,30V,SPRAGUE
1	1	12	---	JUMPER
1	1	11	---	JUMPER
1	1	10	---	JUMPER
4	8	9	B10369	UNIPAD
2	4	8	---	NUT- #4-40 ESNA
4	8	7	---	WASHER-#4,SHAKE PROOF,INT.TGOTH
2	4	6	---	SCREW- #4-40X7/16,RD HD, S/S
3	3	5	1785-2	TERMINAL-CTC
AR	AR	4	AWG 24	SLEEVING-TEFLON,THINWALL
AR	AR	3	AWG 24	WIRE-SOLID COPPER,TINNED
AR	AR	2	AWG 20	WIRE-SOLID COPPER,TINNED
1	1	1	SEL 983	PRINTED CIRCUIT (REV SEE A51140)
-2	-1	ITEM	DWG. OR PART NO.	DESCRIPTION

1	1	R26	RC20GF681J	RESISTOR-680 $\Omega$ ,1/2W,ALLEN BRADLEY
2	2	R23,25	RC07GF392J	RESISTOR-3.9K
1	1	R24	RC07GF821J	RESISTOR-820 $\Omega$
1	1	R21	RC07GF270J	RESISTOR-27 $\Omega$
1	1	R17	RC07GF222J	RESISTOR-2.2K,ALLEN BRADLEY
1	1	R16	RC07GF270J	RESISTOR-27 $\Omega$
1	1	R10	RC07GF222J	RESISTOR-2.2K,ALLEN BRADLEY
1	1	R27	MTC-4	POTENTIOMETER-1K $\pm$ 30%,MALLORY
1	1	R9	RC07GF390J	RESISTOR-39 $\Omega$ ,ALLEN BRADLEY
1	1	R22	RC07GF100J	RESISTOR-10 $\Omega$ ,ALLEN BRADLEY
1	1	R7	RC07GF100J	RESISTOR-10 $\Omega$ ,ALLEN BRADLEY
4	4	R13,14, R5,12	PWS NOTE 5	RESISTOR-.1 $\Omega$ $\pm$ 10%,5W, IRC
1	1	R5	PWS NOTE 5	RESISTOR-.2 $\Omega$ $\pm$ 10%, 5W, IRC
6	6	R20,28, R18,19, R11,15	RC07GF102J	RESISTOR-1K,ALLEN BRADLEY
2	2	R24	RC07GF332J	RESISTOR-33K,ALLEN BRADLEY
1	1	R1	RC07GF332J	RESISTOR-33K,ALLEN BRADLEY
-2	-1	ITEM	DWG OR PART NO.	DESCRIPTION

SEI SYSTEMS ENGINEERING LABORATORIES, INCORPORATED. FORT LAUDERDALE, FLORIDA

DR. R. WENNELL 5/2/67  
 CC RKM 5-8-67  
 ENG. JKB 5/24/67  
 PROJ. 5/24/67  
 APP. 5/24/67

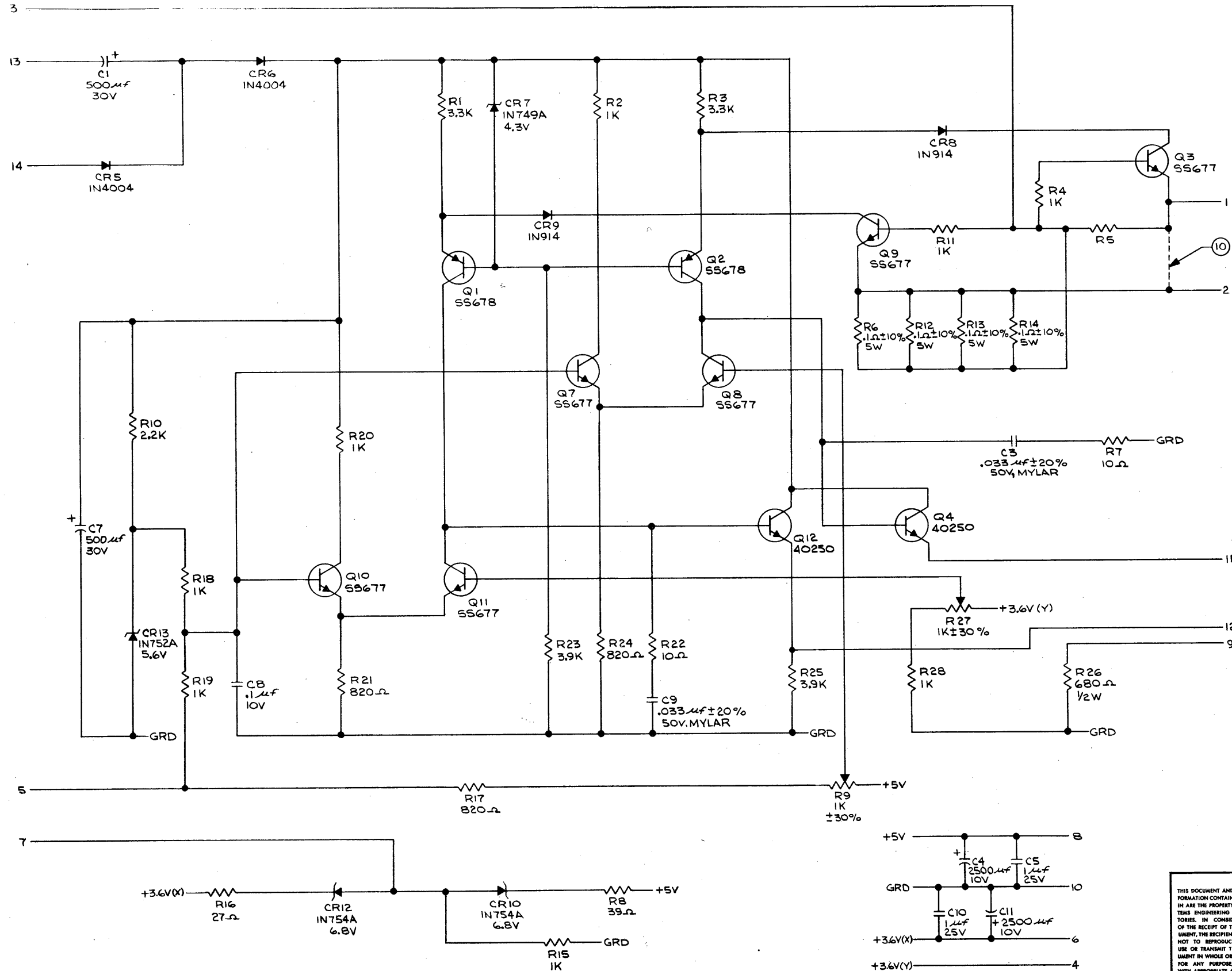
SCHEMATIC & ASSEMBLY  
 3.0V & 5V  
 POWER SUPPLY

CODE IDENT NO. 20886  
 USED ON

REV D 8280

NOTES  
1. SEE SH. 1

SIZE D	8280	REV. A
REV.	DESCRIPTION	DATE APPD
	SEE SH. 1	

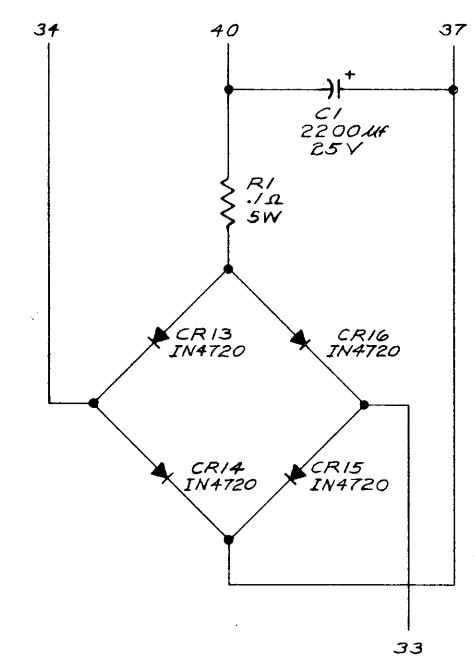
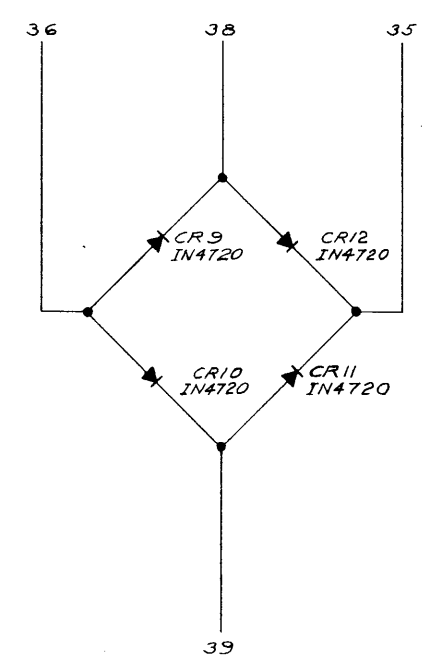
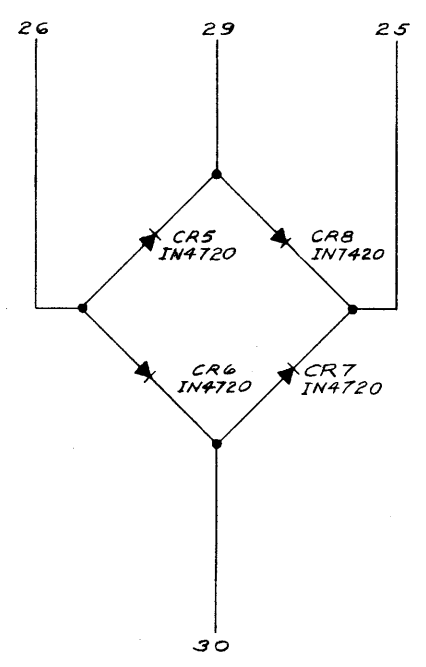
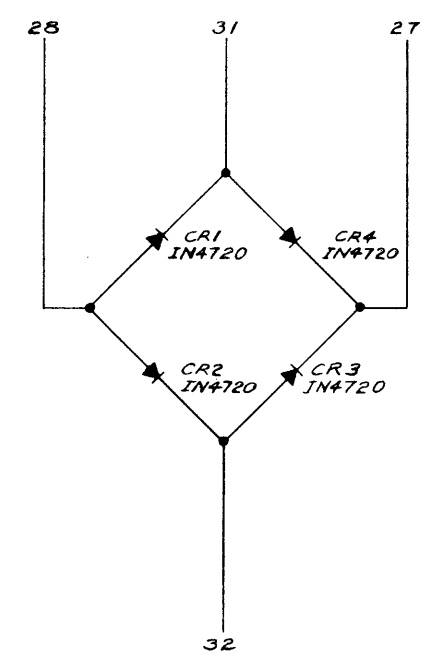
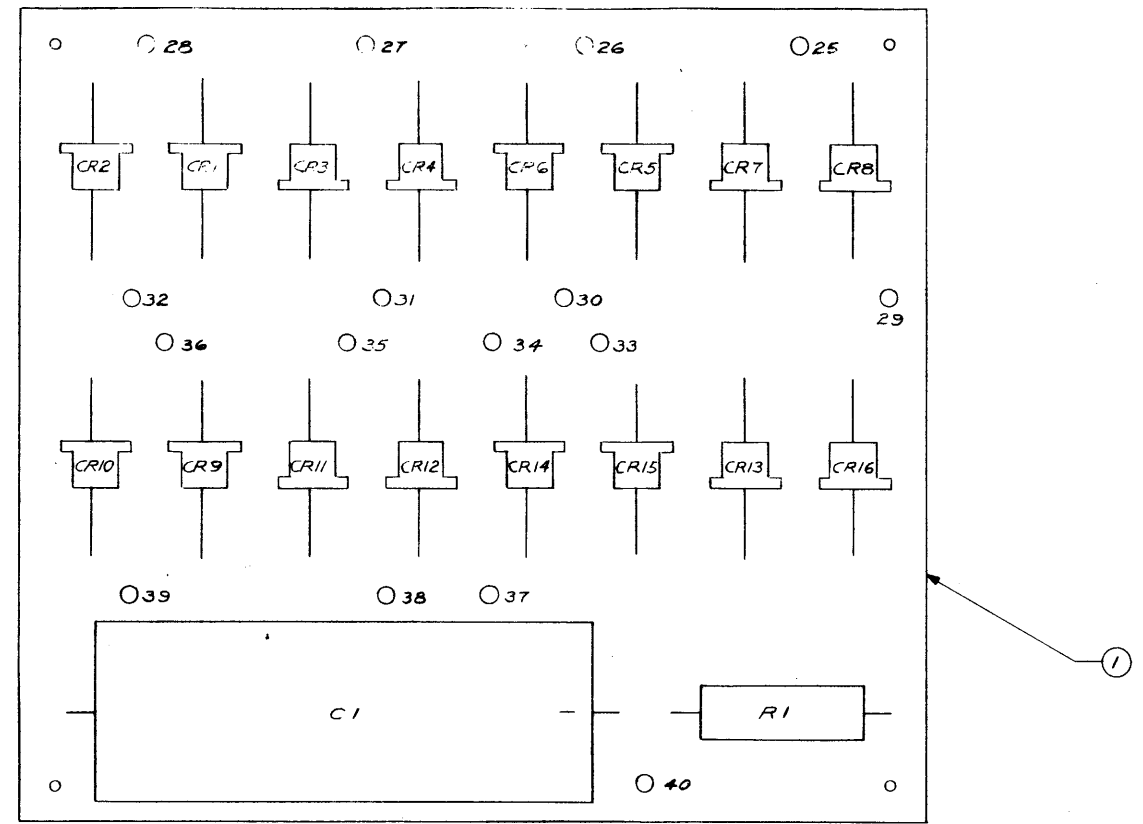


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ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b> 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR R.L. WENNEL	4/27/67	SCHEMATIC & ASSEMBLY 3.6V & 5V POWER SUPPLY
CHK R.K.M.	5/8/67	
ENGR G.E.B.	5/24/67	
PROJ.W. CROWDER	5/24/67	
APPDL KLINGLER	5/24/67	CODE IDENT NO.
NEXT ASSY		20886
		SIZE D
		8280
		REV. A

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE C15474  
 4. FOR COMPLETE SCHEMATIC OF POWER SUPPLY MODEL 222 SEE D53124

REV	D	8281	REV
DESCRIPTION	DATE	APP'D	



1	R1	PWS	RESISTOR-.1Ω,5W, WW, IRC
16	CR6 THRU CR1	IN4720	DIODE- IRC
1	C1	39D2286025HP	CAPACITOR-2200uF,25V, SPRAGUE
1	1	SEL 984	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

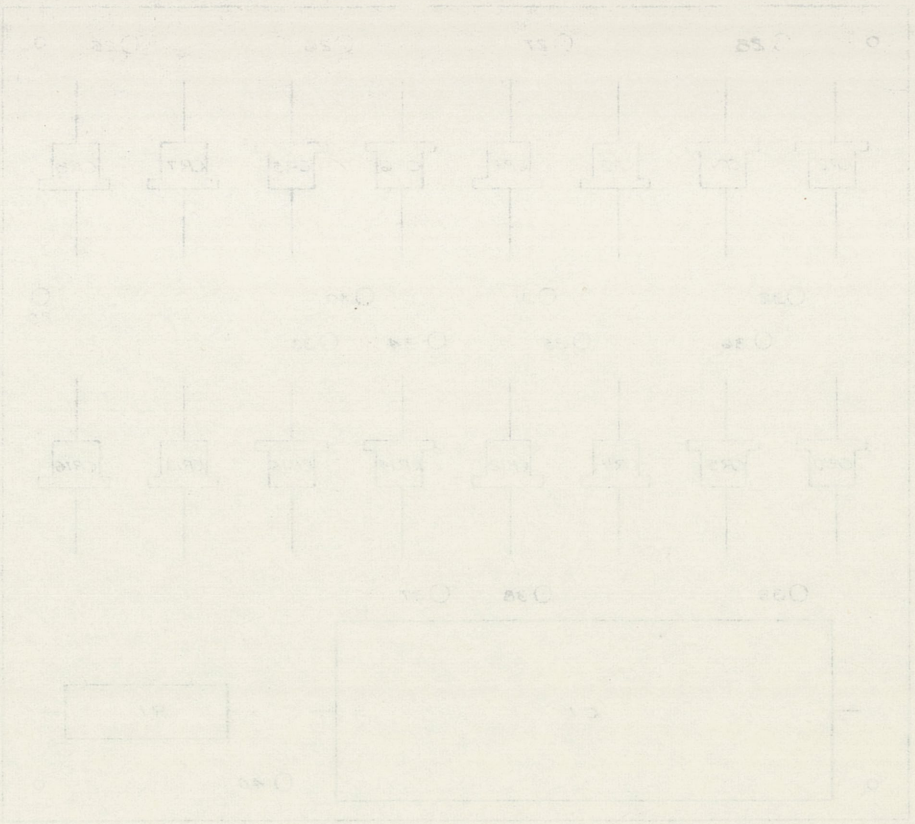
**SEL**  
 SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. M. RICHARDS	4-4-67	<b>SCHEMATIC ASSEMBLY MEMORY RECTIFIERS</b>
CC. RKM	4-5-67	
ENGR. <i>[Signature]</i>	6/23/67	
PROJ. APP. <i>[Signature]</i>	6/23/67	

CODE IDENT NO  
 20886

SIZE  
 D 8281



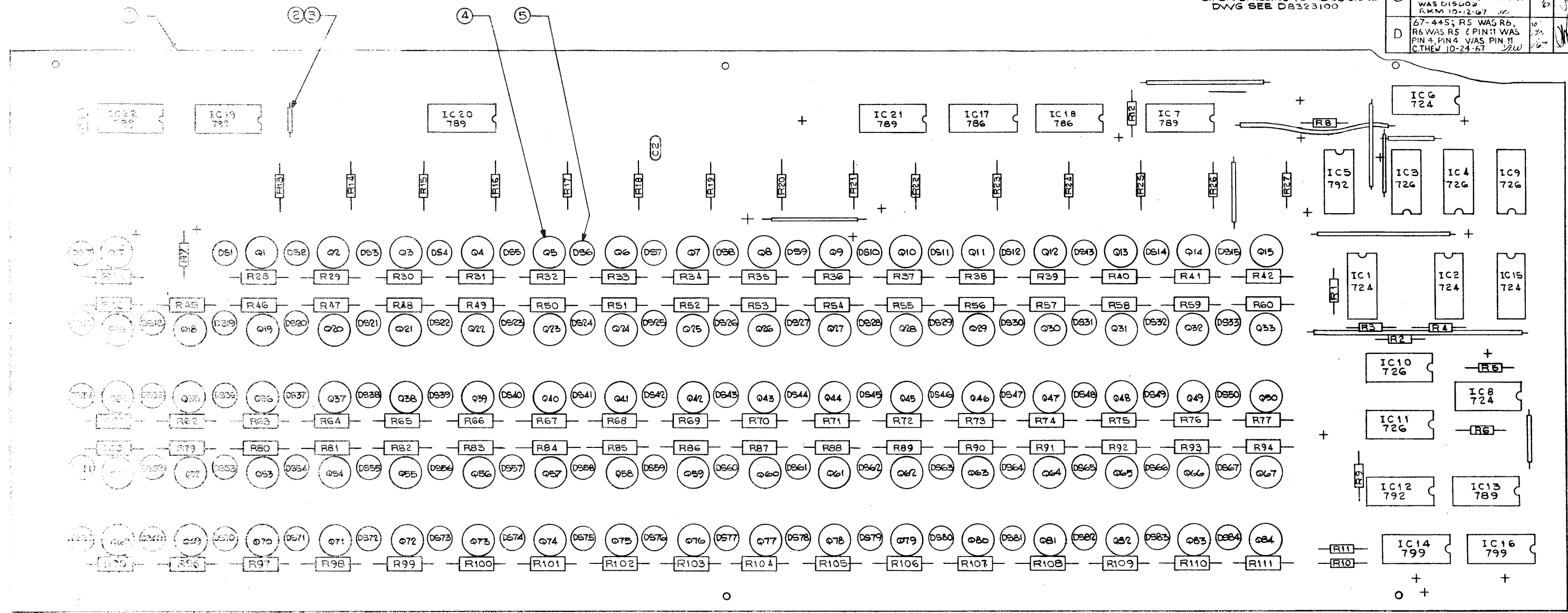


NOTE:  
 1. ALL TUBES TO BE CHECKED AT 100%  
 2. CHECK FOR SHORTS AND OPEN CIRCUITS  
 3. CHECK FOR CORRECT WIRING  
 4. CHECK FOR CORRECT TUBE TYPES  
 5. CHECK FOR CORRECT TUBE POSITIONS  
 6. CHECK FOR CORRECT TUBE IDENTIFICATION  
 7. CHECK FOR CORRECT TUBE IDENTIFICATION  
 8. CHECK FOR CORRECT TUBE IDENTIFICATION

DATE	10/28/58
BY	J. H. [unclear]
PROJECT	SCHEMATIC ASSEMBLY
DESCRIPTION	MEMORY DECKERS
REVISION	1
APPROVED	[Signature]
REVISION	2
APPROVED	[Signature]
REVISION	3
APPROVED	[Signature]

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS  $\pm 5\%$ ,  $1/4$  W.  
 3. FOR DRILLING & DIMENSIONAL DWG SEE D8323100

SIZE	D	8282	REV.	D
REV.	C	DESCRIPTION	DATE	APPD
		67-428: PC NO. WAS SEL. 320 C DRILLING & DIMENSIONAL DWG. NO. WAS D15009	10/12/67	
	D	67-445: R5 WAS R6, R6 WAS R5 & PIN 11 WAS PIN 4. PIN 4 WAS PIN 11	10/25/67	



ITEM	DWG. OR PART NO.	DESCRIPTION
84	Q84 THRU Q1	5S677 TRANSISTOR-MOTOROLA
84	R111 THRU R28	RC20GF122J RESISTOR-1.2K $1/2$ W, ALLEN BRADLEY
1	R12	RC07GF561J RESISTOR-560 $\Omega$
2	R11 THRU R10	RC07GF104J RESISTOR-100 $\Omega$
24	R27 THRU R1 THRU R1	RC07GF47J RESISTOR-470 $\Omega$ , ALLEN BRADLEY

ITEM	DWG. OR PART NO.	DESCRIPTION
2	IC18 IC17 IC22 IC19	MCT86P
4	IC16 IC14	MCT99P
4	IC21 IC20 IC13 IC7	MCT89P
2	IC12 IC5	MCT92P
5	IC11 IC10 IC9 IC4 IC3	MC726P
5	IC15 IC8 IC6 IC2 IC1	MCT24P

ITEM	DWG. OR PART NO.	DESCRIPTION
84	THRU DS1	334 LAMP-GENERAL ELECTRIC
2	C2 C1	UK-10-104 CAPACITOR-.1uF+80-20%,10V,CRL-
84	5	25-35-XPI2 LAMP SOCKET-LEECRAFT
84	4	B10369 UNIPAD
A.R	3	24 AWG SLEEVING-TEFLON, THINWALL
A.R	2	24 AWG WIRE-SOLID COPPER, TINNED
1	1	3231 PRINTED CIRCUIT (FOR REV SEE A53107)

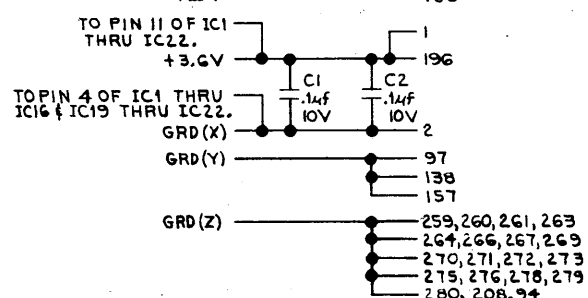
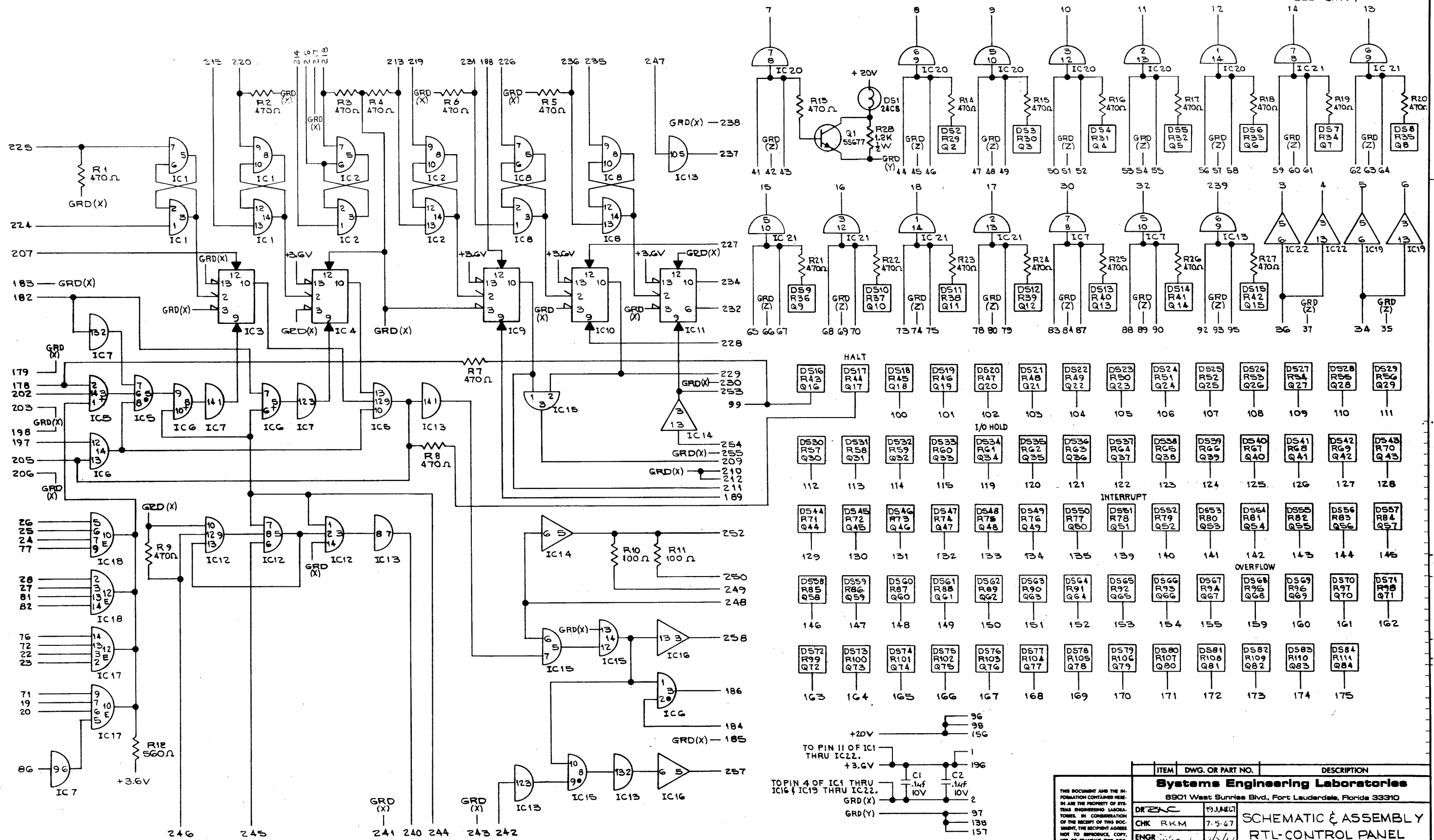
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Systems Engineering Laboratories			
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DR	RKM	19 JUNE 67	SCHEMATIC & ASSEMBLY RTL-CONTROL PANEL
CHK	RKM	7-5-67	
ENGR.			
PROJ.			
APPD			CODE IDENT NO.
NEXT ASSY			20886

SIZE	D	8282	REV.	D
------	---	------	------	---

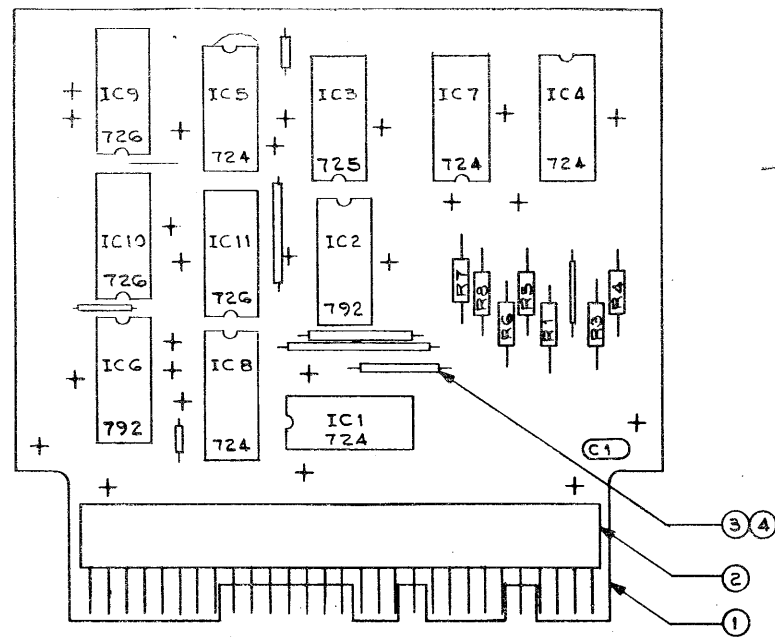
NOTES  
1. SEE SHEET 1.

SIZE	D	8282	REV.	D
REV.		DESCRIPTION	DATE	APPD
		SEE SHT. 1		



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ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b> 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR	JJA/AGL	<b>SCHEMATIC &amp; ASSEMBLY RTL-CONTROL PANEL</b>
CHK	RKM 7-5-67	
ENGR	7/5/67	
PROJ	7/5/67	
APPD	7/5/67	
NEXT ASSY		
CODE IDENT NO.		SIZE
20886		D 8282
REV.		D

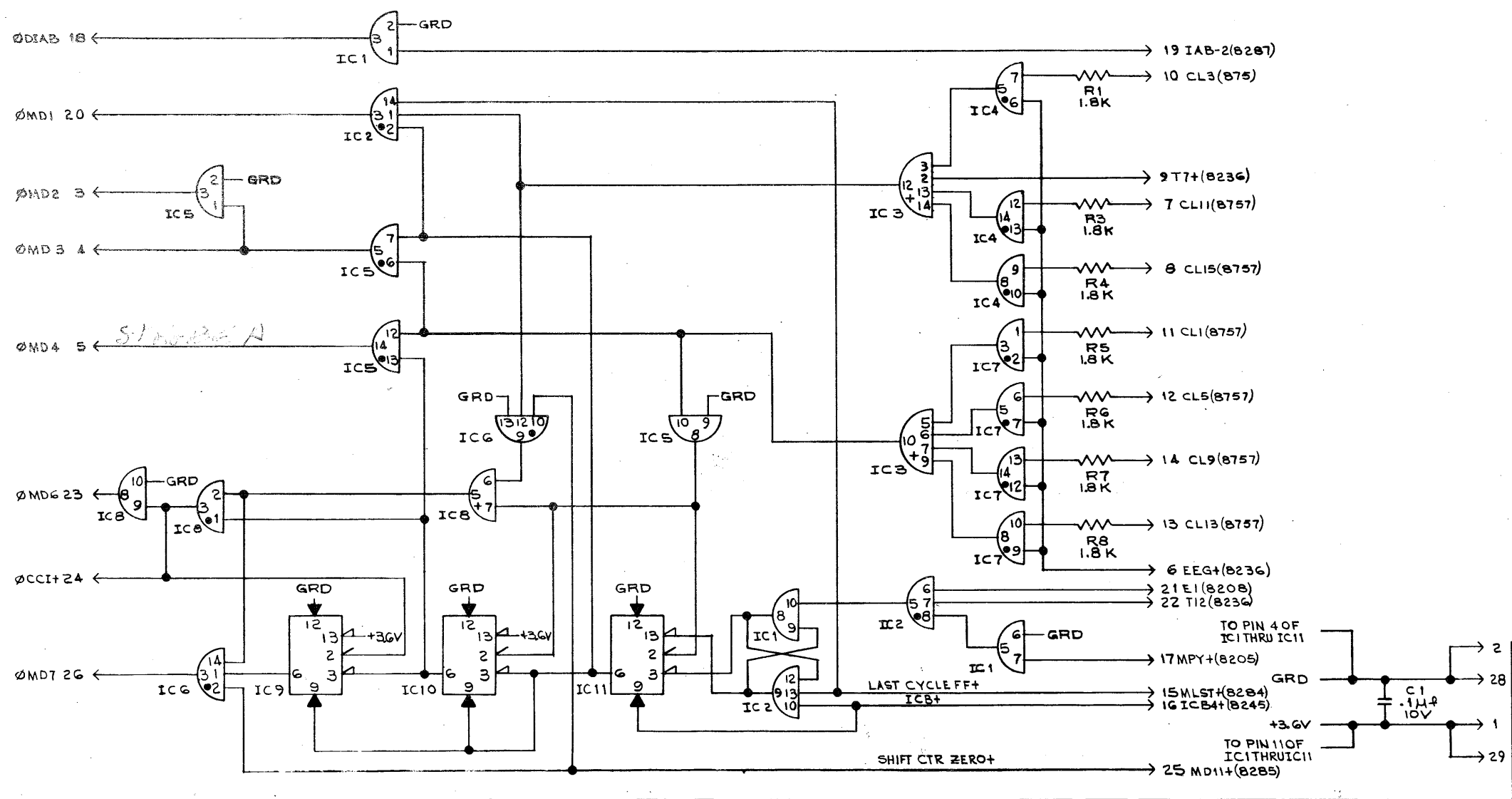


- ∅DIAB+ DIVIAB+
- ∅MD1 MI&M15 STROBE
- ∅MD2
- ∅MD3 X1&X2 STROBE
- ∅MD4 "A" STROBE
- ∅MD6
- ∅CCI+ SHIFT CTR DECREMENT
- ∅MD7

- 19 IAB-2(8287)
- 10 CL3 (8757)
- 9 T7+ (8236)
- 7 CL11 (8757)
- 8 CL15 (8757)
- 11 CL1 (8757)
- 12 CL5 (8757)
- 14 CL9 (8757)
- 13 CL13 (8757)
- 6 EEG+ (8236)
- 21 E1 (8208)
- 22 T12 (8236)
- 17 MPY+ (8205)
- 15 LAST CYCLE FF+ MLST+ (8284)
- 16 ICB+ ICB4(8245)
- 25 SHIFT CTR ZERO+ MD11+ (8285)

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4 W.  
 3. FOR DRILLING DWG SEE D 8600-990.  
 FOR DIMENSIONAL DWG SEE C8600.

REV.	DESCRIPTION	DATE	APPD	REV. C
D	8283			
A	G7-200; DELETED PIN 27. L.G. 6/20/67 uc	6/21/67		
B	G7-316; DELETED R2 AND PINS 1, 2 & 3 OF IC4. LOGIC ON PIN 9 WAS CL7. G7W 8-29-67 uc	8/30/67		
C	G7-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-26-67. AS.	10/30/67		



7	R8 R7 R6 R5 R4 R3 R1	RC07GF182J	RESISTOR - 1.8K, ALLEN BRADLEY
3	IC11 IC10 IC9	MC 726 P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC 725 P	
2	IC6 IC2	MC 792 P	
5	IC8 IC7 IC5 IC4 IC1	MC 724 P	
1	C1	UK10-104	
AR 4	AWG 24		SLEEVEING-TEFLON THIN WALL (COLOR)
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1 2	00-7022-029-000-001		CONNECTOR - ELCO
1 1	SEL 990		PRINTED CIRCUIT (FOR REV SEE ASHW)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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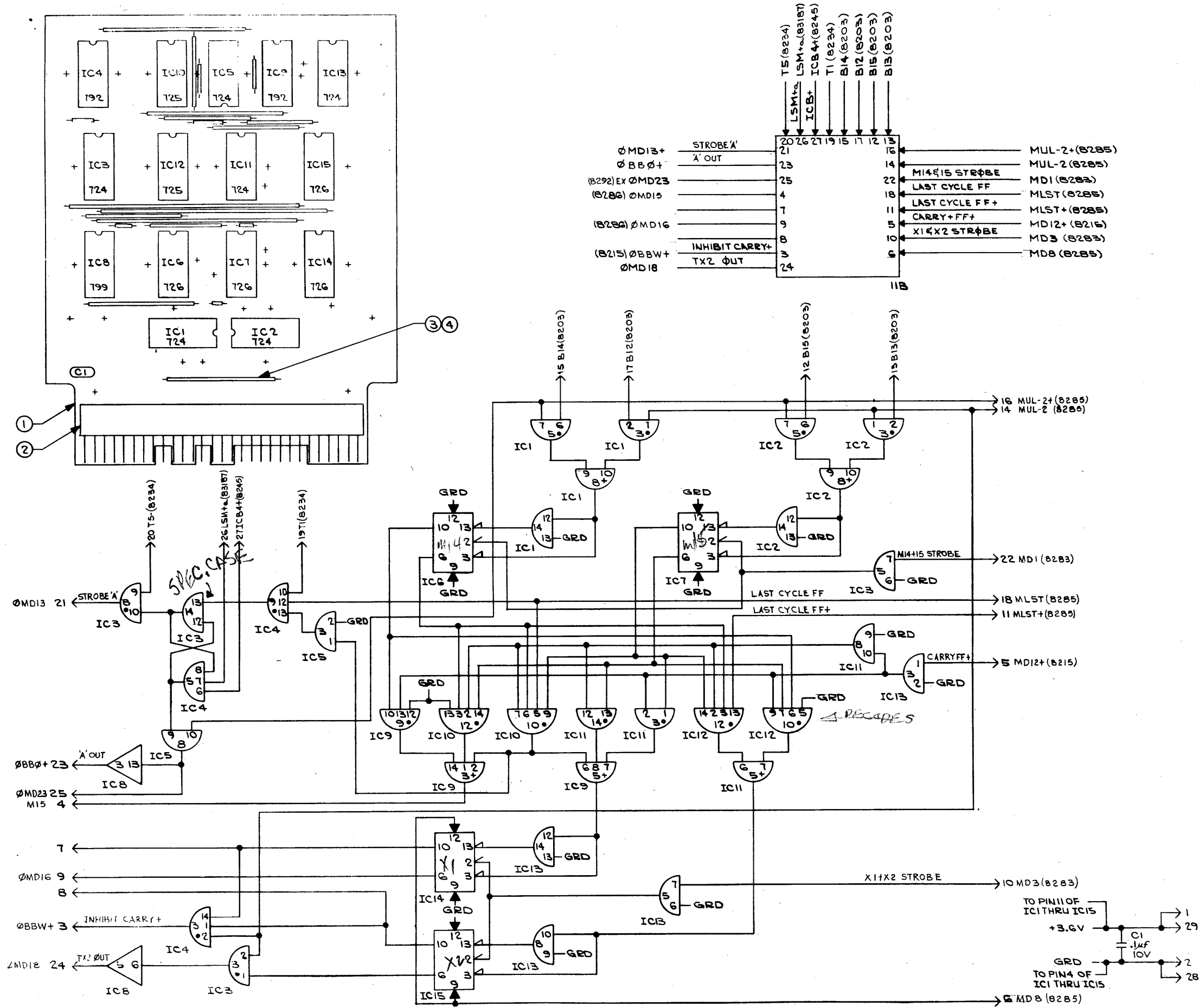
DR	RKC	19MAY67
CHK	RKM	5-24-67
ENGR	W. H. H. H.	6/1/67
PROJ	W. H. H. H.	3/8/67
APPD	RKC	6/8/67
NEXT ASSY		

SCHEMATIC & ASSEMBLY  
 RTL MPY/DIV CONTROL 1

CODE IDENT NO.	SIZE	REV.
20886	D	8283 C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING & DIMENSIONAL DWG. SEE D15387.

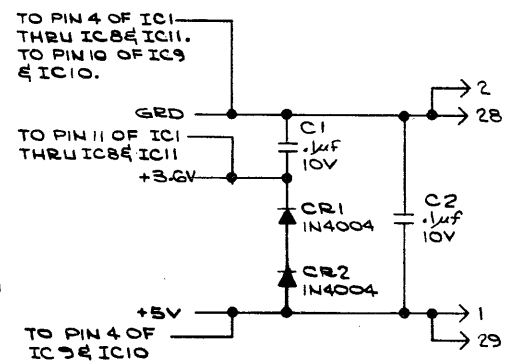
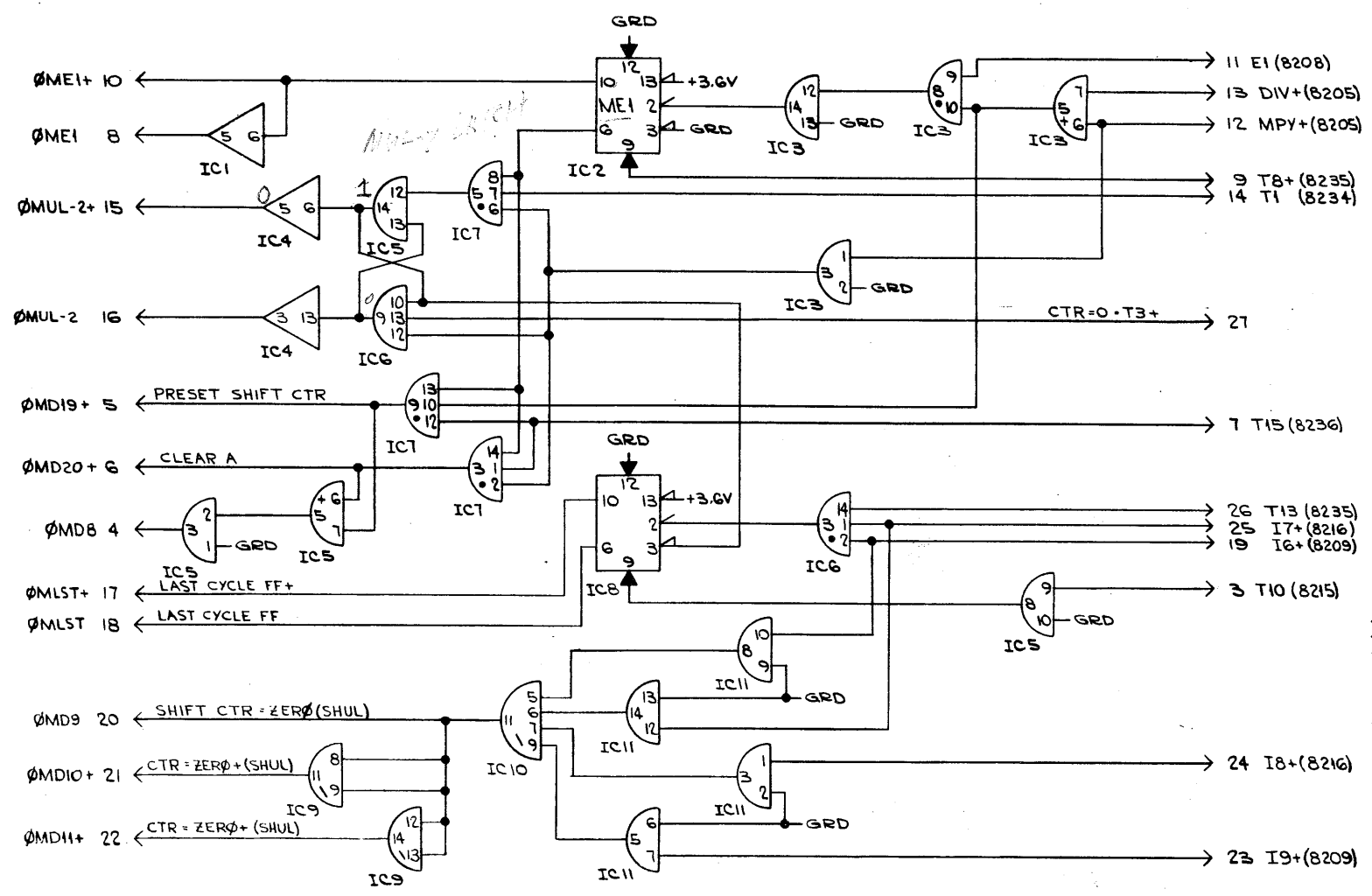
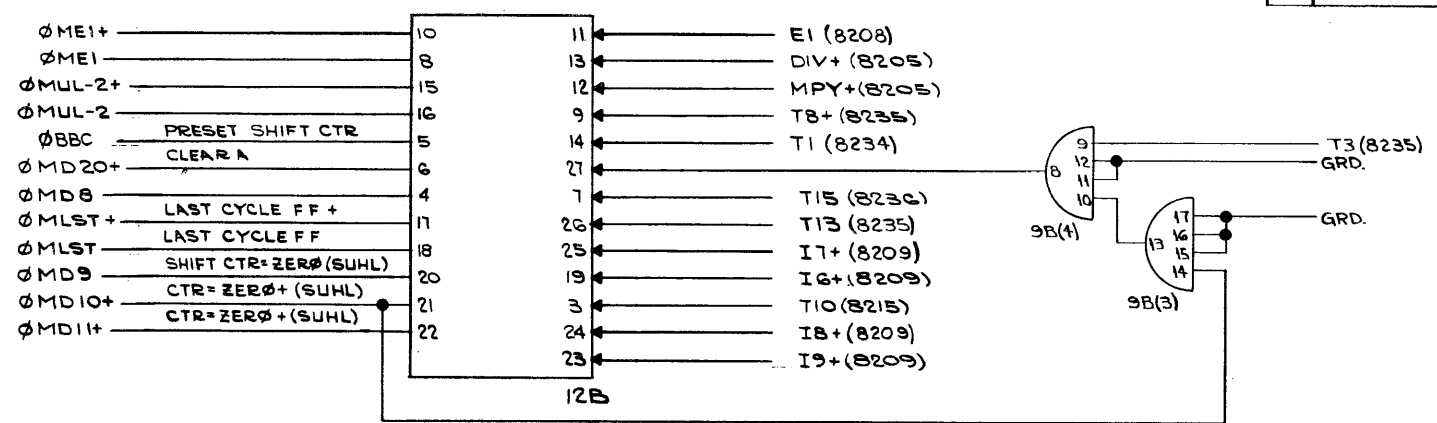
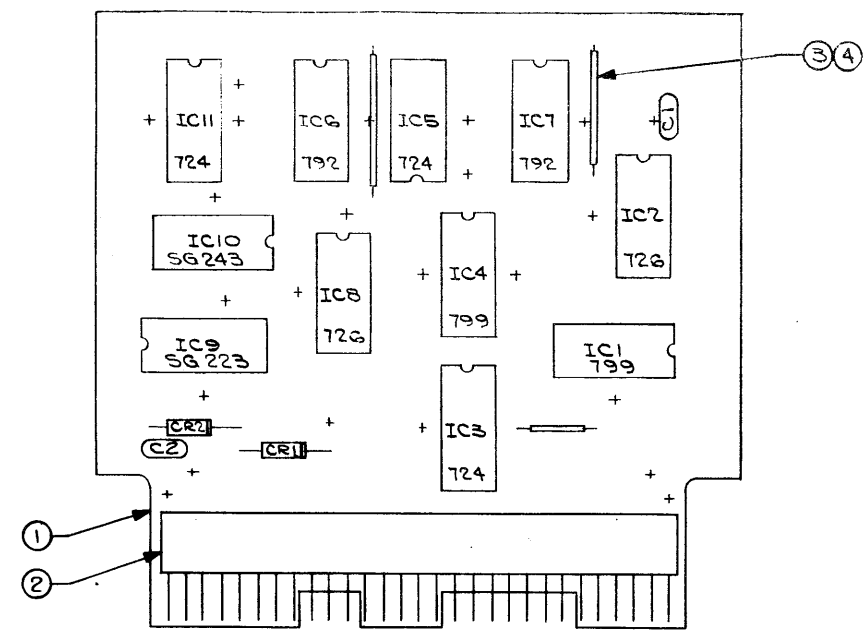
REV	D	8284	DATE	APP'D
REV	A	DESCRIPTION	DATE	APP'D
A		67-448 ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-27-67	10/27/67	[Signature]



2	IC12	MC125P				
	IC10	MC125P				
1	IC8	MC199P				
	IC14	MC126P				
4	IC7	MC126P				
	IC6	MC126P				
2	IC9	MC192P	INTEGRATED CIRCUIT-MOTOROLA			
	IC4	MC192P				
	IC13	MC124P				
	IC11	MC124P				
	IC5	MC124P				
	IC3	MC124P				
	IC2	MC124P				
	IC1	MC124P				
1	C1	UK-10-104	CAPACITOR- $J_{uf}$ -80-20%,10V,CRL			
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL			
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED			
1	2	00-1022-029-000-001	CONNECTOR-ELCO			
1	1	SEL 976	PRINTED CIRCUIT-(REV SEE A51140)			
-1	ITEM	DWG. OR PART NO.	DESCRIPTION			
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA						
DR	[Signature]	5-18-67	SCHEMATIC & ASSEMBLY RTL MPY/DIV CONTROL #2			
CC	RKM	5-22-67				
ENGR	[Signature]	[Signature]				
APP	[Signature]	[Signature]				
CODE IDENT. NO.	20886	SIZE	D	8284	REV	A

SIZE	8285		REV.
REV.	DESCRIPTION	DATE	APPD
A	67-204; REVISED LOGIC OF PINS 10, 11, 14 & 26. BB. 6-27-67 RKM	7/12/67	[Signature]
B	67-445; ADDED 9B(3), 9B(4) ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-27-67	12/20/67	[Signature]

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DIMS SEE D 8600-977.  
 FOR DIMENSIONAL DWG SEE C 8600.



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
1	IC10	SG 243	INTEGRATED CIRCUIT-SYLVANIA
1	IC9	SG 223	INTEGRATED CIRCUIT-SYLVANIA
2	IC7	MC792P	INTEGRATED CIRCUIT-MOTOROLA
3	IC5	MC724P	
3	IC3	MC724P	
2	IC8	MC726P	INTEGRATED CIRCUIT-MOTOROLA
2	IC4	MC799P	
2	CR2	IN4004	DIODE - MOTOROLA
2	CR1	IN4004	DIODE - MOTOROLA
2	C2	UK-10-104	CAPACITOR-.1uf±80-20%,10V,CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	DD-707-829-000-001	CONNECTOR-ELCO
1	1	SEL 977	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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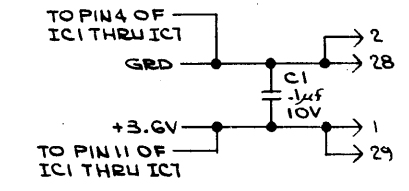
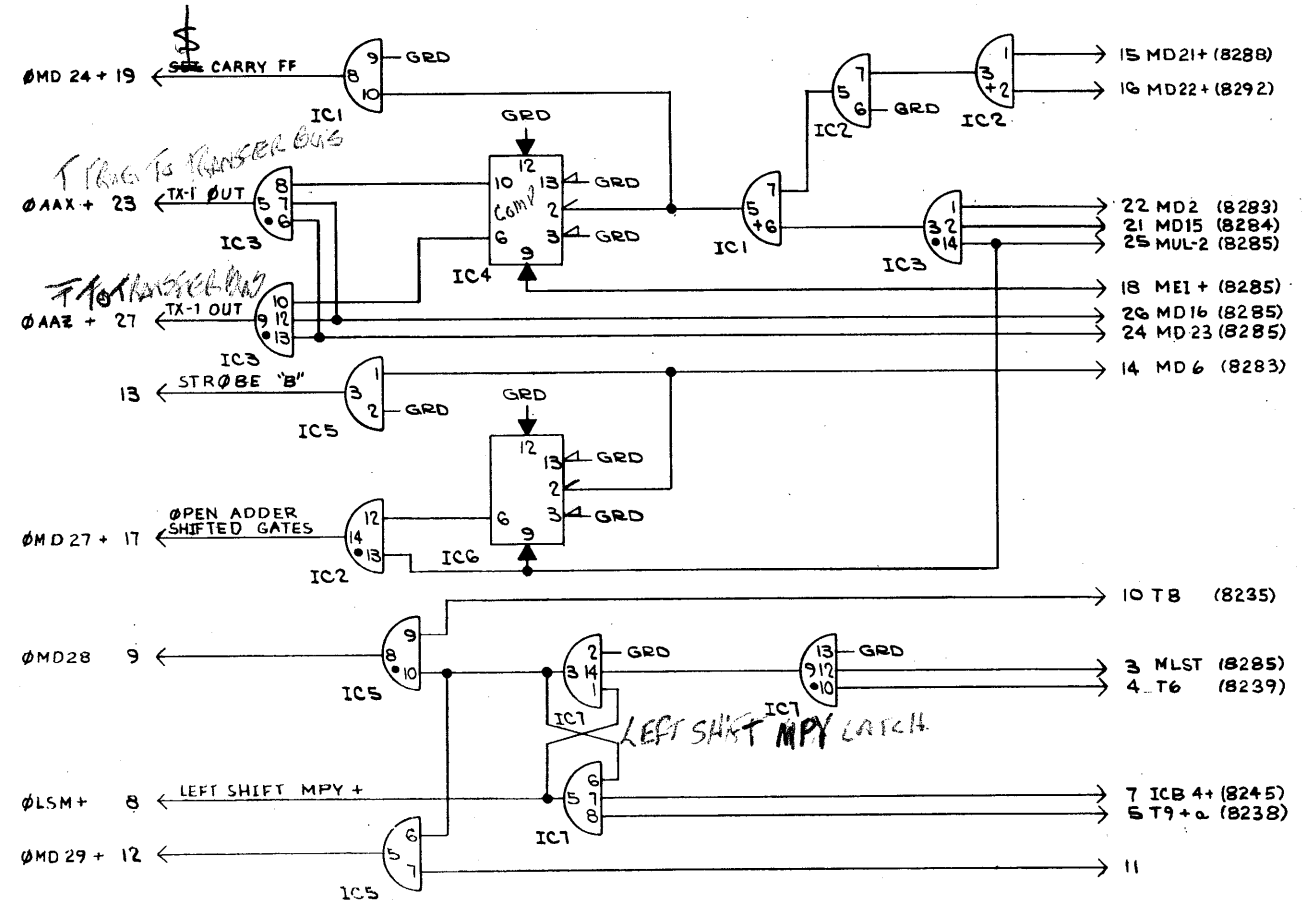
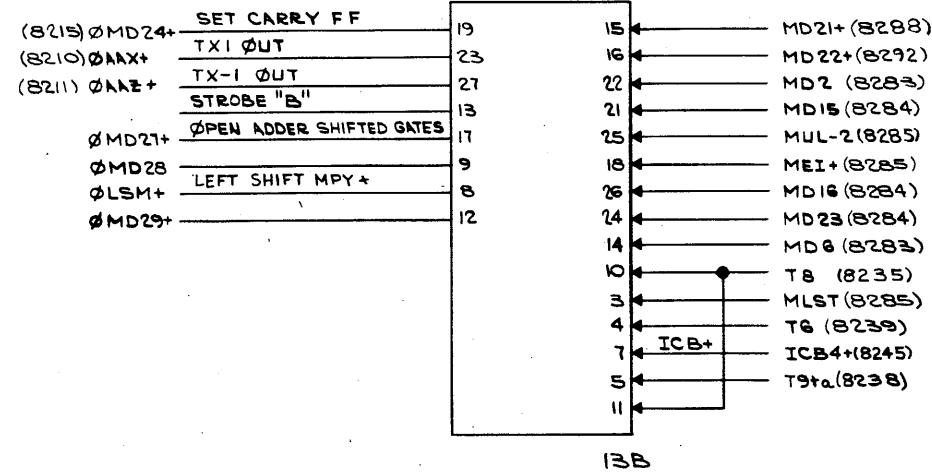
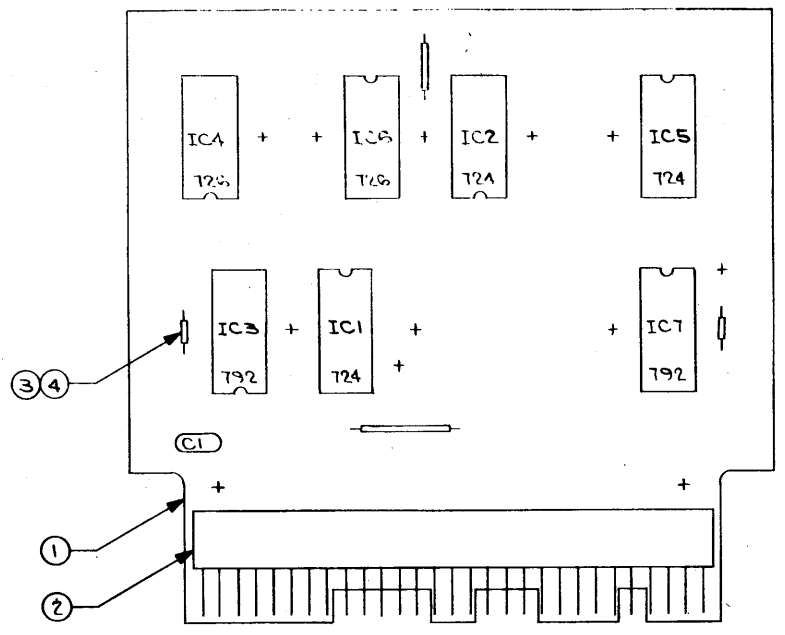
DR	[Signature]	5-19-67
CHK	RKM	5-23-67
ENGR	[Signature]	6-1-67
PROJ	[Signature]	6/7/67
APPD	[Signature]	6/3/67
NEXT ASSY		

SCHEMATIC & ASSEMBLY  
 RTL - MPY/DIV  
 CONTROL 3

CODE IDENT NO.	SIZE	REV.
20886	D	8285
		B

SIZE	D	8286	REV.	A
REV.		DESCRIPTION	DATE	APPD
A		67-445; ADDRESSES REVISED & LINE TITLES ADDED.	10/23/67	JW
		C. THEW 10-27-67		

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-978.  
 FOR DIMENSIONAL DWG. SEE C8600.



2	IC6	MC726P	INTEGRATED CIRCUIT-MOTOROLA
	IC4		
2	IC7	MC792P	
	IC3		
	IC5		
3	IC2	MC724P	
	IC1		
1	C1	UK-10-104	CAPACITOR-.1µf±80-20%,10V,CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLIDCOPPER, TINNED
1	2	DD-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 978	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

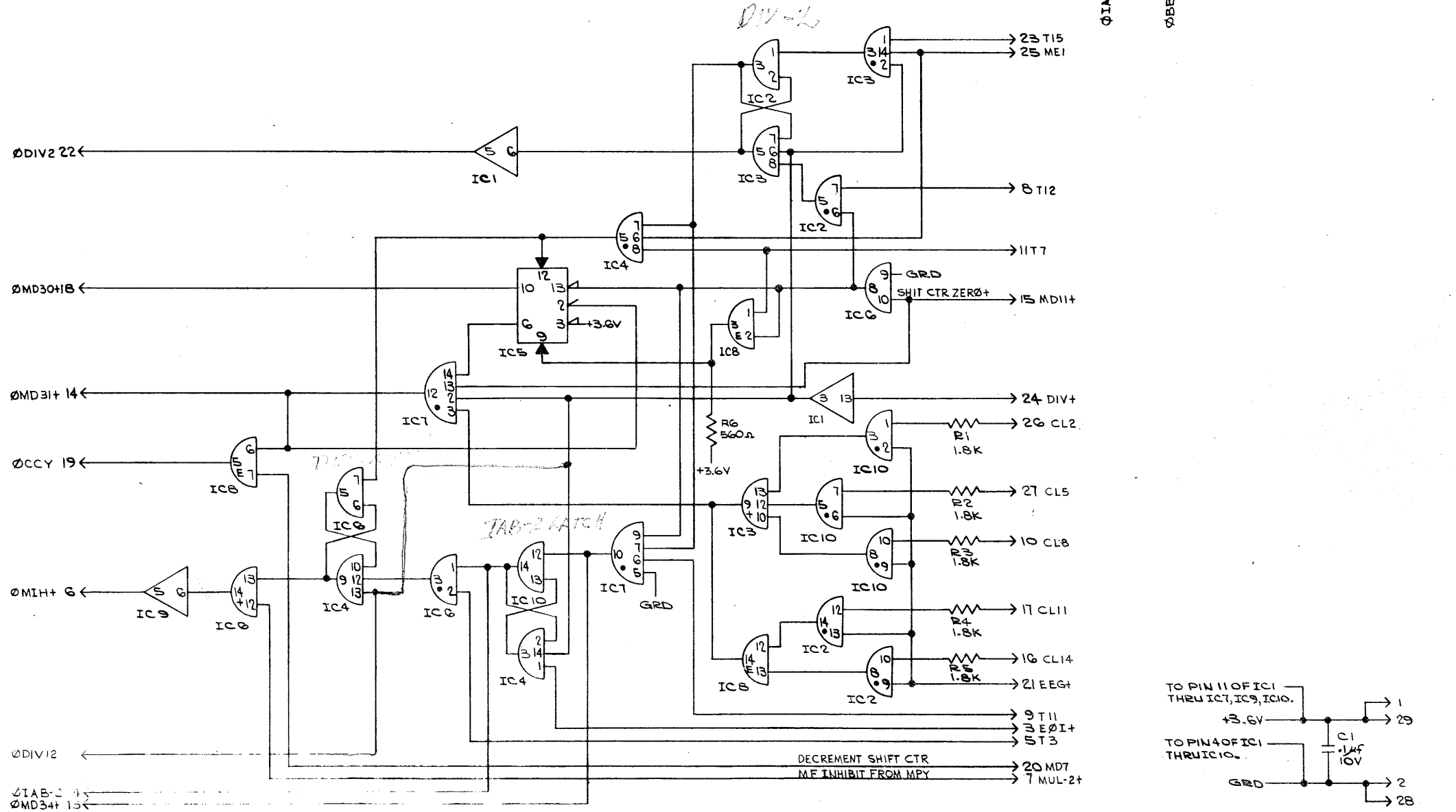
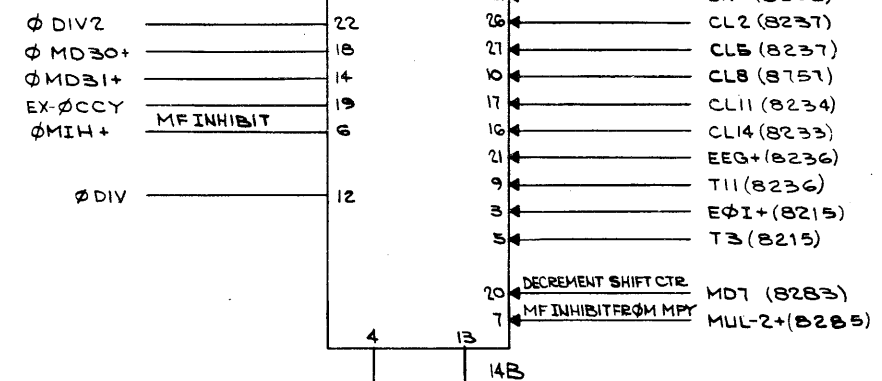
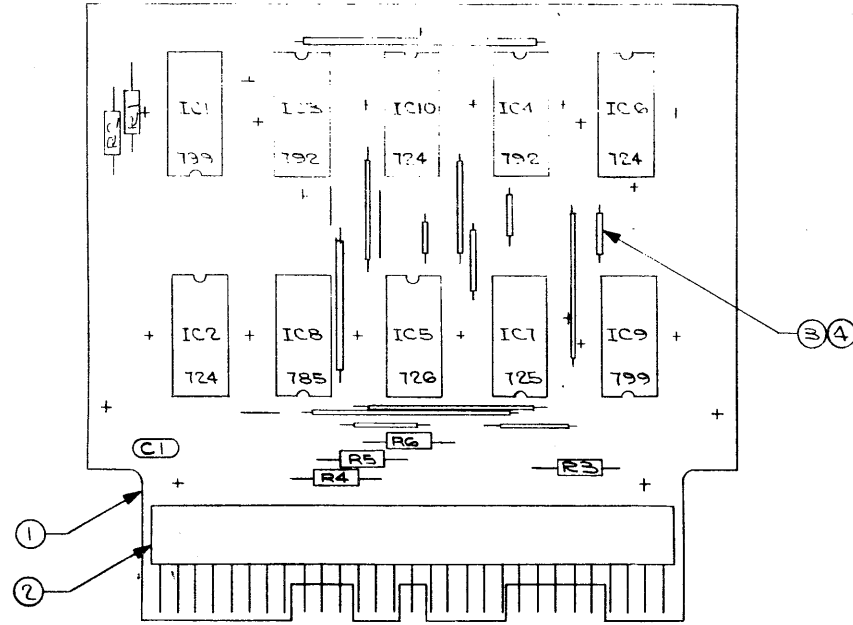
**Systems Engineering Laboratories**  
 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR	5-20-67	SCHEMATIC & ASSEMBLY RTL-MPY/DIV CONTROL #4
CHK	RKM 5-23-67	
ENGR	Vill. 6-3-67	
PROJ	6/6/67	
APPD	6/9/67	
NEXT ASSY		

CODE IDENT NO. 20886 SIZE D 8286 REV. A

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4W.  
 3. FOR DRILLING DWG. SEE D 8000-991.  
 FOR DIMENSIONAL DWG. SEE C8600.

SIZE	REV.	DESCRIPTION	DATE	APPD
D	3287			
A	67-288; ADDED R6 - REV. TO LATEST PC CHANGE. R. HUGHES 8/15/67 GW	8/15/67		
B	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-27-67. GW	10/30/67		



ITEM	QTY	DESCRIPTION	MANUFACTURER
R6	1	RC07GF561J	RESISTOR-560Ω, ALLEN BRADLEY
R5	5	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
R1	5		
IC8	1	MCT85P	INTEGRATED CIRCUIT-MOTOROLA
IC7	1	MC725P	
IC5	1	MC726P	
IC4	2	MCT92P	
IC10	3	MC724P	
IC6	2	MC724P	
IC9	1	MCT99P	
IC1	1		
C1	1	UK-10-104	CAPACITOR-1μf±80-20%, 10V, CRL
AW	4	AWG 24	SLEEVING-TEFLON-THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
	1	00-7072-029-000-001	CONNECTOR-ELCO
	1	SEL 991	PRINTED CIRCUIT (REV. SEE A51140)
	-1	DWG. OR PART NO.	DESCRIPTION

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 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR <i>[Signature]</i>	6-6-61
CHK RKM	6-6-67
ENGR <i>[Signature]</i>	
PROJ <i>[Signature]</i>	6/1/67
APPD <i>[Signature]</i>	6/15/67
NEXT ASSY	

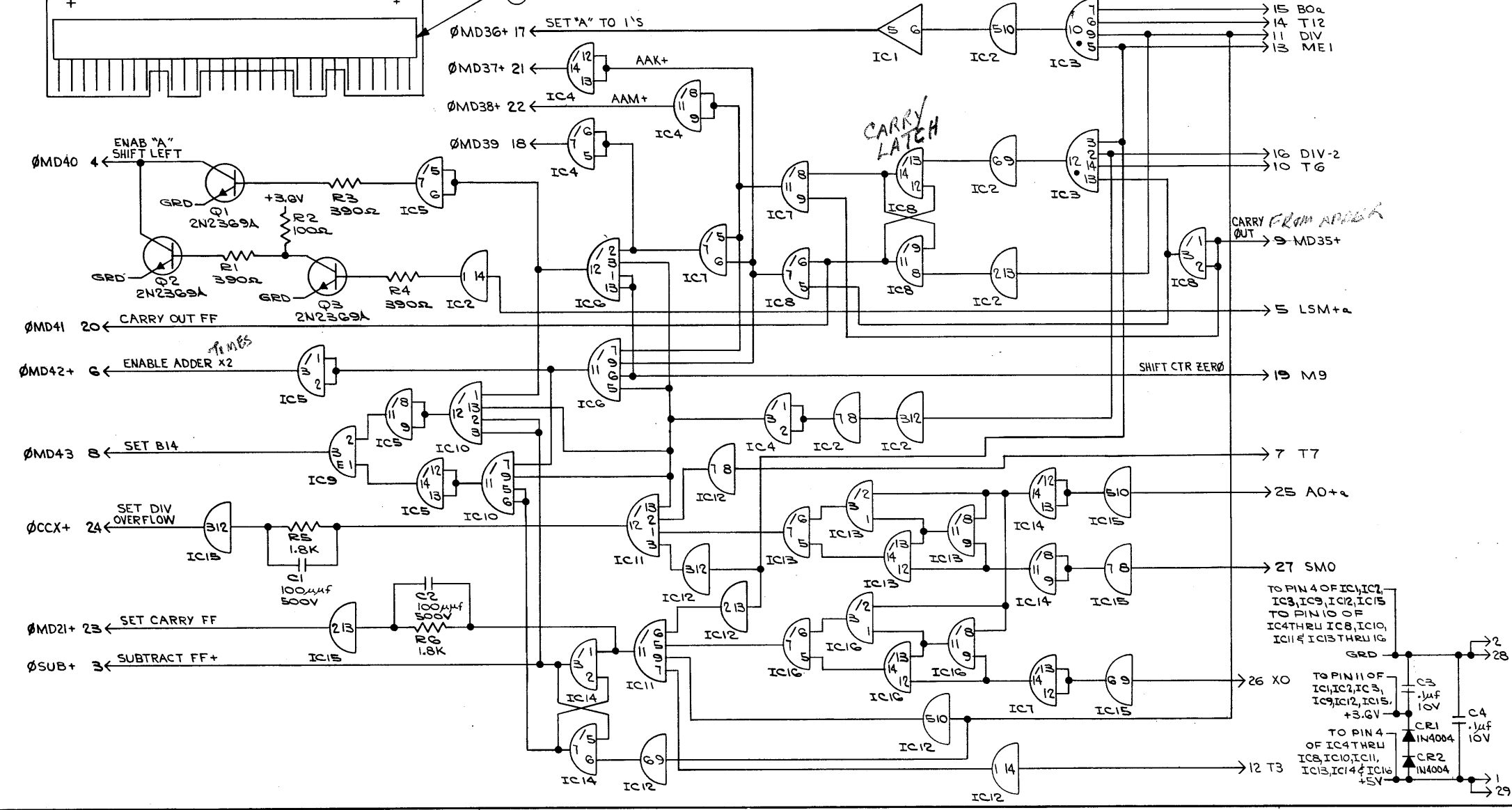
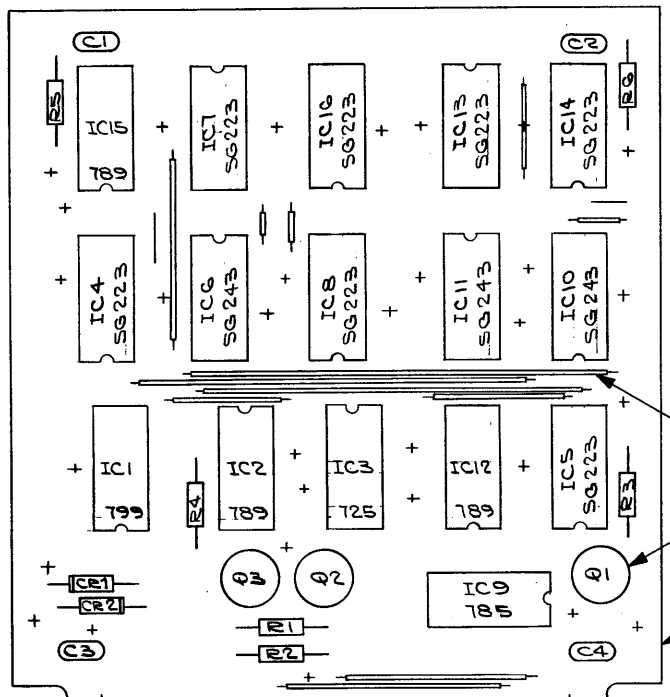
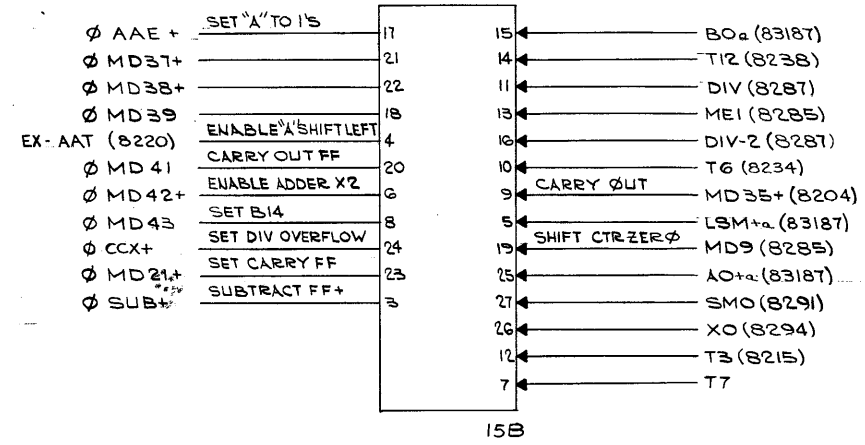
**SCHEMATIC & ASSEMBLY**  
**RTL-MPY/DIV CONTROL 5**

CODE IDENT NO.	SIZE	REV.
20886	D	8287
		B



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $\frac{1}{4}W$ .  
 3. FOR DRILLING DIMENSIONAL DWG. SEE DISS24.

REV.	DESCRIPTION	DATE	APPD
D	8288		C
A	67-445; ADDRESSES REVISED AND LINE TITLES ADDED AS 10-27-67	10/27/67	RKM
B	68-85; REMOVED OUTPUT FROM IC14 PIN7, DISCONNECTED IC12 PIN 8 FROM IC3 PIN 14, 2-14-68 F.L.P. (314)	2/16/68	RKM
C	68-159; ADDED (8234) ON PIN 10, DELETED (8203) ON PIN 24 OF LOGIC.	4/18/68	RKM



2	R9	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
1	R5	RC07GF101J	RESISTOR-100 $\Omega$ , ALLEN BRADLEY
3	R2	RC07GF391J	RESISTOR-390 $\Omega$ , ALLEN BRADLEY
3	Q3	2N2369A	TRANSISTOR-FAIRCHILD
1	IC9	MC1785P	INTEGRATED CIRCUIT-MOTOROLA
3	IC11	SG243	INTEGRATED CIRCUIT-SYLVANIA
7	IC16	SG223	INTEGRATED CIRCUIT-SYLVANIA
1	IC3	MC1785P	INTEGRATED CIRCUIT-MOTOROLA
3	IC12	MC1789P	INTEGRATED CIRCUIT-MOTOROLA
1	IC1	MC1799P	INTEGRATED CIRCUIT-MOTOROLA
2	CR2	IN4004	DIODE-MOTOROLA
2	C4	UK-10-104	CAPACITOR-.1 $\mu$ f+80-20%, 10V, CRL
2	C2	10101	CAPACITOR-100 $\mu$ f $\pm$ 10%, 500V, CRL
3	S	B10369	LINIPAD
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 992	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM		DWG. OR PART NO. DESCRIPTION

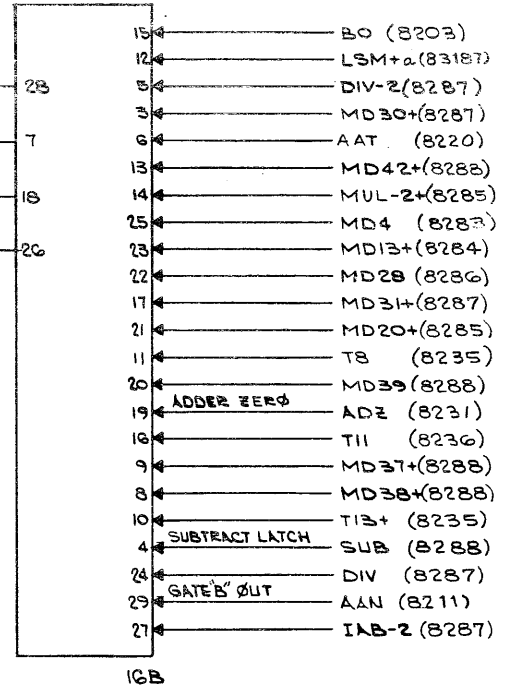
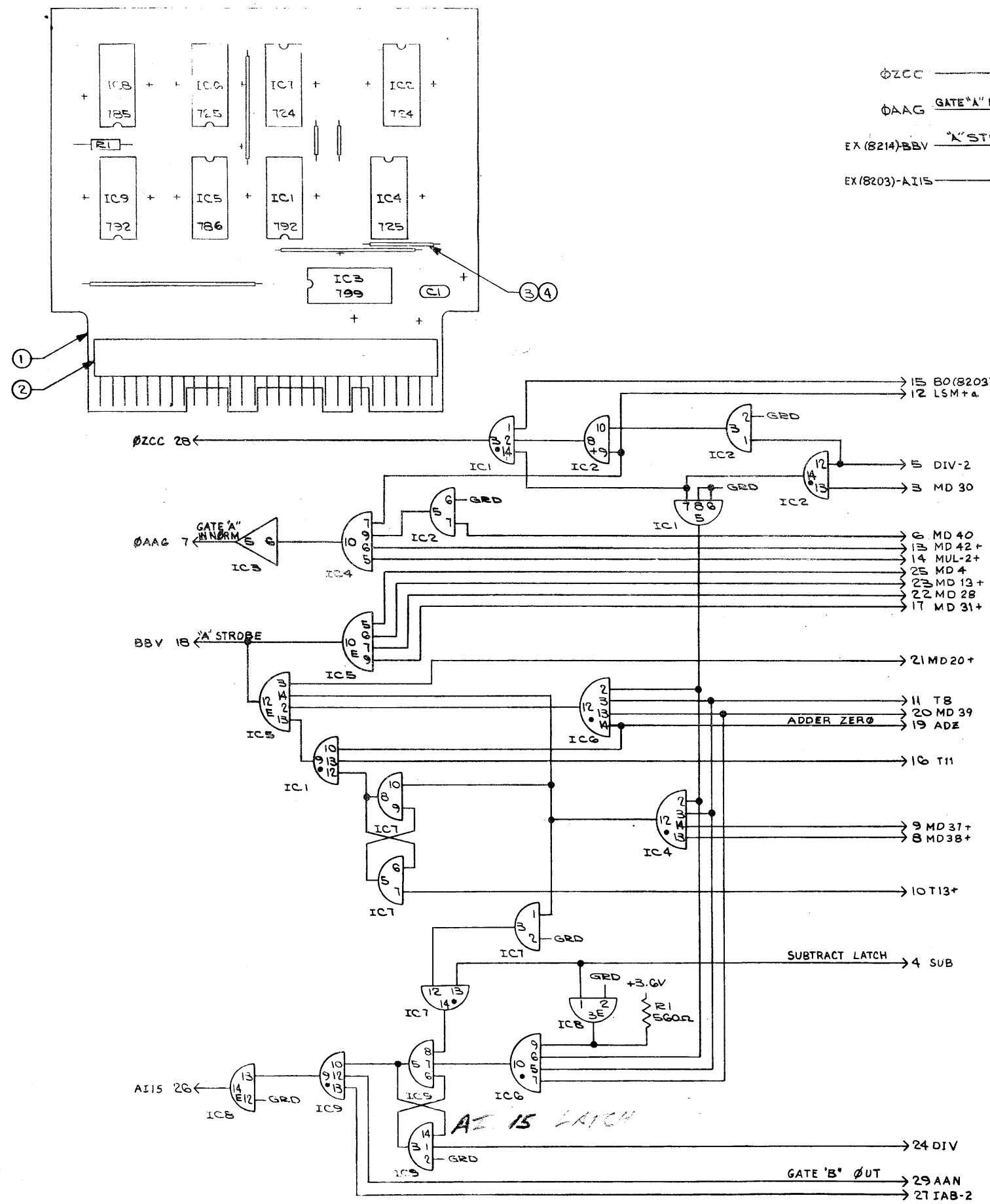
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DR: *[Signature]* 6-7-61  
 CHK: RKM 6-8-67  
 ENGR: *[Signature]* 6-15-67  
 PROJ: *[Signature]* 6/15/67  
 APPD: *[Signature]* 6/15/67

SCHEMATIC & ASSEMBLY  
 RTL-MPY/DIV  
 CONTROL G

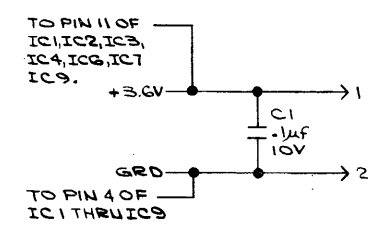
CODE IDENT NO. 20886  
 SIZE D 8288  
 REV. C



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS, OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/4W, 5%.  
 3. FOR DRILLING DWG. SEE D8600-998.  
 FOR DIMENSIONAL DWG. SEE C8600.

SIZE	D	8289	REV.	A
REV.		DESCRIPTION	DATE	APPD
A		67-445, ADDRESSES REVISED & LINE TITLES ADDED. C.THEW 10-27-67	10/23/67	[Signature]

1	R1	RC01GF56U	RESISTOR-560Ω, ALLENBRADLEY	
1	IC8	MCT85P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC6	MC786P		
2	IC8	MCT25P		
1	IC3	MCT99P		
2	IC7	MC724P		
2	IC9	MC792P		
1	C1	UK-10-104		CAPACITOR-.1uF+80-20,10V,CERL
AR	4	AWG 24		SLEEVING-TEFLON, THINWALL
AR	3	AWG 24		WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO	
1	1	SEL998	PRINTED CIRCUIT (REV. SEE A51140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	



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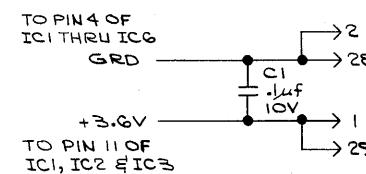
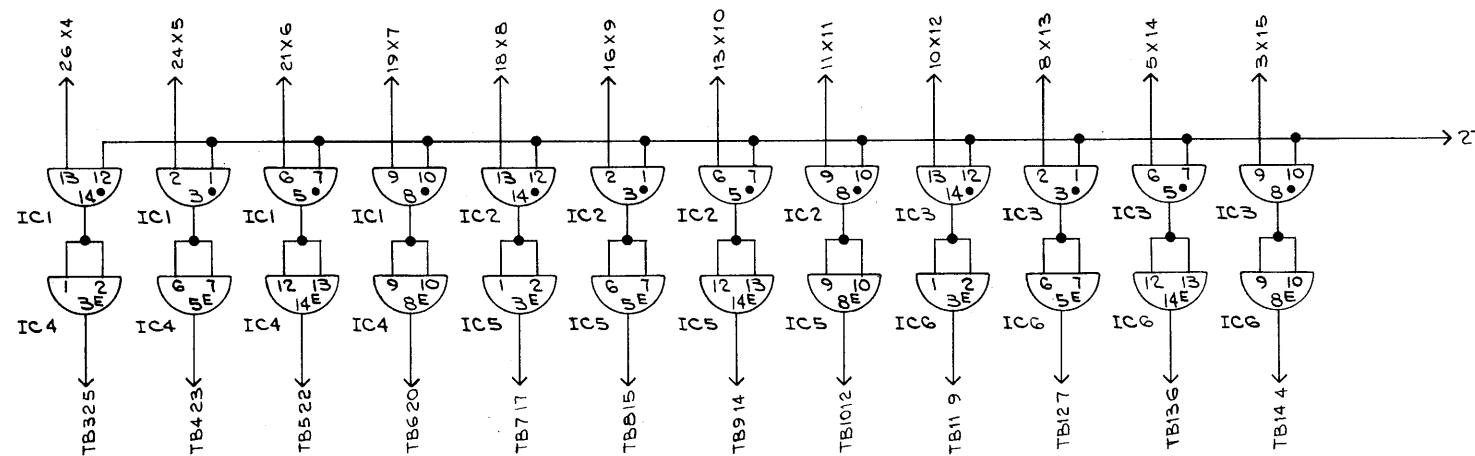
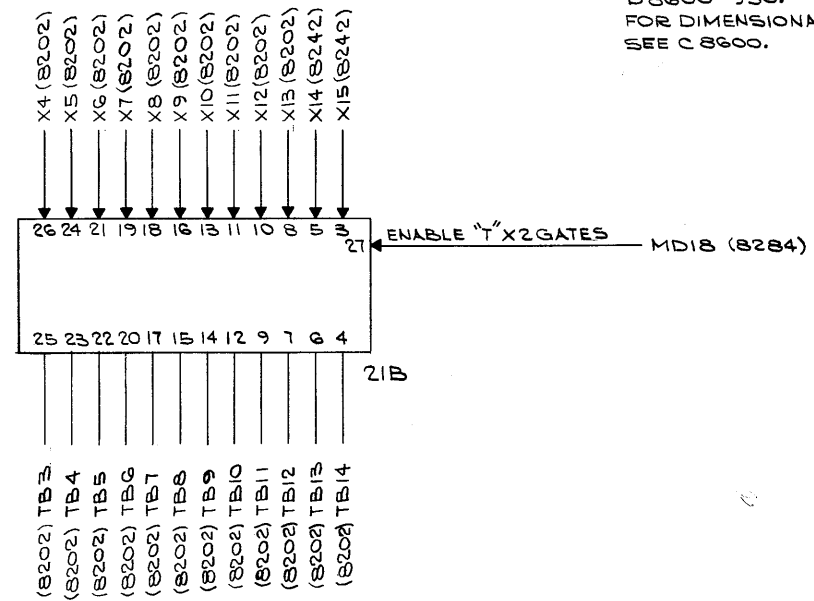
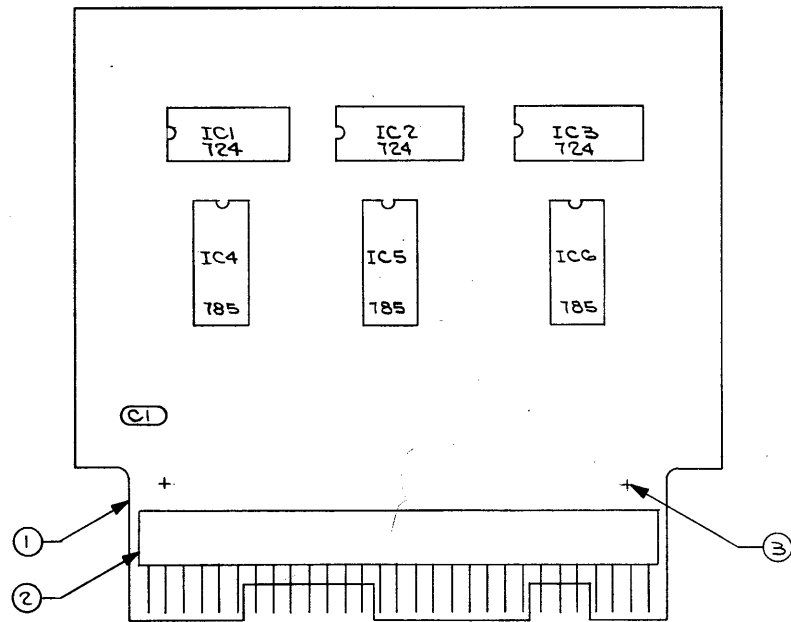
DR	[Signature]	6-9-67
CHK	RKM	6-24-67
ENGR	[Signature]	6-27-67
PROJ	[Signature]	6-27-67
APPD	[Signature]	6-29-67
NEXT ASSY		

SCHEMATIC & ASSEMBLY  
 RTL-MPY/DIV  
 CONTROL 7

CODE IDENT NO.	SIZE	REV.
20886	D	8289
		A

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D8600-950.  
 FOR DIMENSIONAL DWG. SEE C 8600.

REV.	DESCRIPTION	DATE	APPD	REV.
D	8290			B
A	67-445; ADDRESSES REVISED + ADDED. E.P.C. 10-27-67.	10/30/67	CAW	
B	68-199; (8202) ON PIN 15 OF LOGIC WAS (8203) JWM 4-18-68	4/18/68	RKM	



3	IC6 IC5 IC4	MCT85P	INTEGRATED CIRCUIT-MOTOROLA
3	IC3 IC2 IC1	MCT24P	
1	C1	UK-10-104	CAPACITOR-.1uF+80-20%, 10V, CRL
AR	3	AWG24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 950	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

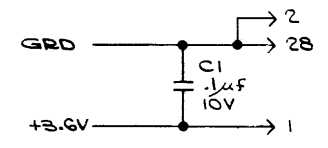
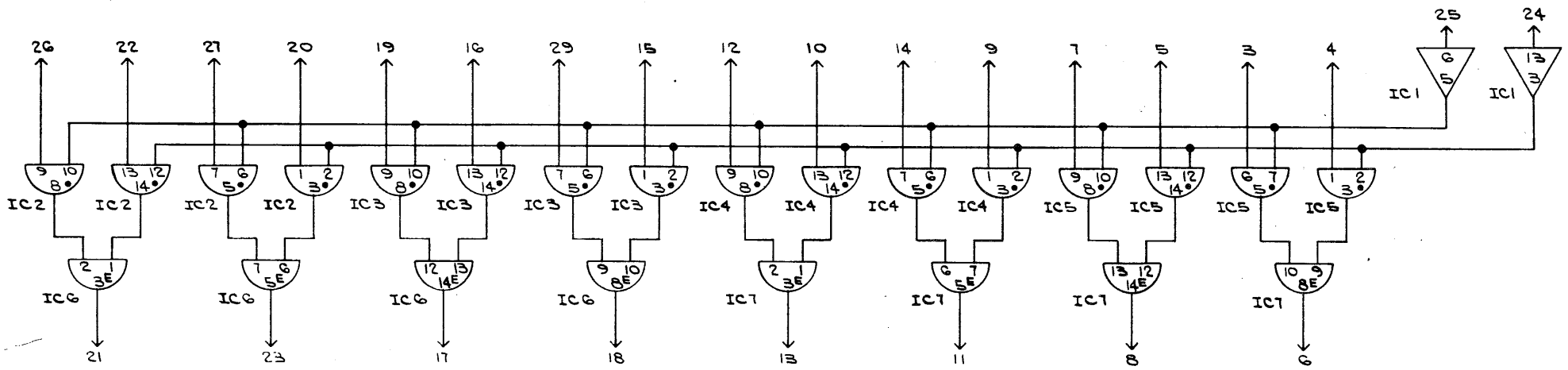
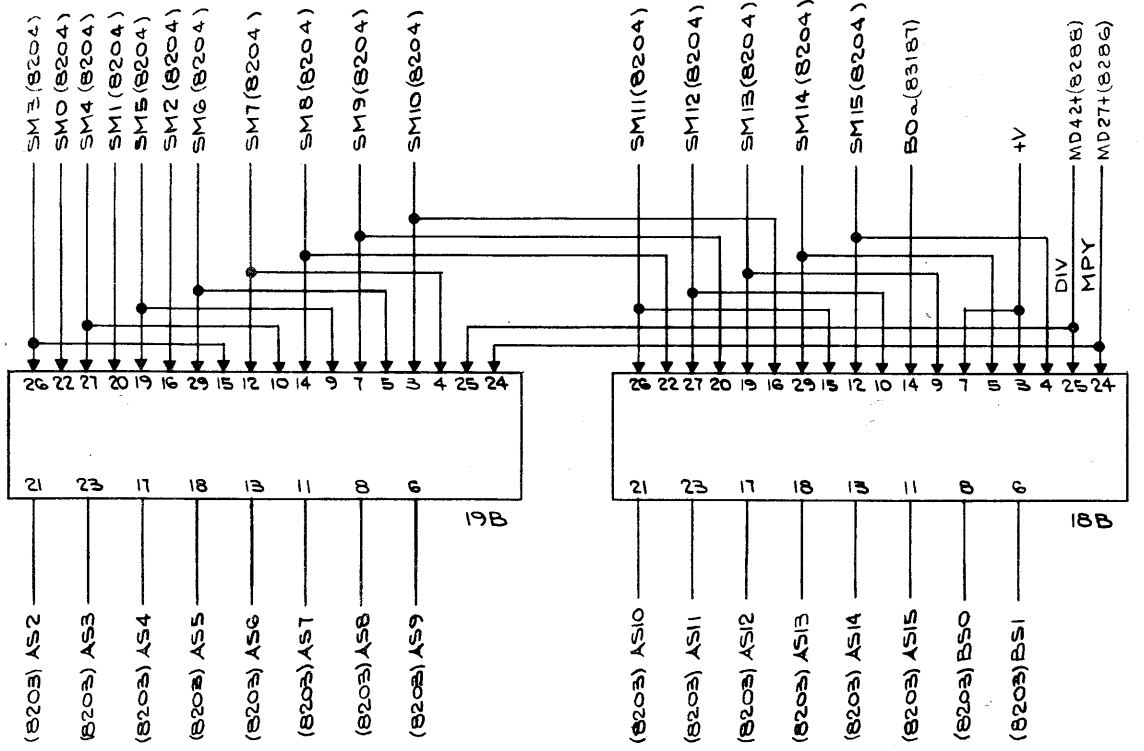
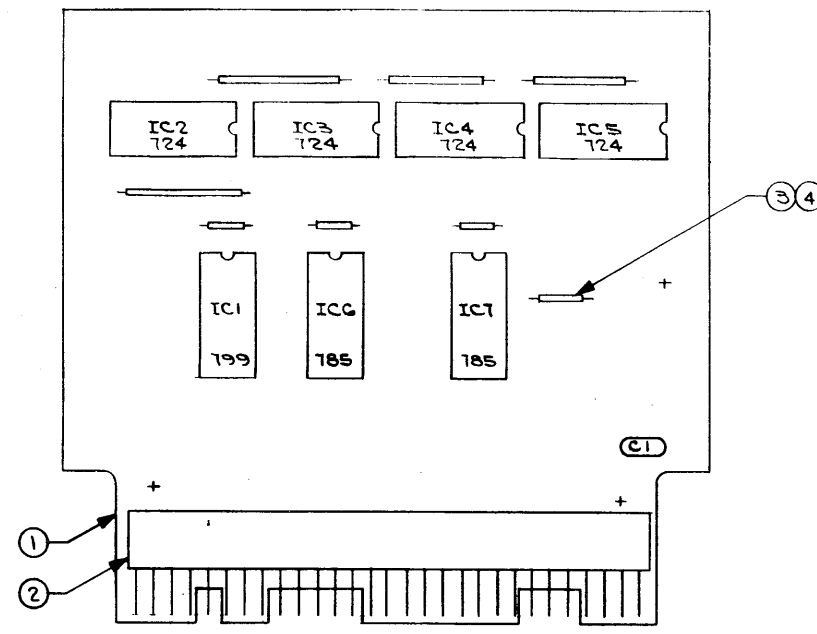
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DR <i>[Signature]</i>	5-24-67	SCHEMATIC ASSEMBLY RTL-MPY/DIV "T" X2 GATES
CHK RKM	6-1-67	
ENGR <i>[Signature]</i>	6-8-67	
PROJ <i>[Signature]</i>	6/1/67	
APPD <i>[Signature]</i>	6/8/67	
NEXT ASSY		

CODE IDENT NO.	SIZE	REV.
20886	D	8290
		B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE DB800-951.  
 FOR DIMENSIONAL DWG. SEE C8800.

SIZE	D	8291	REV.	A
REV.	A	67-445; ADDRESSES REVISED. E.P.C. 10-27-67. <i>YUW</i>	DATE	APPD



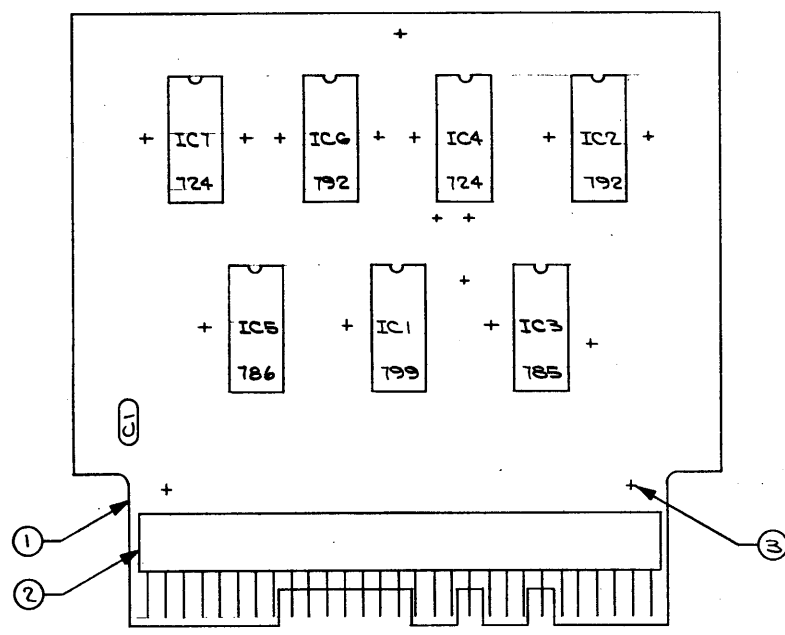
2	IC1	MC185P	
4	IC2	MC124P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3		
1	IC4		
1	IC5		
1	IC6		
1	IC7		
1	C1	UK-10-104	CAPACITOR-.1uF-80-20%,10V,CRL
AR	4	AWG 24	SLEEVING-TEFLON, THIN WALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 951	PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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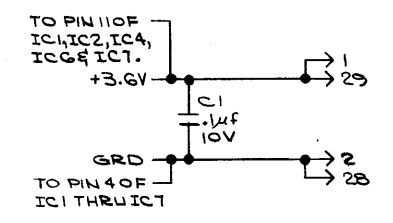
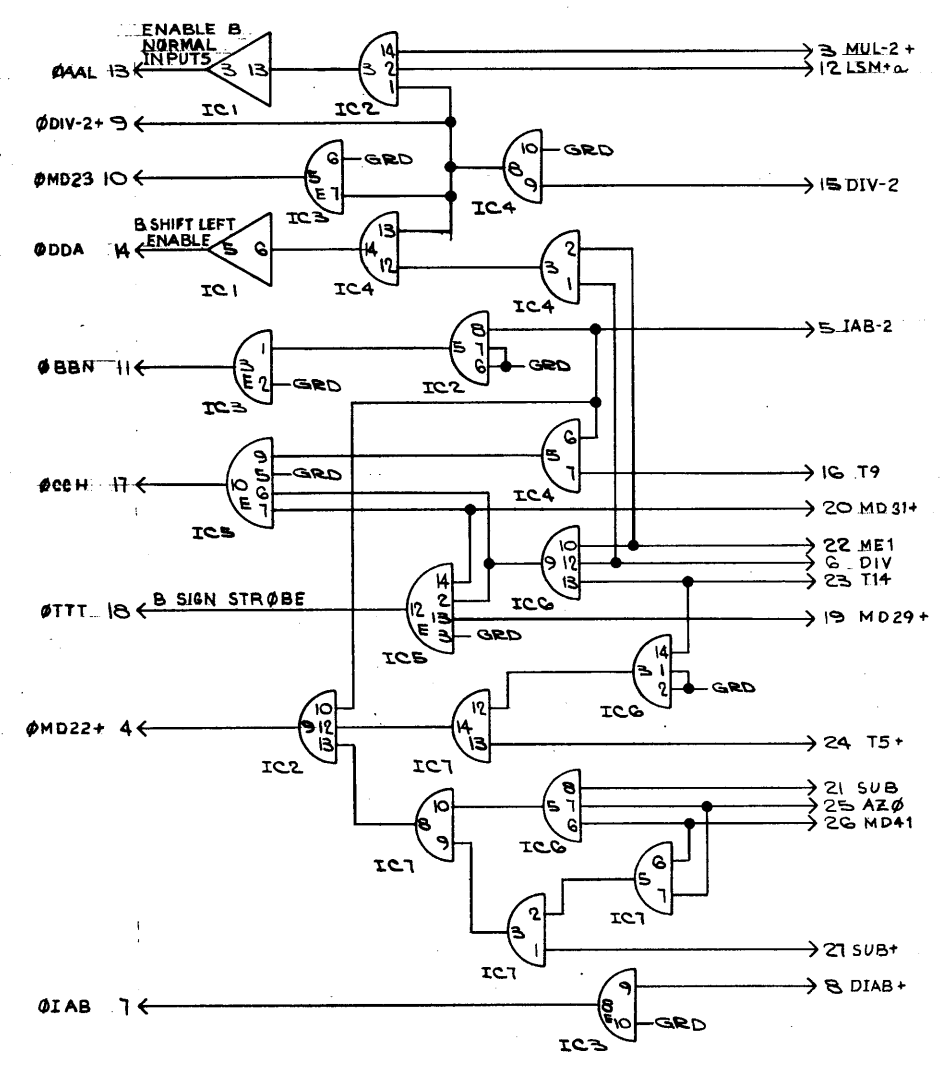
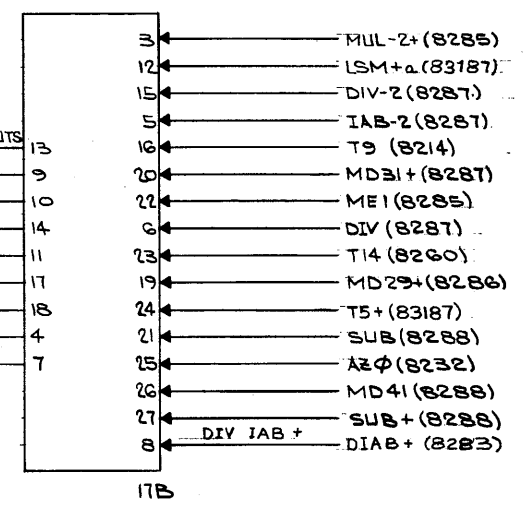
<b>Systems Engineering Laboratories</b>			
6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DR	<i>Edwards</i>	5-24-67	SCHEMATIC & ASSEMBLY RTL-MPY/DIV SHIFTED ADDER GATES
CHK	RKM	5-31-67	
ENGR	<i>Edwards</i>	6/8/67	
PROJ	<i>Edwards</i>	6/8/67	
APPD	<i>Edwards</i>	6/10/67	
NEXT ASSY			
CODE IDENT NO.	20886	SIZE	D
		8291	REV. A

NOTES  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE D 8600-994.  
 FOR DIMENSIONAL DWG. SEE C 8600.

SIZE	REV.	DESCRIPTION	DATE	APPD
D	8292			C
A	67-204	ADDED $\phi$ DDA TO PIN 14 ON LOGIC BB 6-27-67	7/12/67	RKM
B	67-445	ADDRESSES REVISED. FLTNE TITLES ADDED. C.THEW 10-27-67	10/29/67	RKM
C	68-199	DESTINATION OF PIN 24 WAS T7+(8237) JWM 4-18-68	4/18/68	RKM



- $\phi$  ALL
- EX(8284) -  $\phi$  DIV-2+
- EX(8212)-SD23  $\phi$  MD23
- EX(8213)-  $\phi$  CCH
- EX(8224)-  $\phi$  TTT
- EX(8206)-  $\phi$  MD22+
- EX(8206)-  $\phi$  IAB

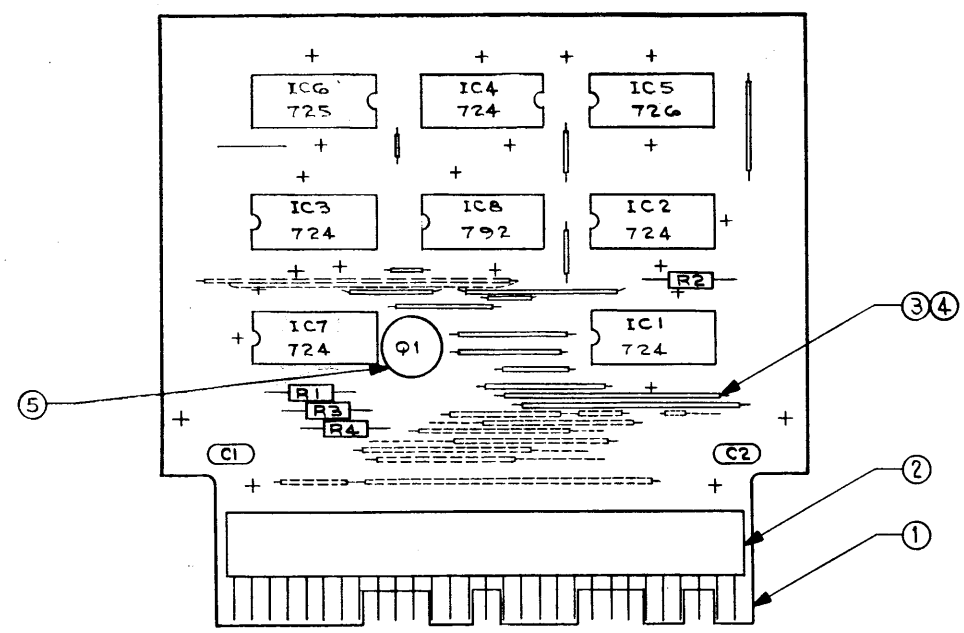


1	IC5	MCT86P	
2	IC7	MCT24P	
	IC4		
1	IC3	MCT86P	INTEGRATED CIRCUIT - MOTOROLA
2	IC6	MCT92P	
	IC2		
1	IC1	MCT99P	
1	C1	UK-10-104	CAPACITOR-.1uf+80-20%,10V,CRL
AP	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 994	PRINTED CIRCUIT (REV SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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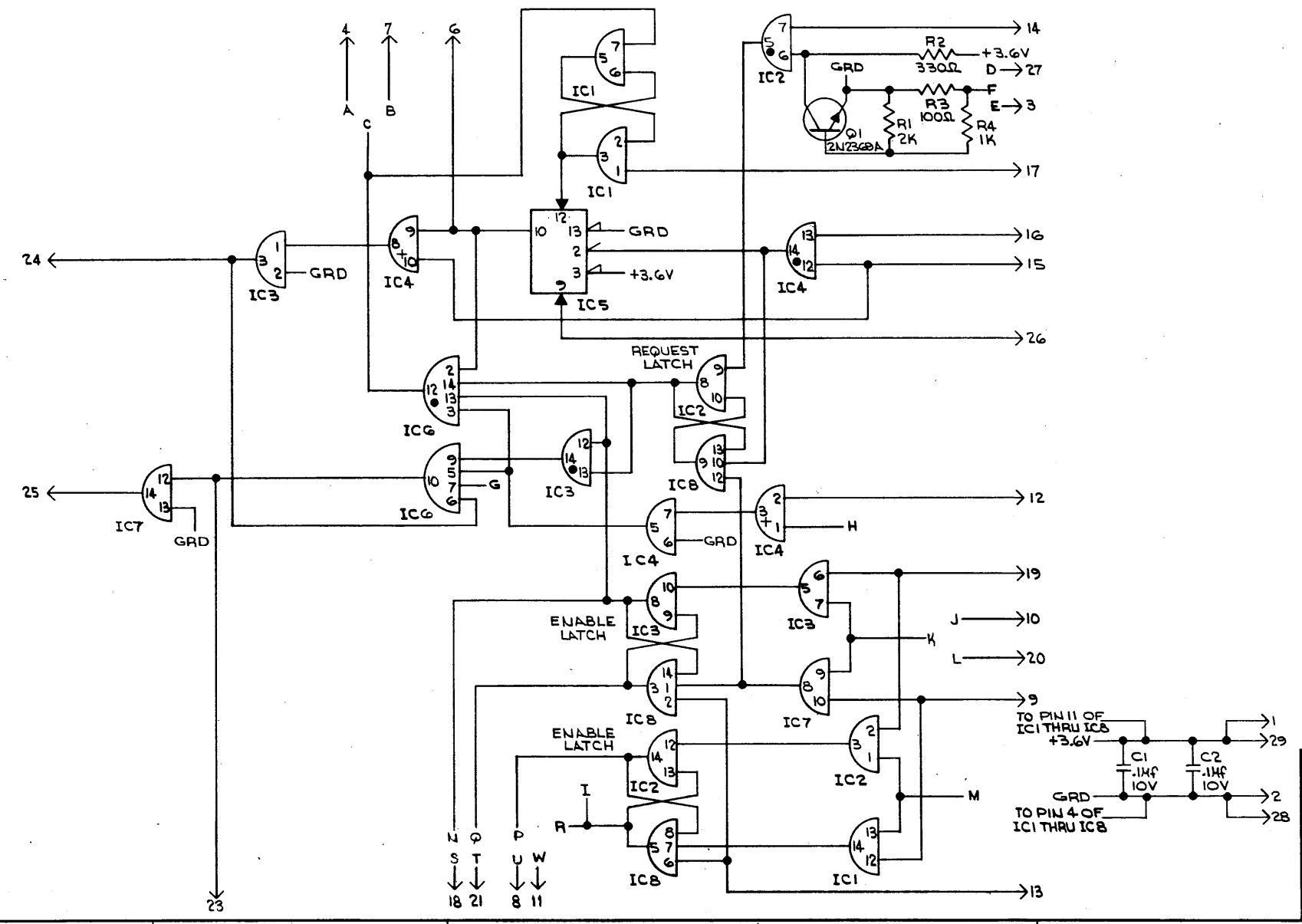
DR <i>E. Diana</i>	6-8-67	SCHEMATIC & ASSEMBLY RTL MPY/DIV CONTROL B
CHK RKM	6-9-67	
ENGR <i>E. Villanti</i>	6-15-67	
PROJ <i>E. Diana</i>	6-15-67	
APPD <i>E. Diana</i>	6-15-67	CODE IDENT NO. SIZE
NEXT ASSY		20886 D 8292

REV. C



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING & DIMENSIONAL DWG. SEE DB600-32G

SIZE	D	8293	REV.
REV.	DESCRIPTION	DATE	APPD



1	1	R4	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
1	1	R3	RC07GF101J	RESISTOR-100Ω, ALLEN BRADLEY
1	1	R2	RC07GF331J	RESISTOR-330Ω, ALLEN BRADLEY
1	1	R1	RC07GF202J	RESISTOR-2K, ALLEN BRADLEY
1	1	Q1	2N2369A	TRANSISTOR-FAIRCHILD
1	1	IC8	MC792P	INTEGRATED CIRCUIT-MOTOROLA
1	1	IC6	MC725P	
1	1	IC5	MC726P	
5	5	IC7 IC34 IC12	MC724P	
2	2	C2 C1	UK-10-104	CAPACITOR-.1μF*80-20V, CARL.
1	1	24	U TO W	JUMPER
1	1	23	S TO N	
1	1	22	Q TO W	
1	1	21	Q TO T	
1	1	19	S TO P	
1	1	18	U TO P	
1	1	17	T TO R	
1	1	16	W TO R	
1	1	15	L TO M	
1	1	14	J TO M	
1	1	13	J TO K	
1	1	12	L TO K	
1	1	11	I TO G	
1	1	10	I TO H	
1	1	9	E TO F	
1	1	8	D TO F	
1	1	7	B TO C	
1	1	6	A TO C	
1	1	5	B10369	UNIPAD
AR	AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	1	SEL 326	PRINTED CIRCUIT (FOR REV. A 51140)
-2	-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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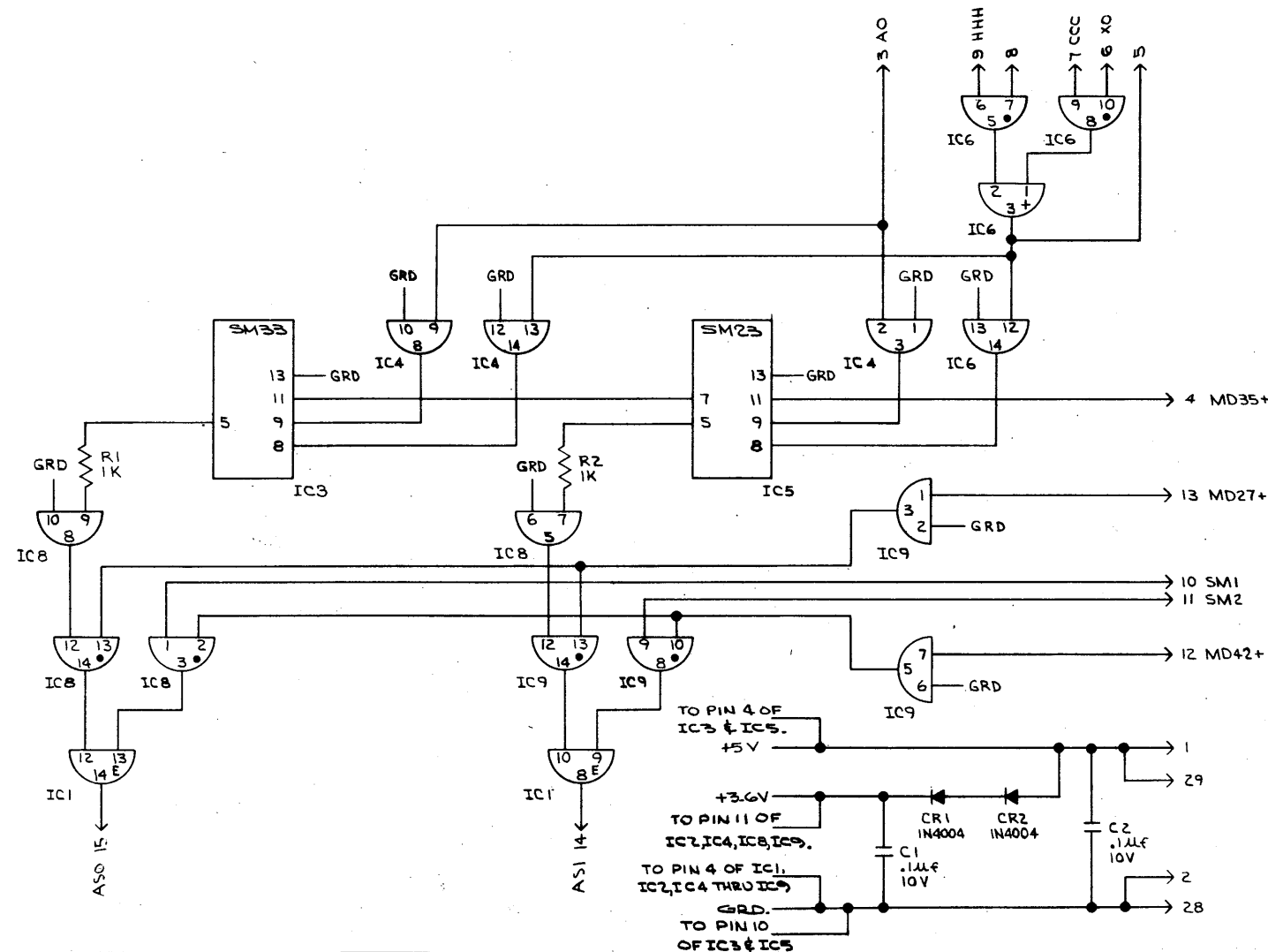
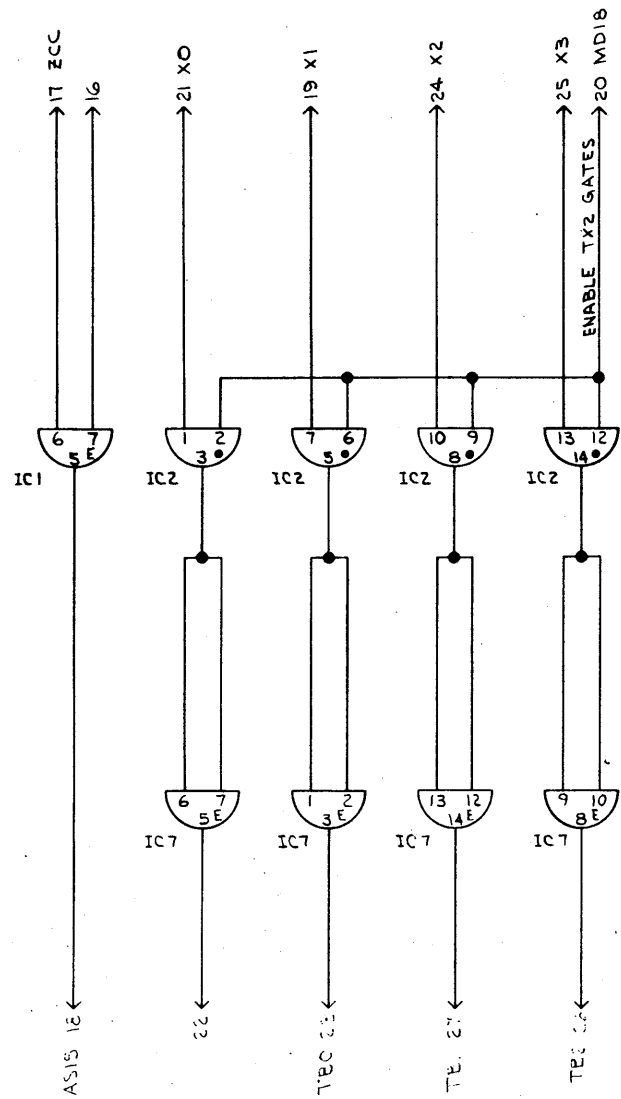
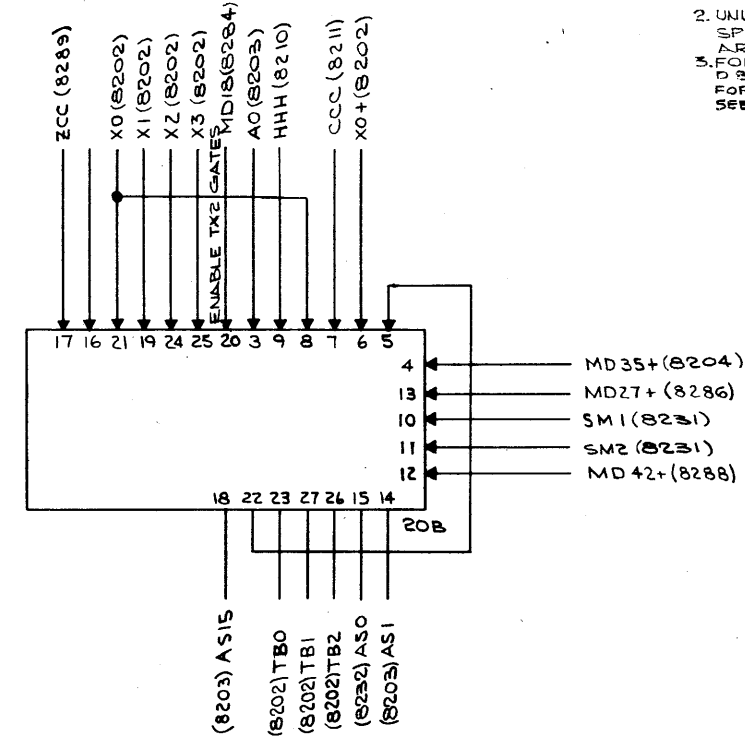
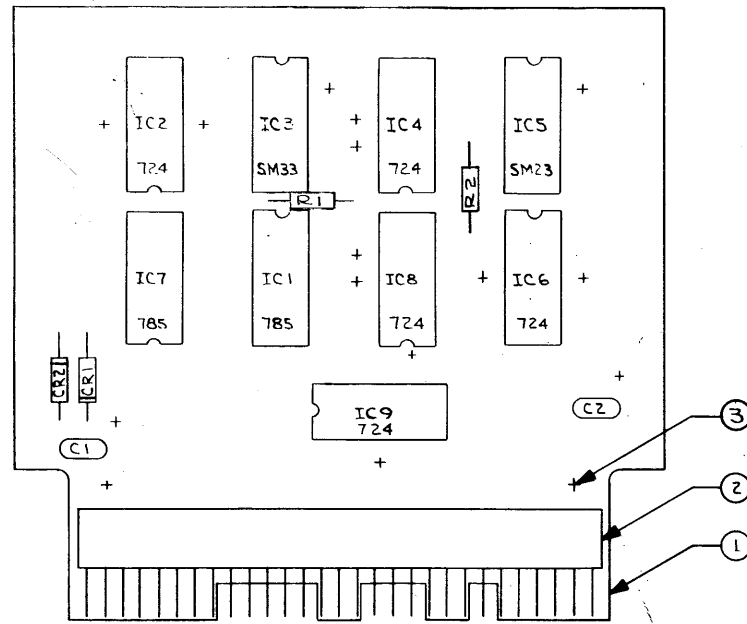
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DRB	BSYD	7-5-67	SCHEMATIC & ASSEMBLY RTL MASK PRIORITY INTERRUPT
CHK	RKM	7-18-67	
ENGR	<i>[Signature]</i>	9-27	
PROJ	<i>[Signature]</i>	9-27	
APPD	<i>[Signature]</i>	9-27	

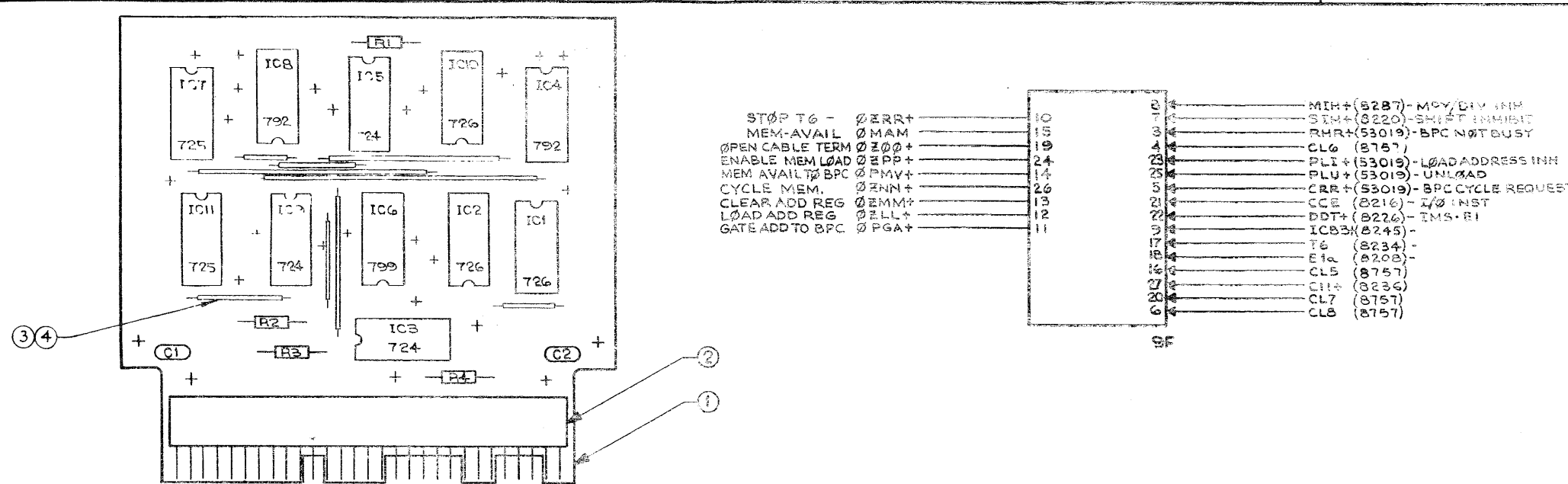
CODE IDENT NO. SIZE  
 20886 D 8293

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 1/4W, 1%.  
 3. FOR DRILLING DWG SEE D 8400-293.  
 FOR DIMENSIONAL DWG SEE C 8600.

REV	DESCRIPTION	DATE	APPD
D	8294		A
A	6T-445; ADDRESSES REVISED AND LINE TITLES ADDED.	10/27/67	(initials)

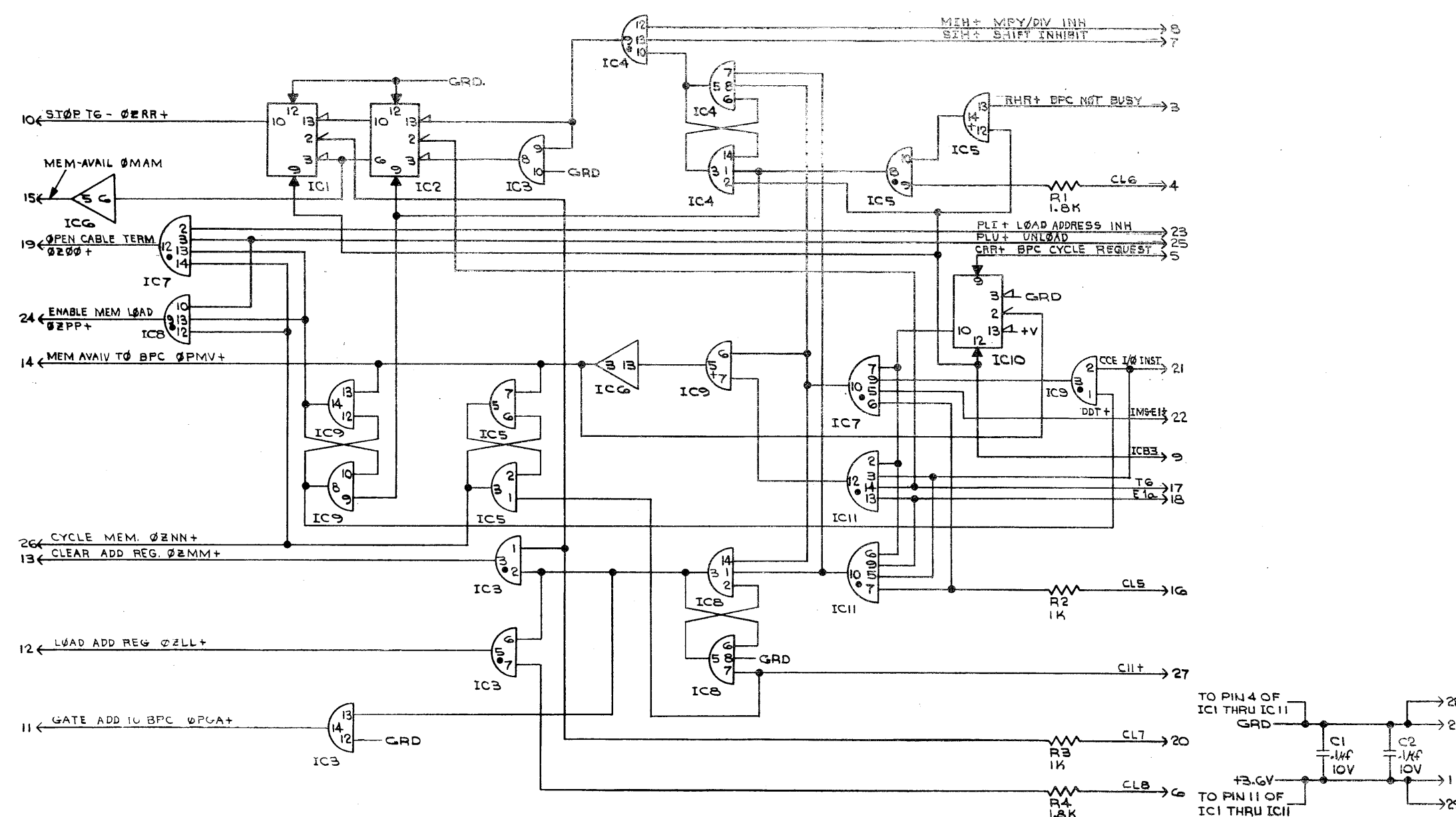
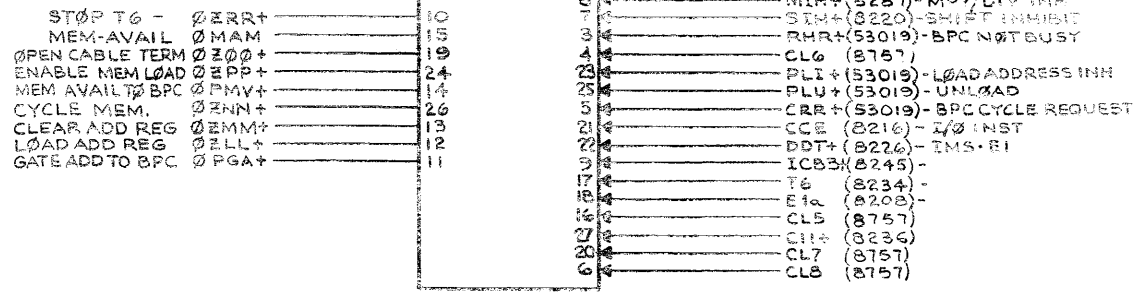


2	R2 R1	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY	
1	IC5	SM23	INTEGRATED CIRCUIT-SYLVANIA	
1	IC3	SM33	INTEGRATED CIRCUIT-SYLVANIA	
5	IC9 IC8 IC6 IC24	MC724P	INTEGRATED CIRCUIT- MOTOROLA	
2	IC7 IC1	MC785P	INTEGRATED CIRCUIT-MOTOROLA	
2	CR2 CRI	1N4004	DIODE - MOTOROLA	
2	C2 C1	UK-10-104	CAPACITOR-.1uF+80-20%,10V,CRL.	
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED	
1	2	00-7022-029-000-001	CONNECTOR-ELCO	
1	1	SEL 993	PRINTED CIRCUIT (FOR REV SEE AS1140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DE	B. HALL	4-20-67	SCHEMATIC & ASSEMBLY RTL EXTENDER ADDER AND TX2 GATES	
CE	RKM	5-3-67		
ENG.	(initials)	6-1-67		
PROJ. APP.	(initials)	6/1/67		
CODE IDENT NO.	20886		SIZE	D
REV	A		8294	A



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING & DIMENSIONAL DWG. SEE D15538.

REV.	DESCRIPTION	DATE	APPD.
D	8295		
A	67-276 - REDRAWN TO AGREE WITH LATEST P.C. CHANGES BY B. B. 2-1-67	8/18/67	RKM
B	67-340; DUPLICATED NOMENCLATURE OF LOGIC TO SCHEMATIC. RMT 9/11/67	9/11/67	RKM
C	67-445 - ADDRESSES REVISED AND LINE TITLES ADDED. E.P.C. 10-27-67.	10/27/67	AL



2	R3	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY	
2	R4	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY	
2	IC11	MC725P	INTEGRATED CIRCUIT-MOTOROLA	
1	IC6	MC799P		
2	IC8	MC792P		
3	IC5	MC724P		
	IC3			
3	IC2	MC726P		
	IC1			
2	C2	UK 10-104		CAPACITOR-.1uF+80-20%, 10V, CARL
	C1			
AR	4	AWG 24		SLEEVING - TEFLON, THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED	
1	2	007022029-000-00	CONNECTOR - ELCO	
1	1	SEL 970	PRINTED CIRCUIT (REV. SEE A5140)	
-1	ITEM	DWG. OR PART NO.	DESCRIPTION	

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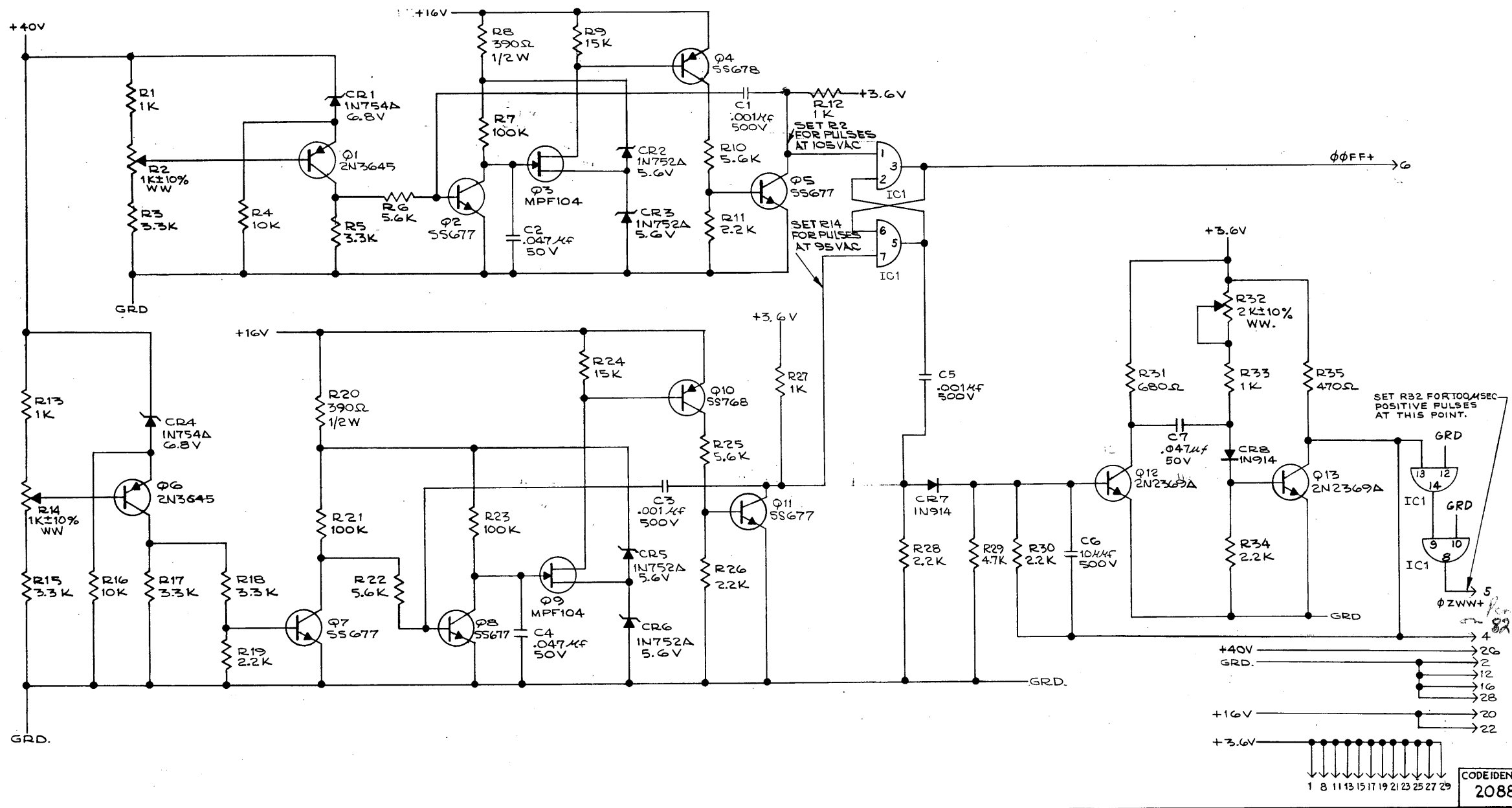
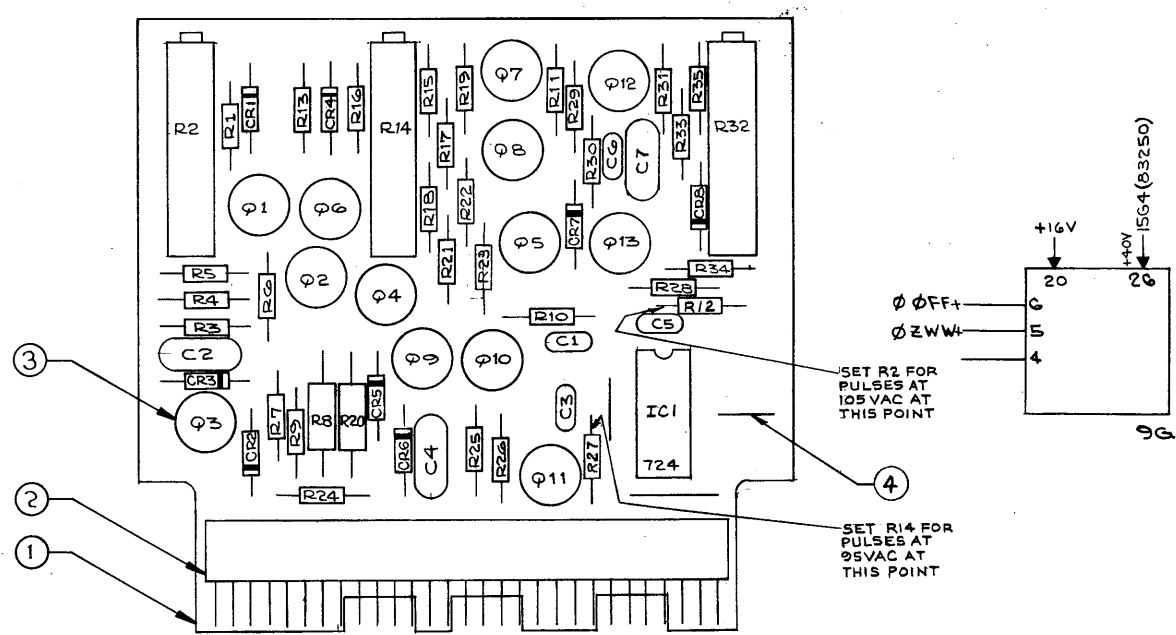
DR. SANBORN	3-8-67	SCHEMATIC & ASSEMBLY RTL MEMORY ACCESS CONTROL
CHKL. GOODREAD	3-9-67	
ENGR. VILLANTI	6-22-67	
PROJ. W. CROWDER	6-22-67	
APPD. L. KLINGLER	6-22-67	

CODE IDENT NO. **20886** SIZE **D** **8295** REV. **C**



- NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $1/4$ W.  
 2. FOR DRILLING AND DIMENSIONAL DWG. SEE C 8600-974

REV	DESCRIPTION	DATE	APP'D
D	8296		B
A	67-445; C7 WAS 1.47, 25V. ADDED LINE DESIGNATIONS & POTENTIOMETER NOTES. RKM 10-25-67	10/25/67	
B	68-193; DESTINATION OF PIN 26 WAS +40V. RKM 4-19-68	4/19/68	



2	Q12,13	2N2369A	TRANSISTOR - FAIRCHILD
2	Q4,10	SS67B	- MOTOROLA
2	Q3,9	MPF104	- MOTOROLA
5	Q5,7	SS677	- MOTOROLA
2	Q1,6	2N3645	TRANSISTOR - FAIRCHILD
1	R35	RC07GF471J	RESISTOR-470Ω, ALLEN BRADLEY
1	R32	200P-1-202	POTENTIOMETER-2K $\pm$ 10%, 1/4W, BOURNS
1	R31	RC07GF681J	RESISTOR-680Ω, ALLEN BRADLEY
1	R29	RC07GF472J	4.7 K $\pm$
6	R30,24	RC07GF222J	-2.2 K $\pm$
2	R24	RC07GF153J	-15 K $\pm$
2	R8,20	RC20GF391J	-390Ω, 1/2W
3	R23	RC07GF104J	-100 K $\pm$
4	R22,5	RC07GF562J	-5.6 K $\pm$
2	R4,16	RC07GF103J	-10 K $\pm$
5	R15,17	RC07GF332J	RESISTOR-33K, ALLEN BRADLEY
2	R24	200P-1-102	POTENTIOMETER-1K, $\pm 10\%$ , 1/4W, BOURNS
5	R33	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
1	IC1	MC724P	INTEGRATED CIRCUIT-MOTOROLA
2	CR8	IN914	DIODE - CLEVITE
4	CR5	IN752A	- 5.6V, ZENER, MOTOROLA
2	CR4	IN754A	DIODE - 6.8V, ZENER, MOTOROLA
1	C6	1D100	CAPACITOR-100μF $\pm 10\%$ , 500V, CRL
3	C4	601PE	-0.047μF $\pm 20\%$ , 50V, MYLAR, GOODALL
3	C5	1D102	CAPACITOR-.001μF $\pm 10\%$ , 500V, CRL
AR	4	AWG 24	WIRE-SOLID COPPER, TINNED
13	3	BIO369	UNIPAD
1	2	00-7022-029-000-001	CONNECTOR - ELCO
1	1	SEL 974	PRINTED CIRCUIT (FOR REV. 51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. B. BOYD 3-7-67  
 CL. RKM 3-22-67  
 ENG. E. V. MONT 6-8-67  
 PROJ. M. J. L. 6/8/67  
 APP. S. C. 6/8/67

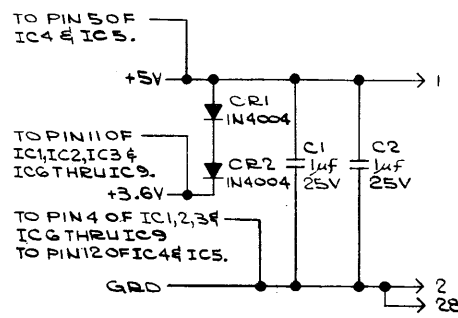
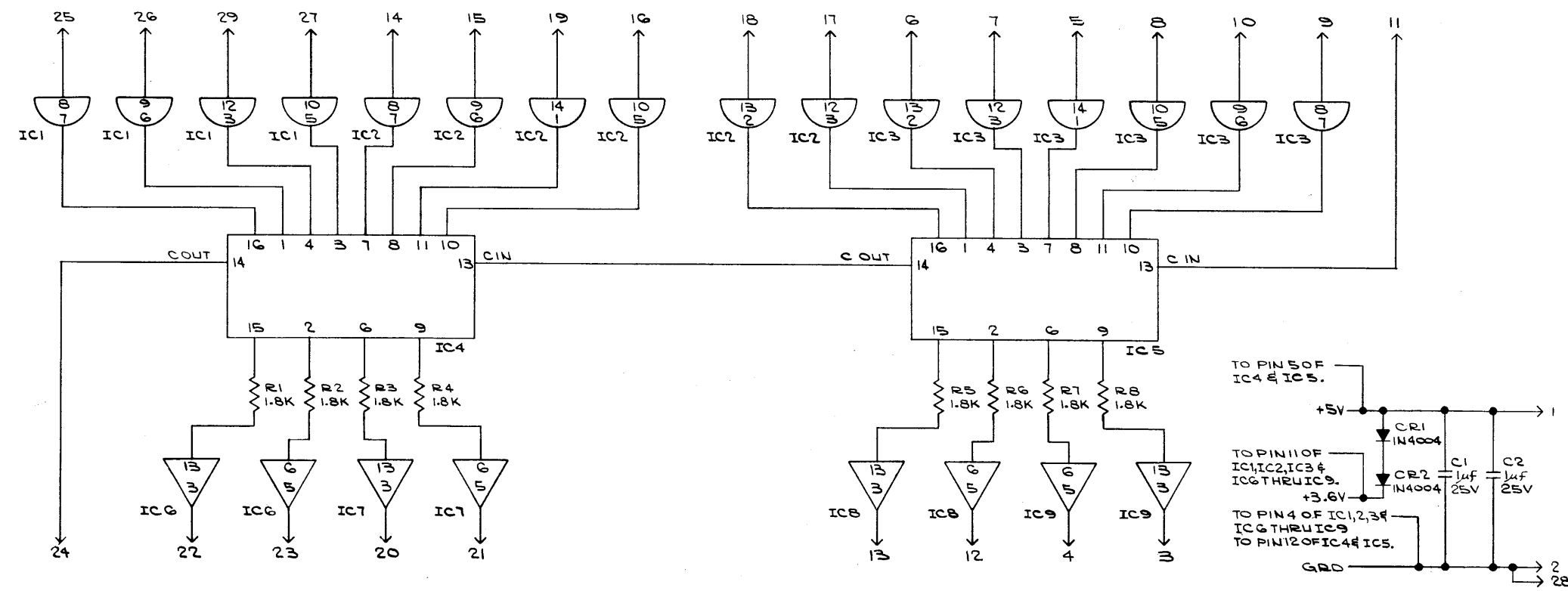
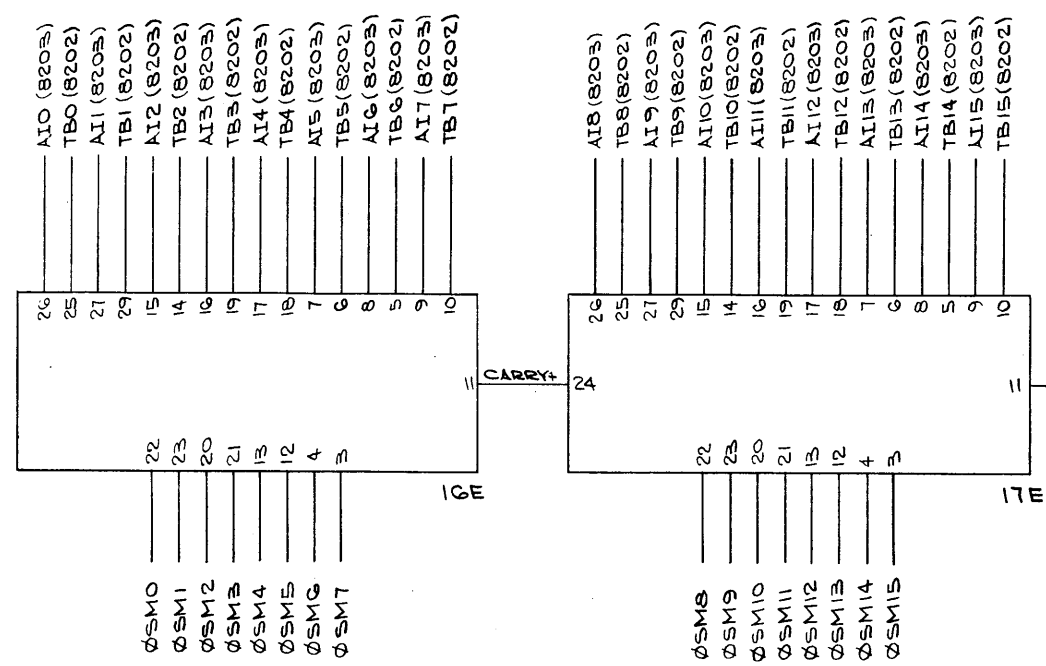
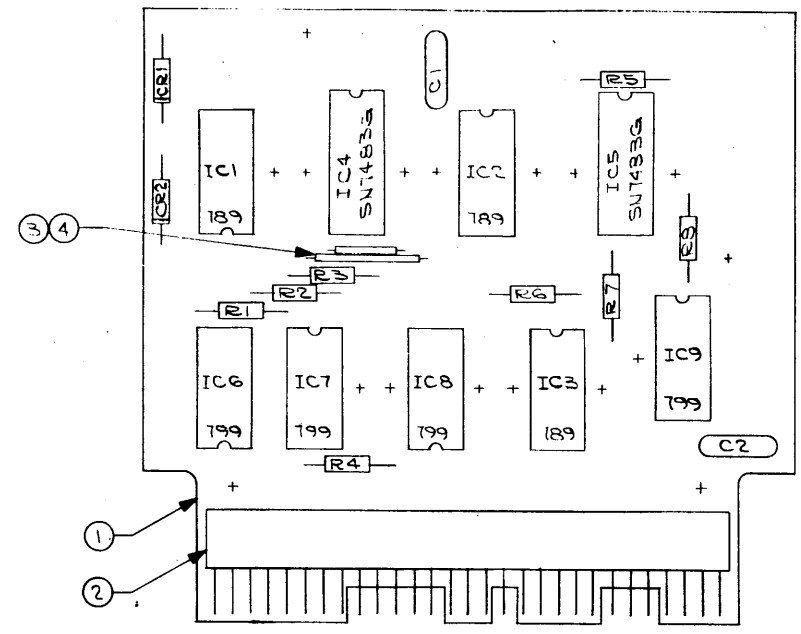
CODE IDENT NO. 20886

SIZE D 8296 REV B

SHEET 1 OF 1

SIZE	D	8297	REV.
REV.		DESCRIPTION	DATE APPD

- NOTES
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
  2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $\frac{1}{4}W$ .
  3. FOR DRILLING DWG. SEE DB800-971. FOR DIMENSIONAL DWG. SEE CB800.
  4. THIS CARD USED IN PLACE OF DB204 WHEN NO MPY/DIV USED.



8	R8 R1 R6 R5 R4 R3 R2 R1	RCOTGF182J	RESISTOR-1.8K, ALLEN BRADLEY
4	IC9 IC8 IC7 IC6	MC799P	INTEGRATED CIRCUIT-MOTOROLA
2	IC5 IC4	SN7483G	INTEGRATED CIRCUIT-TI
3	IC3 IC2 IC1	MC789P	INTEGRATED CIRCUIT-MOTOROLA
2	CR2 CR1	1N4004	DIODE - MOTOROLA
2	C2 C1	5C13	CAPACITOR- $\frac{1}{2}\mu f \pm 20\%$ , 25V, SPRAGUE
AR 4	AWG 24		SLEEVING-TEFLON, THIN WALL
AR 3	AWG 24		WIRE-SOLID COPPER, TINNED
1 2	00-7022-029-000-001		CONNECTOR-ELCO
1 1	SEL 971		PRINTED CIRCUIT (REV. SEE AS1140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

**Systems Engineering Laboratories**  
6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

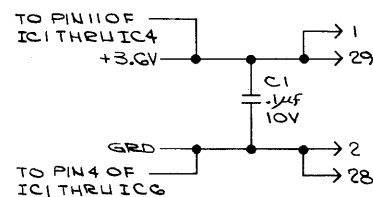
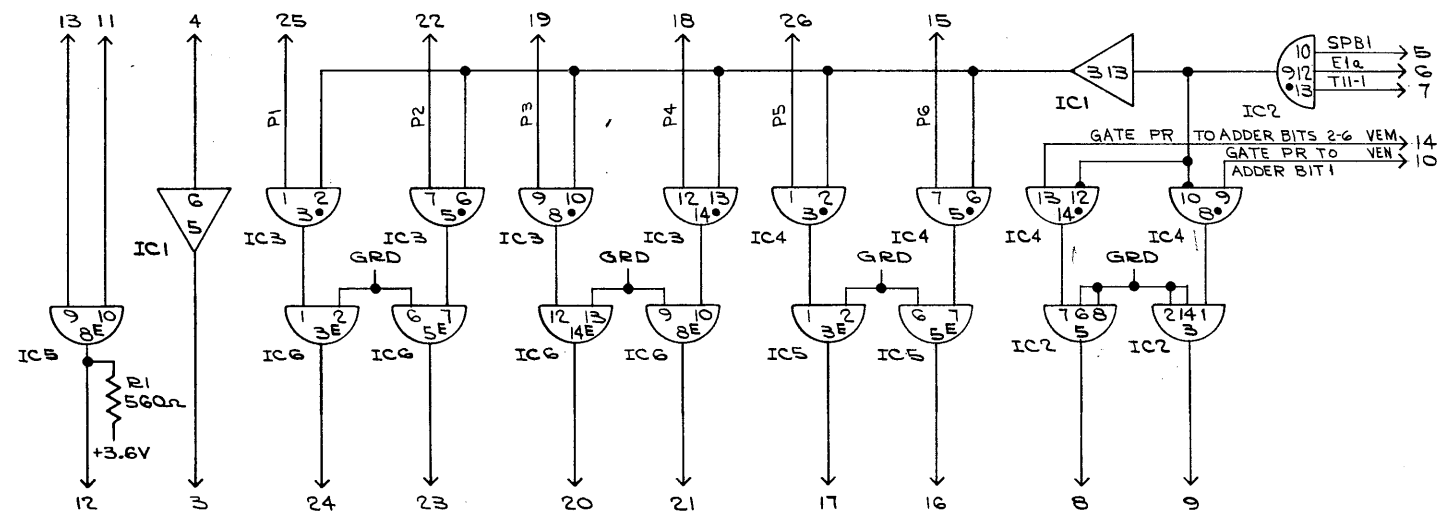
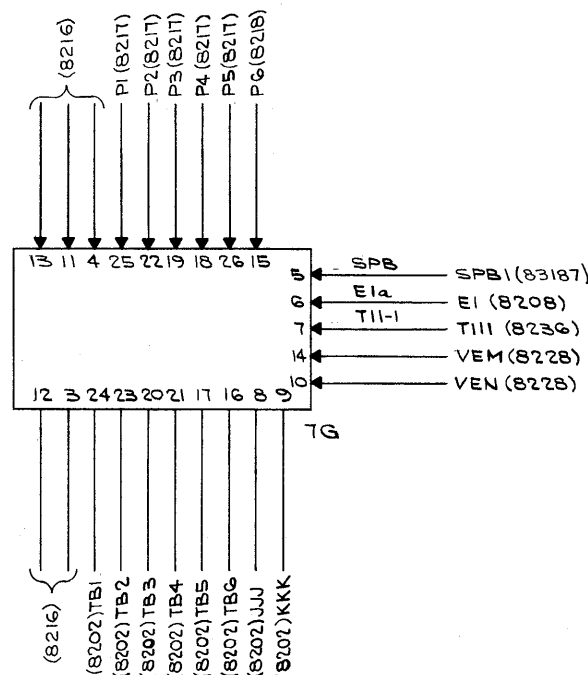
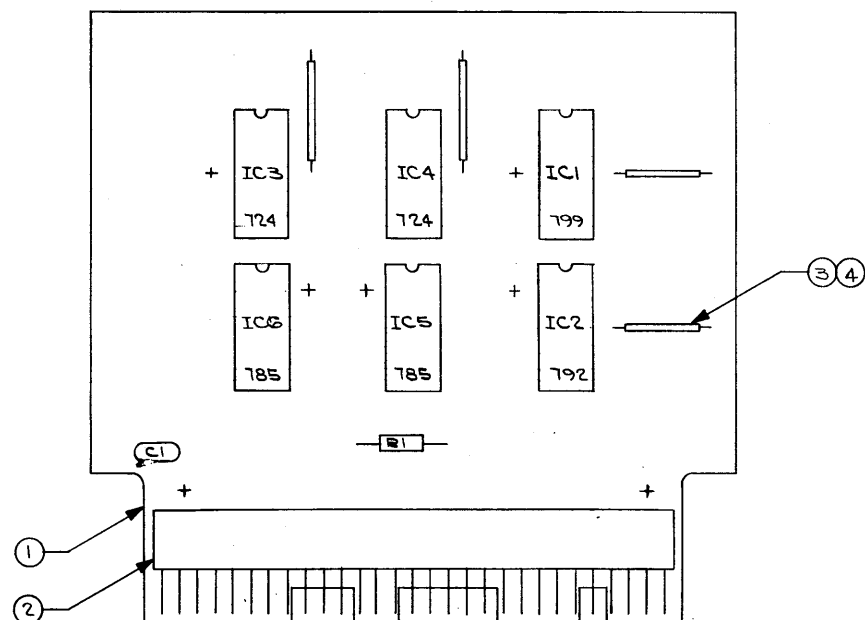
DR	5-25-67
CHK RKM	6-1-67
ENGR E. Vellanti	6/3/67
PROJ J. K. ...	6/1/67
APPD J. K. ...	6/8/67
NEXT ASSY	

SCHEMATIC & ASSEMBLY  
TI 8BIT RIPPLE ADDER

CODE IDENT NO.	SIZE	REV.
20886	D	8297

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPEC'D, RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING DWG. SEE D 8600-981.  
 FOR DIMENSIONAL DWG. SEE C 8600.

REV.	DESCRIPTION	DATE	APPD	REV.
D	8298			B
A	67-445; ADDRESSES REVISED AND LINE TITLES ADDED. AS 10-27-67	10/27/67		
B	68-199; PINS 3, 11, 12, & 13 WERE SPARES. JWM 4-18-68 RKM	4/18/68		

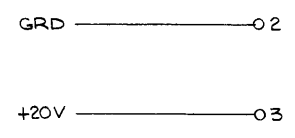
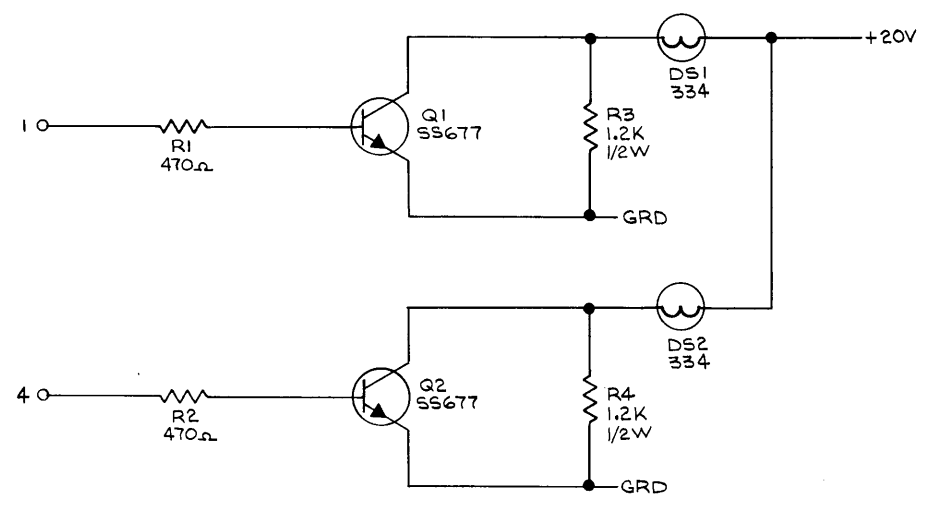
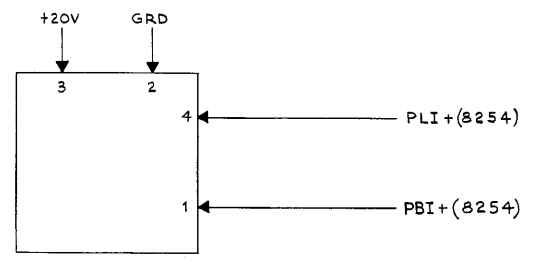
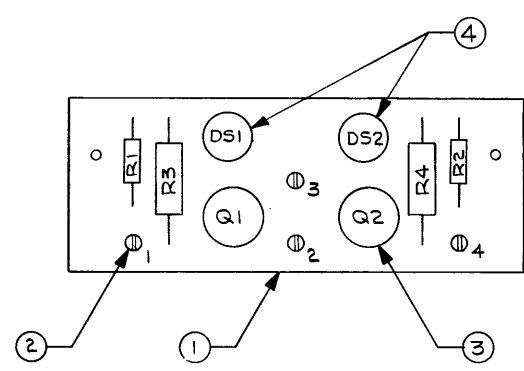


QTY	REF	DESCRIPTION	MANUFACTURER
1	R1	RC07GF561J	RESISTOR-560 $\Omega$ , ALLEN BRADLEY
2	IC6 IC5	MCT85P	INTEGRATED CIRCUIT-MOTOROLA
2	IC4 IC3	MC724P	
1	IC2	MCT92P	
1	IC1	MCT99P	
1	C1	UK-10-104	CAPACITOR-.1uF+80-20%, 10V, CBL
AR 4		AWG. 24	SLEEVING-TEFLON, THIN WALL
AR 3		AWG. 24	WIRE-SOLID COPPER, TINNED
1	2	00-1022-079-000-001	CONNECTOR-ELCO
1	1	SEL 981	PRINTED CIRCUIT (REV. SEE A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>Systems Engineering Laboratories</b>			
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DR	<i>R. L. RKM</i>	5-25-67	
CHK	RKM	6-1-67	SCHMATIC & ASSEMBLY
ENGR	<i>E. Villant</i>	6-8-67	RTL-SPB MAP STORE GATES
PROJ	<i>W. J. Villant</i>	6/8/67	
APPD	<i>R. L. RKM</i>	6/2/67	
NEXT ASSY			
CODE IDENT NO.	20886	SIZE	D
		8298	REV. B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE B16103

SIZE	REV.	DESCRIPTION	DATE	APPD	REV.
D		8299			C
A		67-391; D & D DWG NO. IN NOTE 3 WAS B15874-RKM 10-18-67 UC	10/20/67	[Signature]	
B		67-445; ADDED LOGIC. RKM 10-25-67 UC	10/25/67	[Signature]	
C		68-83; DELETED PI FROM LOGIC. H.A.B. 2-14-68 RKM	2/14/68	[Signature]	



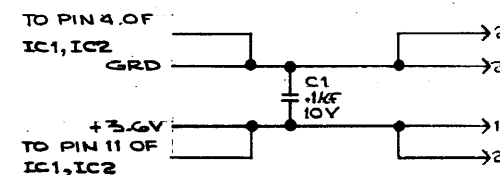
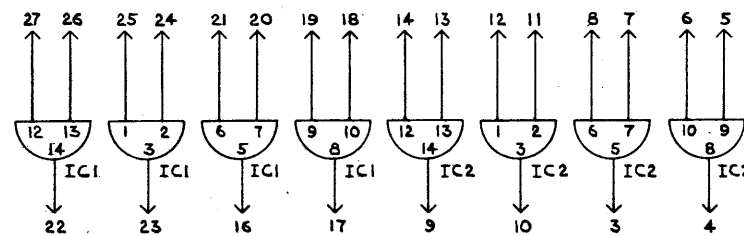
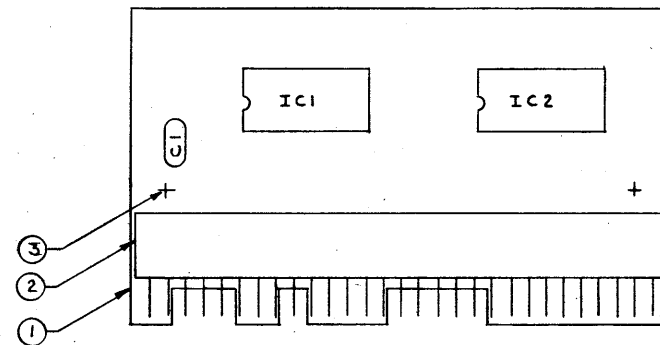
2	R4 R3	RC20GF122J	RESISTOR-1.2K, 1/2W, ALLEN BRADLEY
2	R2 R1	RC07GF471J	RESISTOR-470Ω, ALLEN BRADLEY
2	Q2 Q1	55677	TRANSISTOR-MOTOROLA
2	DS2 DS1	334	LAMP-GENERAL ELECTRIC
2	4	25-35-XP11	LAMP SOCKET-LEECRAFT
2	3	B10369	UNIPAD
4	2	1785-2	TERMINAL -CTC
1	1	SEL 329	PRINTED CIRCUIT (SEE REV. A5114-O)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

**Systems Engineering Laboratories**  
 6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR	C.E.M.	8/3/67	SCHEMATIC & ASSEMBLY PROGRAM PROTECT LAMP DRIVERS	REV. C
CHK	RKM	8-4-67		
ENGR	[Signature]	8-15-67		
PROJ	[Signature]	8/15/67		
APPD	[Signature]	8/15/67		
NEXT ASSY			CODE IDENT NO. SIZE	REV.
			20886 D 8299	C

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG SEE C8500-743.  
 FOR DIMENSIONAL DWG SEE C8500.

REV	D	8543	DATE	APP'D
REV		DESCRIPTION		



2	IC2	MC724P	INTEGRATED CIRCUIT-MOTOROLA
	IC1		
1	C1	UK10-104	CAPACITOR-.1uF+80-20%, 10V, CRL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
	2	00-7C22-029-000 001	CONNECTOR-ELCO
	1	SEL 743	PRINTED CIRCUIT(REV. SEE A51840)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

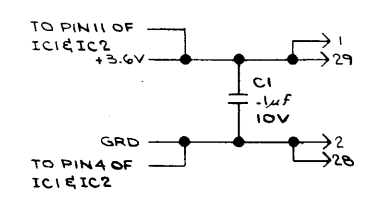
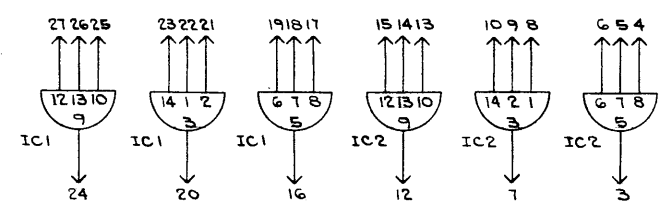
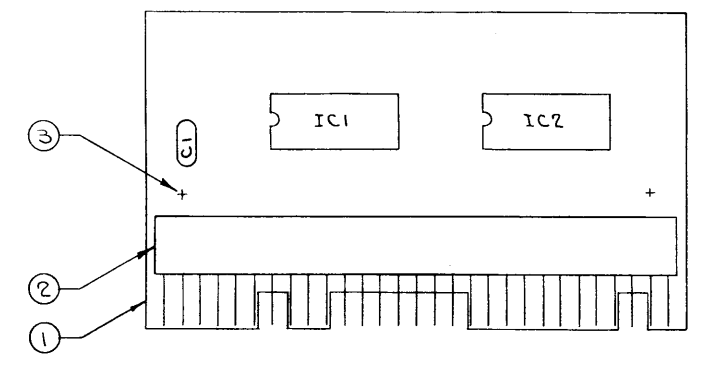
**SEL** SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. R. GANBORNE 3-13-67  
 CL. L. GOODBREAD 3/14/67  
 DWO. *W. C. ...* 4/20/67  
 APP. *W. C. ...* 4/20/67  
 SCHEMATIC ASSEMBLY  
 2 NOR(M)

CODE IDENT NO.	20886	REV	D	8543
DATE	4/24/67	SIZE		

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE C8500-744.  
 FOR DIMENSIONAL DWG. SEE C8500.

SIZE	D	8544	REV
REV		DESCRIPTION	DATE APPD



2	IC2 IC1	MC 792P	INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK-10-104	CAPACITOR-.1µf±80-20%, 10V, CRL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	SEL 744	PRINTED CIRCUIT (REV. SEE A51860)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

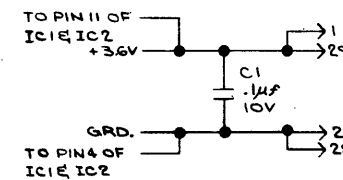
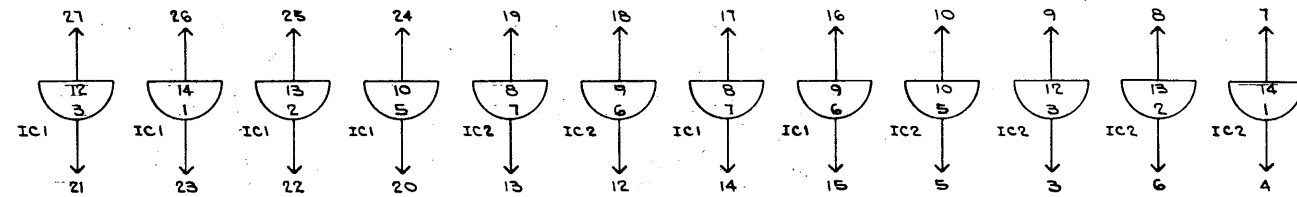
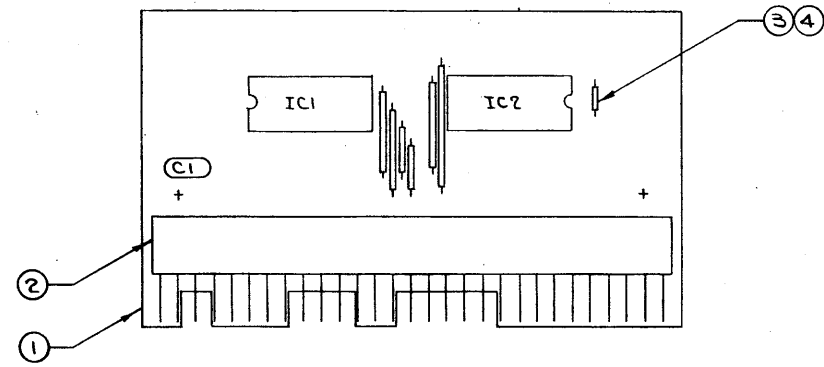
		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR.	F.L. SIENK	3-1-67	SCHEMATIC & ASSEMBLY 3 NOR (M)
ENGR.	L. GOODBREAD	3/20/67	
APP.	<i>[Signature]</i>	4/20/67	
USEF ON	<i>[Signature]</i>	4/20/67	

CODE IDENT NO.  
20886

SIZE	D	8544	REV
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NOTES:  
 1. ALL ITEMS AS SPECIFIED  
 IN LIST OF MATERIAL OR  
 APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE  
 C8500-745.  
 FOR DIMENSIONAL DWG. SEE  
 C8500.

REV	DESCRIPTION	DATE	APPD
D	8545		



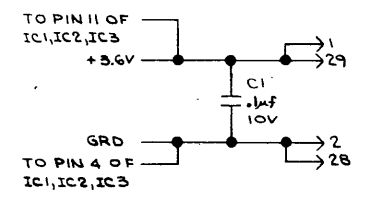
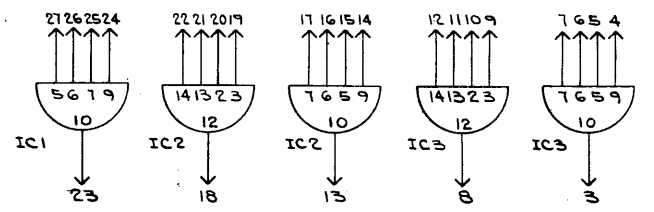
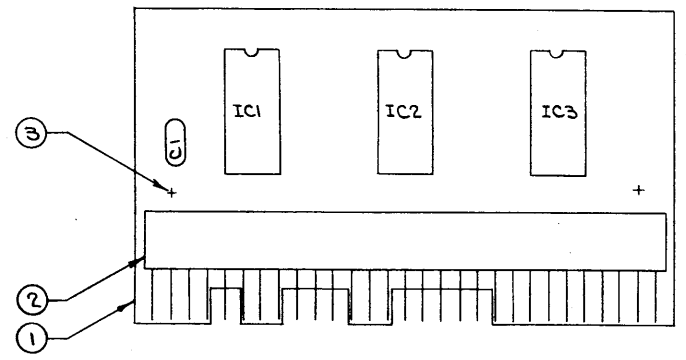
2	IC2 IC1	MC 789P	INTEGRATED CIRCUIT - MOTOROLA
1	C1	LIK 10-104	CAPACITOR - .1µF 80-20% 10V, CRL
AR	4	AWG. 24	SLEEVING - TEFLON, THINWALL
AR	3	AWG. 24	WIRE - SOLID COPPER, TINNED
1	2	60-1027-029-000-001	CONNECTOR - ELCO
1	1	SEL 745	PRINTED CIRCUIT (REV. SEE A51860)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	F.L. SIENA	3-1-67	SCHEMATIC & ASSEMBLY INVERTER (M)
DC.	G.F. Wolfe	3-6-67	
ENG.	W.C. Wolfe	4/20/67	
PROJ.	W.C. Wolfe	4/20/67	REV
APP.	W.C. Wolfe	4/20/67	
USED ON			D

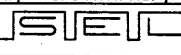
CODE IDENT NO  
20886

8545

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING DWG. SEE C 8500-747.  
 FOR DIMENSIONAL DWG. SEE C 8500.

REV	DESCRIPTION	DATE	APP'D
D	8547		

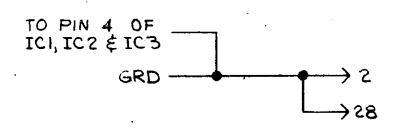
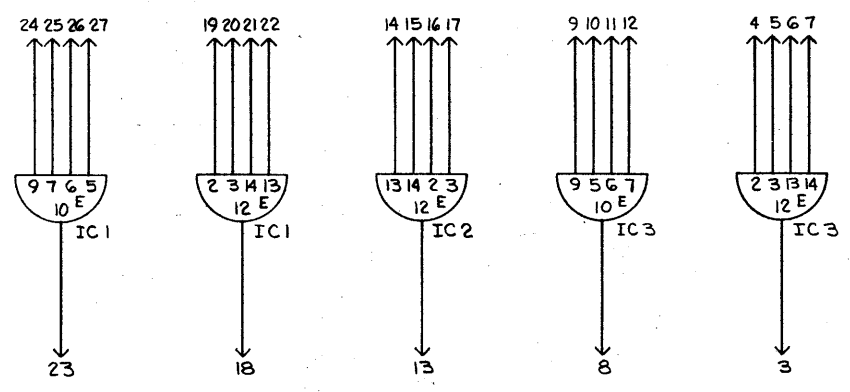
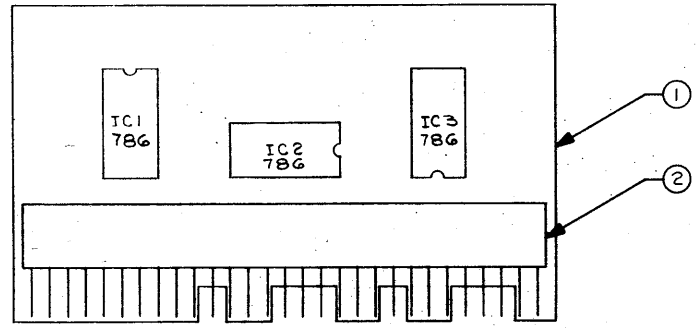


3	IC3		
	IC2	MCT25P	INTEGRATED CIRCUIT - MOTOROLA
	IC1		
1	C1	UK10-104	CAPACITOR - .1µF +80-20%, 10V, CRL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED
1	2	00-1022-029-000-001	CONNECTOR - ELCO
1	1	SEL 747	PRINTED CIRCUIT - (REV. SEE A51860)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR	F.L. SIENA	3-1-67	
CK	RKM	3-27-67	SCHMATIC & ASSEMBLY
ENG.	<i>W. S. ...</i>	4/20/67	4 NOR (M)
PROJ. MGR.	<i>W. S. ...</i>	4/20/67	
CODE IDENT NO	20886	SIZE	D
			8547



NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING & DIMENSIONAL DWG. SEE 20800.

REV	D	8557	DATE	APP'D
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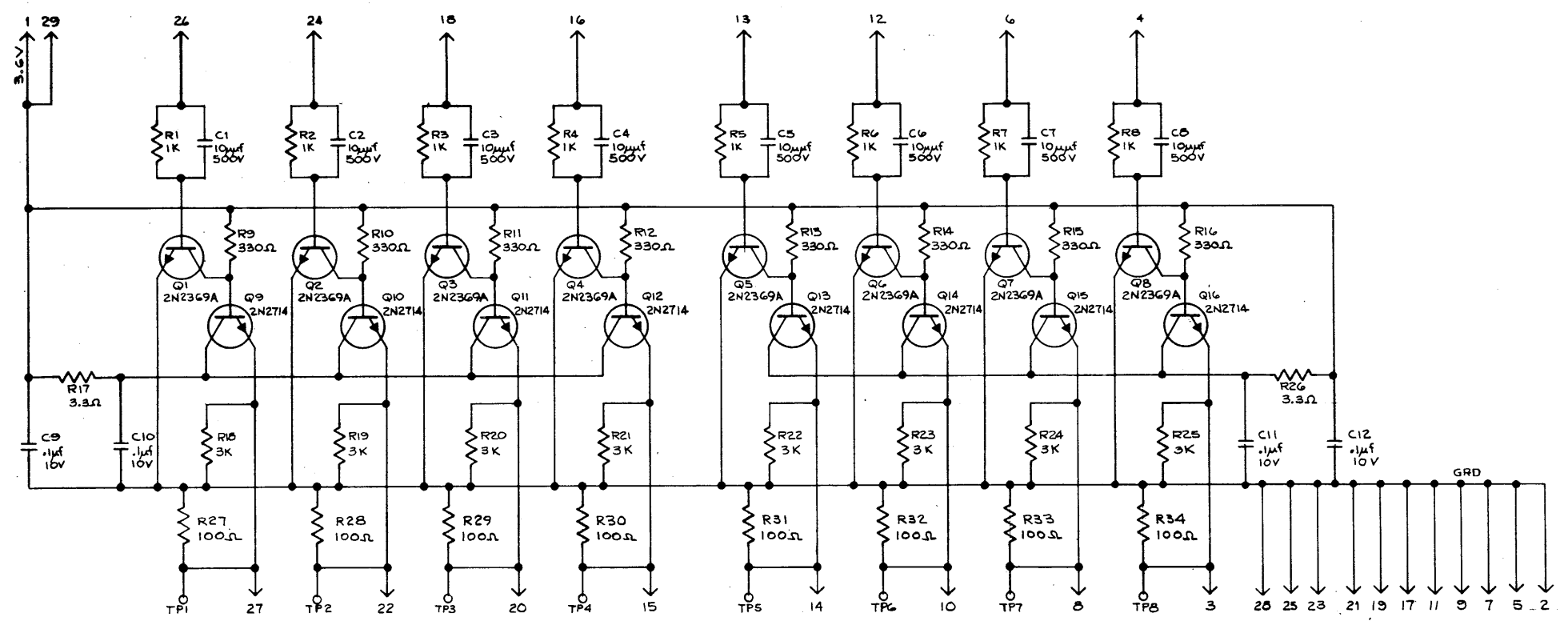
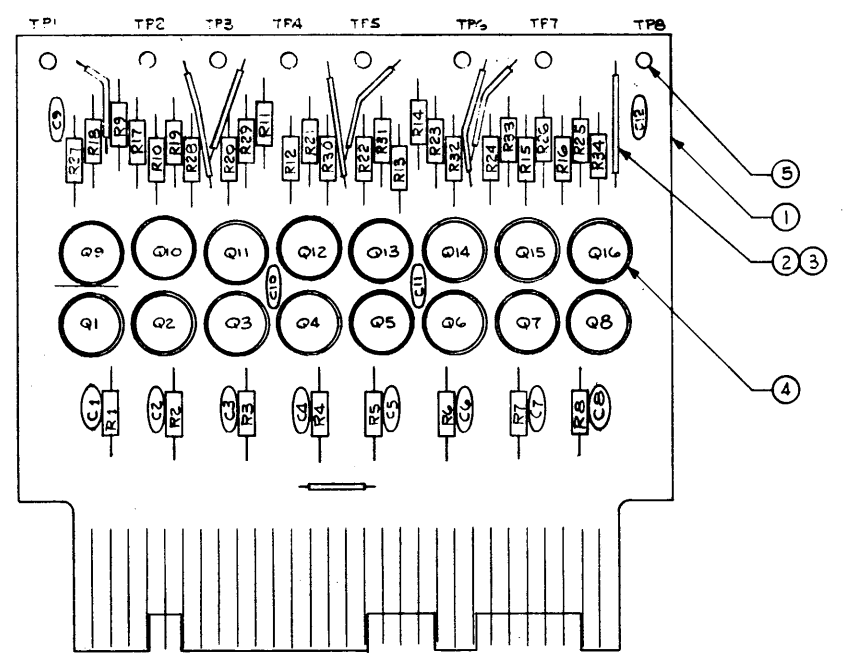
3	IC3		
	IC2	MC 786P	INTEGRATED CIRCUIT - MOTOROLA
	IC1		
1	2	00-7022-029-000-000	CONNECTOR - ELCO
1	1	SEL 757	PRINTED CIRCUIT (FOR REV. SEE AS1860)
1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	L. GOODBREAD	5/11/67	
CC	RKM	5-12-67	SCHEMATIC & ASSEMBLY 4 NOR EXPANDER (M)
ENGR.			
PROJ. APP.		5/11/67	
AV.			
USED ON			

CODE IDENT NO.	20886	SIZE	D	REV	8557
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIALS OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE  $\pm 5\%$ ,  $\frac{1}{4}W$ .  
 3. FOR DRILLING DIMENSIONS C.A. DWG SEE CBSKC-575

REV	DESCRIPTION	DATE	APPD
D	8614		E
A	65-183; REVISED TO LATEST PC SEL 575B. AXTEL NOTE B 67W046 7/23/65	7/27/65	RKM
B	66-57 REVISED TO LATEST PC SEL 575C. KJ 7/2/66	7/4/66	RKM
C	66-755, ADDED DASH 2 C.W. DATE 7/15/66	7/19/66	RKM
D	66-276; R27 THRU R34, 100 $\Omega$ WAS R26 THRU R33, 100 $\Omega$ . L.G. 8/2/66	8/2/66	RKM
E	67-106; Q1 THRU Q8 WERE 2N709. LG 3/28/67	3/31/67	RKM



8	R34 THRU R27	RC07GF101J	RESISTOR-100 $\Omega$ , ALLEN BRADLEY
8	R25 THRU R18	RC07GF302J	RESISTOR - 3K - ALLEN BRADLEY
2	R26	RC07GF3R3J	RESISTOR - 3.3 $\Omega$ - ALLEN BRADLEY
8	R16 THRU R9	RC07GF331J	RESISTOR - 330 $\Omega$ - ALLEN BRADLEY
8	R8 THRU R1	RC07GF102J	RESISTOR - 1K - ALLEN BRADLEY
8	Q16 THRU Q9	2N2714	TRANSISTOR - G.E.
8	Q8 THRU Q1	2N2369A	TRANSISTOR - FAIRCHILD
4	C12 C11 C10 C9	UK-10-104	CAPACITOR - .1 $\mu$ f, $\pm 10\%$ , 10V - CRL
8	C8 THRU C1	ID-100	CAPACITOR - 10 $\mu$ f, $\pm 10\%$ , 500V - CRL
8	5	2043B	TERMINAL - CTC
16	4	B10369	UNIPAD
AR	AR	3	AWG 24 SLEEVING - TEFLON, THINWALL
AR	AR	2	AWG 24 WIRE - SOLID COPPER, TINNED
1	1	1	SEL-575 PRINTED CIRCUIT (FOR REV. SEE AS1140)
-2	-1	ITEM	DWG. OR PART NO. DESCRIPTION

SEI SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA

DR. E.J. SCHEICK 5-11-65  
 CK. W.R. FREY 5-13-65  
 ENG. J. L. ... 7/12/65

SCHEMATIC & ASSEMBLY CABLE DRIVER

CODE IDENT NO. 20886  
 USED ON

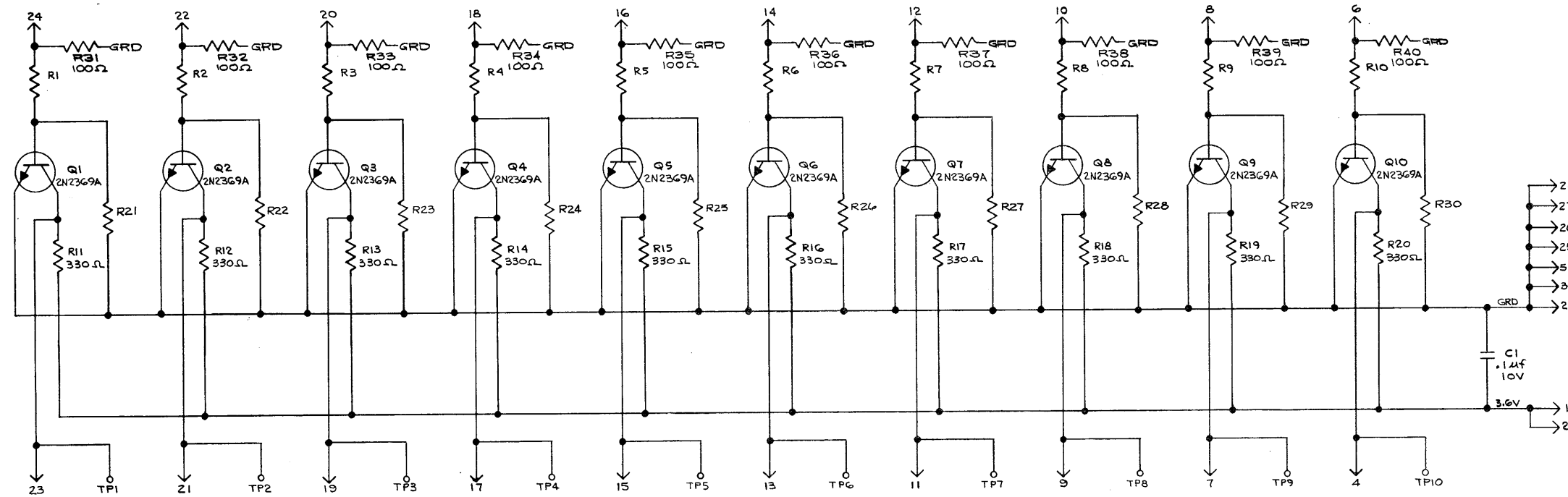
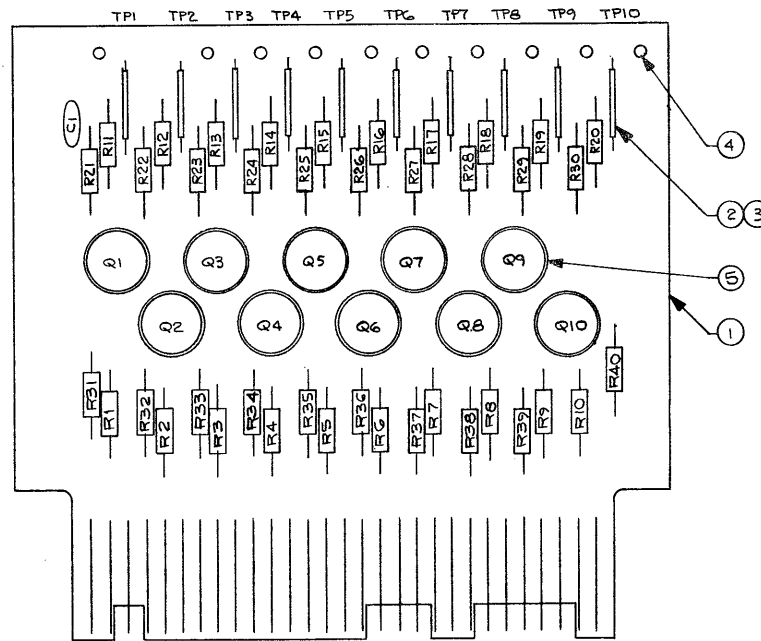
DATE 7/12/65

SIZE D 8614

REV E

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 15%, 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG SEE C8600-576.

REV	DESCRIPTION	DATE	APPD
D	8615		
A	65-162; ADDED NOTE 3 M.D.WOLSKI 7-6-65	7/1/65	
B	66-133; ADDED DASH 2 R.C. COME 3-28-66 R.K.M.	4/1/66	
C	67-106; Q1 THRU Q10 WERE 2N709. LG 3/28/67 R.K.M.	3/5/67	
D	68-73; ADDED DASH 3 W.A. FINE 2-9-68 R.K.M.	2/2/68	
E	68-121; ADDED DASH 4 W.A. F. 3-5-68 R.K.M.	3/7/68	



10				R30	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
10				R10	RC07GF472J	RESISTOR-4.7K, ALLEN BRADLEY
10		10		R40	RC07GF101J	RESISTOR-100Ω, ALLEN BRADLEY
10		10	10	R30	RC07GF202J	RESISTOR-2K, ALLEN BRADLEY
10		10	10	R20	RC07GF331J	RESISTOR-330Ω, ALLEN BRADLEY
10		10	10	R10	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
10	10	10	10	Q10	2N2369A	TRANSISTOR- FAIRCHILD
1	1	1	1	C1	UK10-104	CAPACITOR--1μf ±50-20%, 10V, CRL
10	10	10	10	5	B10369	UNIPAD-
AR	AR	AR	AR	3	2043B	TERMINAL- CTC
AR	AR	AR	AR	2		SLEEVING- TEFLON , THINWALL
1	1	1	1			WIRE- SOLID COPPER, TINNED
-4	-3	-2	-1	ITEM	SEL 576	PRINTED CIRCUIT (FOR REV. SEE A51140)
						DESCRIPTION

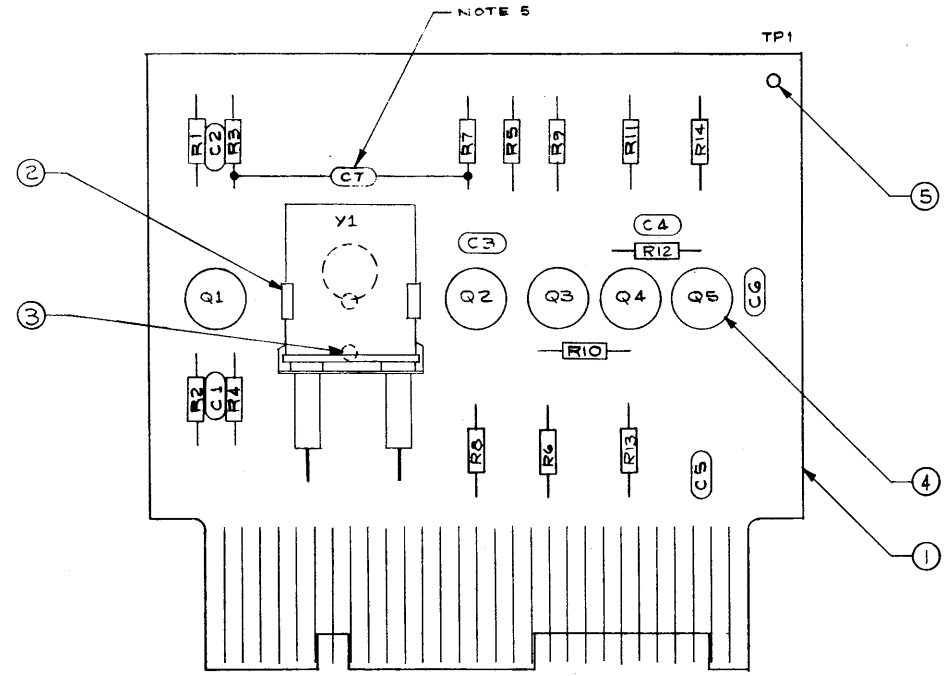
SEI SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA

DR. G. Wolfe 4-30-65  
 CK. R.K.M. 5-10-65  
 ENG. J.D. Stinson 5-14-65  
 PROJ. APP. J.K. 5-11-65

CODE IDENT NO. 20886

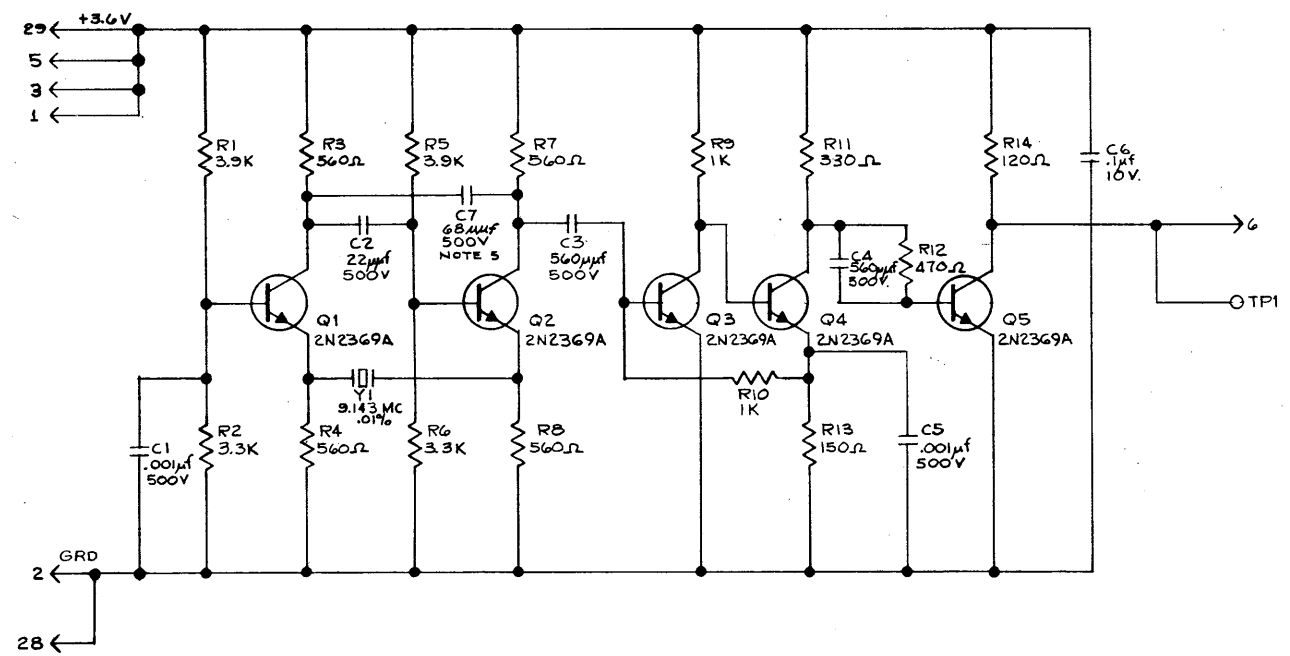
SIZE D 8615

REV E



- NOTES:
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL, OR APPROVED EQUIVALENT.
  2. UNLESS OTHERWISE SPECIFIED, RESISTORS ARE 15%, 1/4W.
  3. FOR DRILLING & DIMENSIONAL DWG. SEE C8600-570.
  4. Y1 MAY BE SUBSTITUTED WITH G4-A1 MONITOR.
  5. DASH 2 FOR 5MHz OPERATION ONLY.

REV	DESCRIPTION	DATE	APPD
D	8620		
A	65-179 ADDED NOTE 3 E.J.SCHEICK 7-22-65	7/22/65	[Signature]
B	66-205; ADDED NOTE 4, & ITEMS 2 AND 3. Y1 WAS #G4-A1, MONITOR, REVISED TO AGREE WITH LATEST P.C. BACKGROUND. RAC 8-3-66 RKM	8/4/66	[Signature]
C	66-406; TITLE WAS "10MC OSCILLATOR" RKM 11-10-66 UC	11/10/66	[Signature]
D	67-1; ADDED DASH 2 & NOTE 5. RKM 1-4-67 UC	1/5/67	[Signature]
E	67-105; TRANSISTORS WERE 2N709; Y1 WAS 9.148 MC. LG 3/28/67 RKM	3/28/67	[Signature]



QTY	REF	DESCRIPTION	VALUE	MANUFACTURER
1	Y1	HC-GAU NOTE 4	CRYSTAL - 9.143 MC, .01%, PIEZO	
4	R8, R7, R4, R3	RC07GFS61J	RESISTOR - 560Ω - ALLEN BRADLEY	
2	R10, R9	RC07GF102J	1K	
2	R6, R2	RC07GF332J	3.3K	
2	R5, R1	RC07GF392J	3.9K	
1	R14	RC07GF121J	120Ω	
1	R13	RC07GF151J	150Ω	
1	R12	RC07GF471J	470Ω	
1	R11	RC07GF331J	REISISTOR - 330Ω - ALLEN BRADLEY	
5	Q5 THRU Q1	2N2369A	TRANSISTOR - FAIRCHILD	
1	C7	1D-680	CAPACITOR - 68μmf ±10%, 500V - CRL	
2	C5, C1	1D-102	CAPACITOR - .001μf ±10%, 500V - CRL	
2	C4, C3	1D-561	CAPACITOR - 560μf ±10%, 500V - CRL	
1	C2	1D-220	CAPACITOR - 22μmf ±10%, 500V - CRL	
1	C6	UK-10-104	CAPACITOR - .1μf ±20%, 10V - CRL	
1	5	2043B	TERMINAL - CTC	
5	4	B10369	UNIPAD	
2	3	A877-1	EYELET - STIMPSON	
1	2	B000-DG2	CLIP - AUGAT	
1	1	SEL-570	PRINTED CIRCUIT (FOR REV SEE AS1140)	

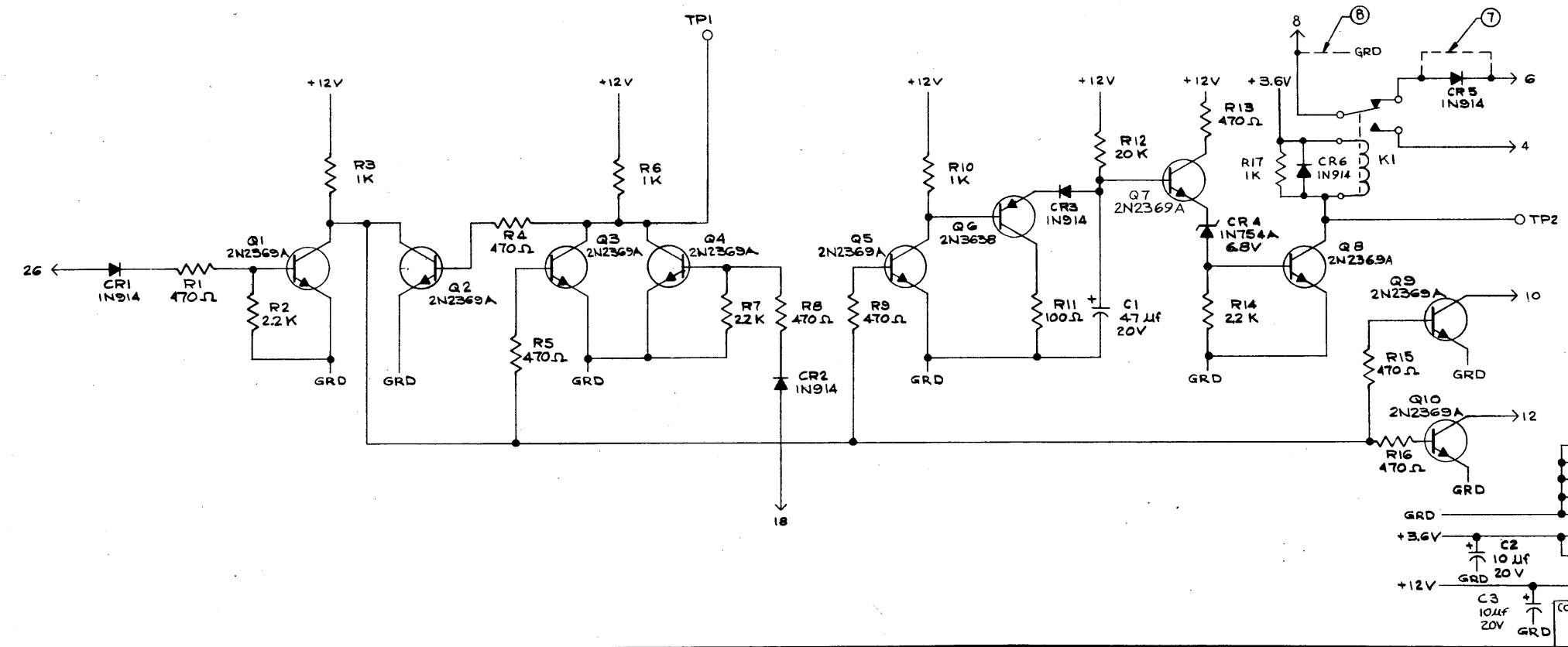
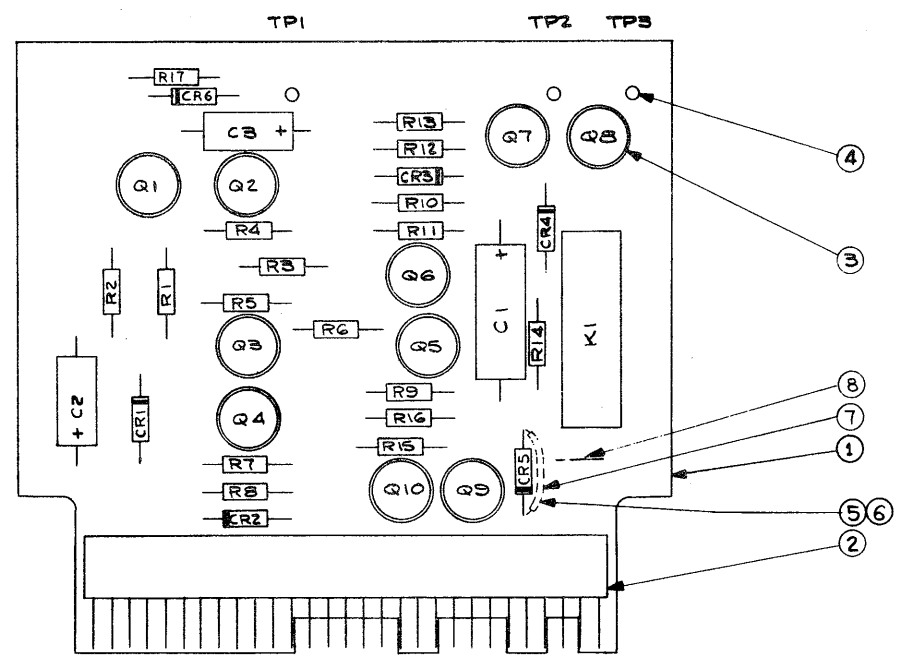
**SEL**  
SYSTEMS ENGINEERING  
LABORATORIES, INCORPORATED  
FORT LAUDERDALE, FLORIDA

DR. E.J. SCHEICK	5-4-65	<b>SCHEMATIC &amp; ASSEMBLY OSCILLATOR</b>
CK. W. R. FREY	5-11-65	
ENG. [Signature]	7-15-65	
PROJ. APP. [Signature]	7-15-65	

CODE IDENT NO. 20886      SIZE D      8620      REV E

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5%, 1/4 W.  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE C 8600-617.

REV	DESCRIPTION	DATE	APPD
D	8639		C
A	65-467, ADDED R17 & CR6, Q8 WAS 2N2102. PMM 12-30-65 RKM	12/30/65	
B	66-347, C1 WAS 120UF. E. MARCUM 10-12-66 RKM	10/13/66	
C	67-111; C1 WAS 10V M.H.R. 3-30-67 RKM	3/31/67	



1	1	R12	RC07GF20BJ	RESISTOR-20K, ALLEN BRADLEY
1	1	R11	RC07GF101J	RESISTOR-100Ω, ALLEN BRADLEY
4	4	R17 R10 R3,6	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
3	3	R14 R7 R2	RC07GF222J	RESISTOR-22K, ALLEN BRADLEY
8	8	R16 R15 R13 R9 R8 R5 R4 R1	RC07GF471J	RESISTOR-470Ω, ALLEN BRADLEY
1	1	Q2 Q10 Q9,10 Q7,8 Q5 Q1,4	2N3638	TRANSISTOR-FAIRCHILD
9	9	Q3 Q4 Q6 Q1	2N2369A	TRANSISTOR-FAIRCHILD
1	1	K1	C1C	RELAY-MCI
1	1	CR4	1N754A	DIODE-6.8V, ZENER, MOTOROLA
1	1	CR5		JUMPER
4	4	CR6 CR3 CR2 CR1	1N914	DIODE - CLEVITE
2	2	C3 C2	150D106X0020B2	CAPACITOR-10μf ±20%, 20V, SPRAGUE
1	1	C1	150D47K0020R2	CAPACITOR-47μf ±20%, 20V, SPRAGUE
1	1	J		JUMPER
AR	6	AWG 24		SLEEVING-TEFLON, THINWALL (COLOR OPT)
AR	5	AWG 24		WIRE - SOLID COPPER, TINNED
3	3	2043B		TERMINAL-CETEC
10	10	B10369		UNIPAD
1	1	2	00-7022-029-000-001	CONNECTOR-ELCO
1	1	1	SEL 617	PRINTED CIRCUIT (FOR REV/S&AS/MS)
-2	-1	ITEM	DWG. OR PART NO.	DESCRIPTION

**SEL**  
 SYSTEMS ENGINEERING  
 LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DATE	11-16-65	DESCRIPTION	SCHMATIC & ASSEMBLY
BY	R.K.M.	DATE	12-16-65
ENG.	J.P. Vogel	DATE	12-21-65
PROJ. APP.		DATE	12-21-65
APPROVED		DATE	1/1/66
USED ON			

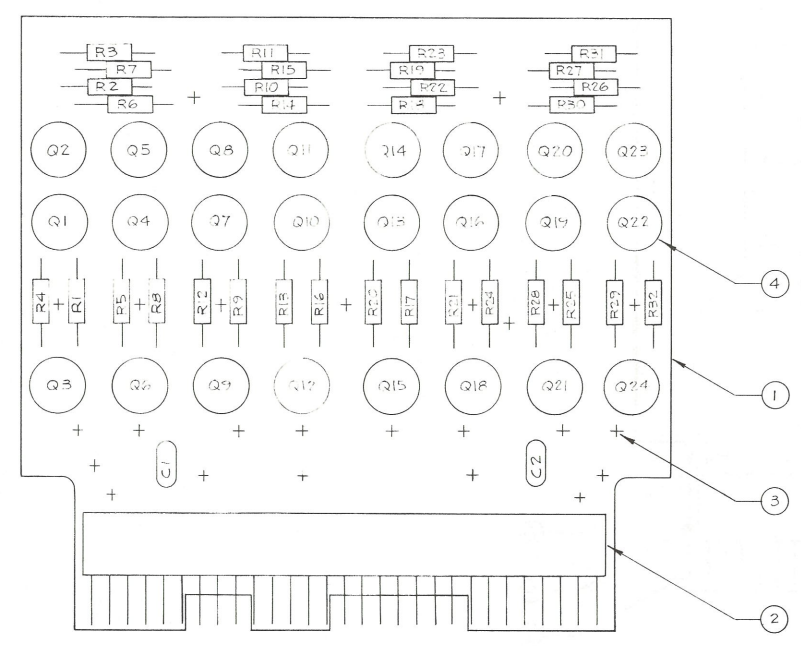
CODE IDENT NO. 2088E

REV	D	8639	C
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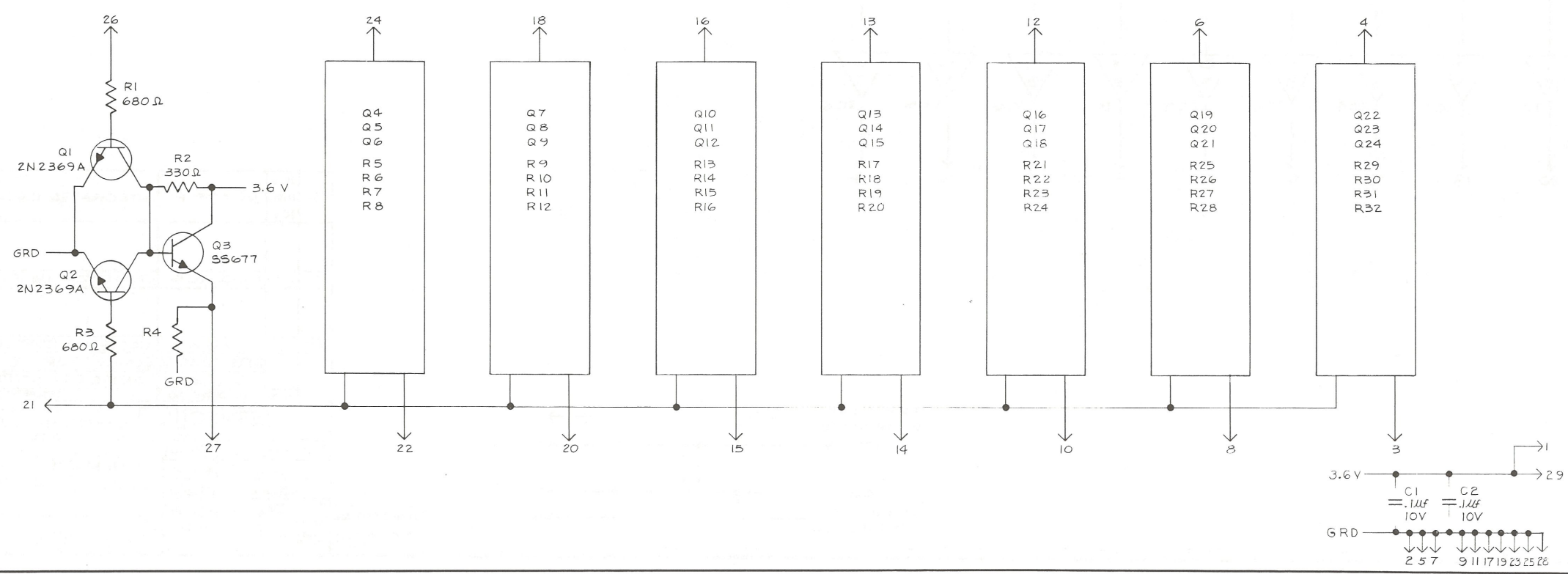
NOTES:

- ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
- UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ , 1/4 W.
- FOR DRILLING DRAWING SEE D86007 812. FOR DIMENSIONAL DRAWING SEE C16381.

REV	DESCRIPTION	DATE	APP'D
D	8705		C
A	6T-52; ADDED -2 R.H.S. 2-20-67 R.K.M.	2/20/67	[Signature]
B	6B-122; Q3,6,9,12,15,18,21 & Q2+ WERE 2N3904. CEM 3/8/68 R.K.M.	3/13/68	[Signature]
C	6B-262; NOTE 3 WAS: FOR DRILLING & DIM. DWG. SEE CB699. RKM 5-13-68	5/20/68	[Signature]



QTY	REF	DESCRIPTION	VALUE	MANUFACTURER
8	R32, R28, R24, R20, R16, R12, R8, R4	RC07GF101J	RESISTOR-100Ω	ALLEN BRADLEY
8	R32, R28, R24, R20, R16, R12, R8, R4	RC07GF302J	RESISTOR-3K	ALLEN BRADLEY
8	R30, R26, R22, R18, R14, R10, R6, R2	RC07GF331J	RESISTOR-330Ω	ALLEN BRADLEY
16	R31, R29, R27, R25, R23, R21, R19, R17, R15, R13, R11, R9, R7, R5, R3, R1	RC07GF681J	RESISTOR-680Ω	ALLEN BRADLEY
8	Q24, Q21, Q18, Q15, Q12, Q9, Q6, Q3	SS677	TRANSISTOR - MOTOROLA	
16	Q23, Q22, Q20, Q19, Q17, Q16, Q14, Q13, Q11, Q10, Q8, Q7, Q5, Q4, Q2, Q1	2N2369A	TRANSISTOR - FAIRCHILD	
2	C2, C1	UK10-104	CAPACITOR-.1μF+80-20%, 10V, CRL	
24	AR	BIO369	UNIPAD-	
1	AR	AWG 24	WIRE-SOLID COPPER, TINNED	
1	AR	00-7022-029-000-001	CONNECTOR-ELCO	
1	AR	SEL 812	PRINTED CIRCUIT (FOR REV SEE A51140)	
-2	AR	ITEM	DWG. OR PART NO.	DESCRIPTION



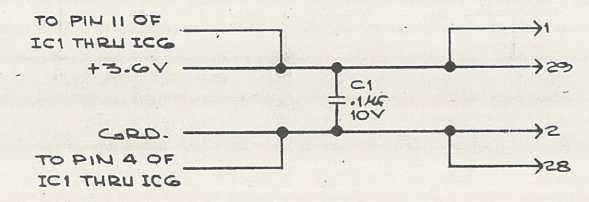
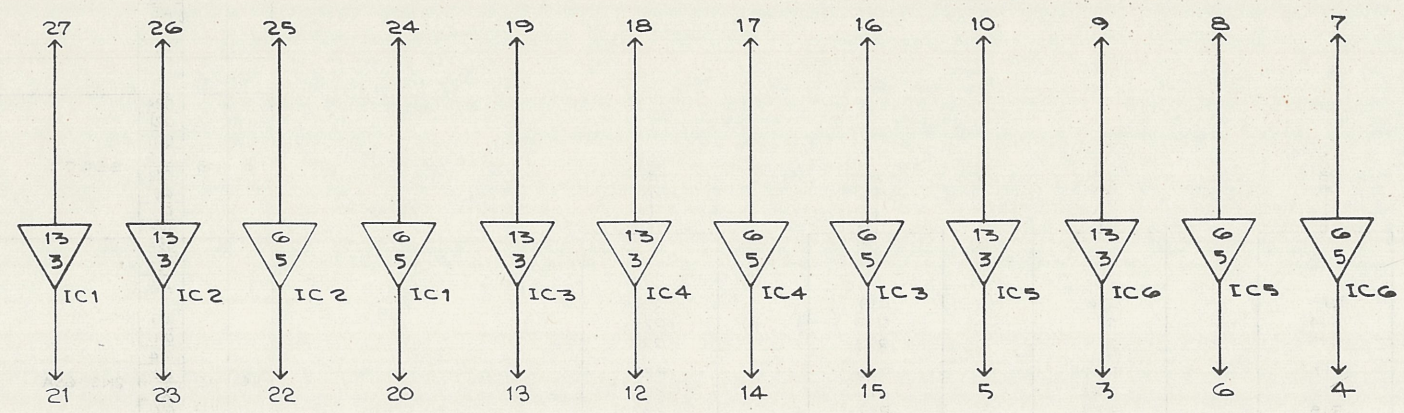
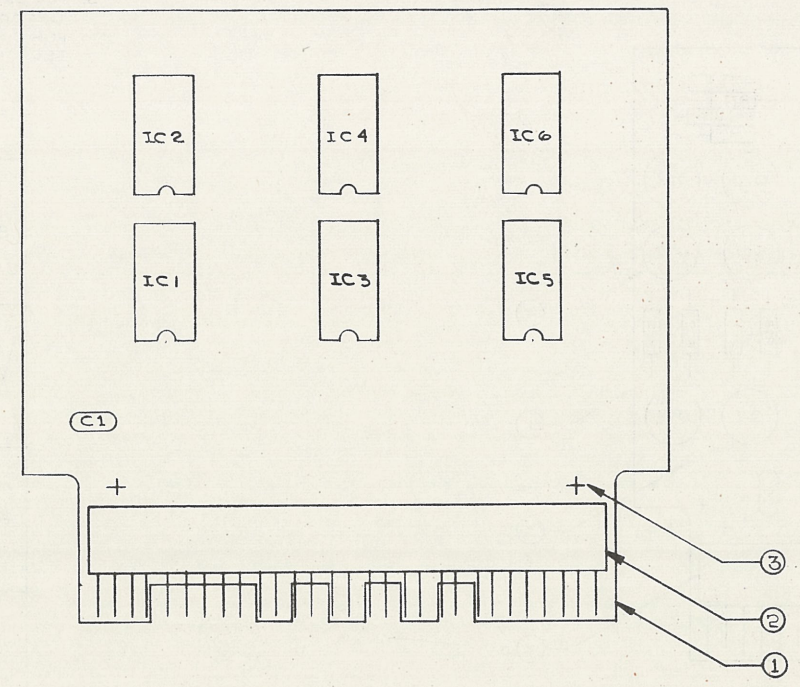
CODE IDENT NO.  
20886

DR. JIM MAY	26 APR 66	SCHEMATIC & ASSEMBLY GATED CABLE DRIVER
CE. R.K.M.	4-27-66	
ENG. [Signature]	5/6/66	
PROJ. APP. [Signature]		
APP. [Signature]		
USED ON		

SIZE	8705	REV	C
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NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT FOR DRILLING DWG.  
 2. SEE DB600-900 FOR DIMENSIONAL DWG. SEE C 8600

REV	DESCRIPTION	DATE	APP'D
D	8749		

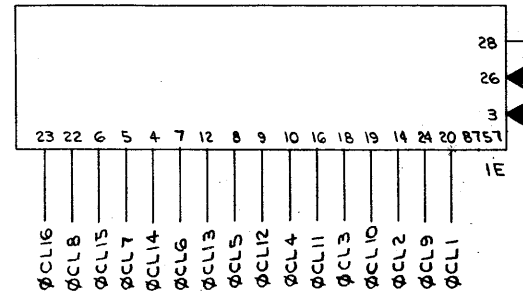
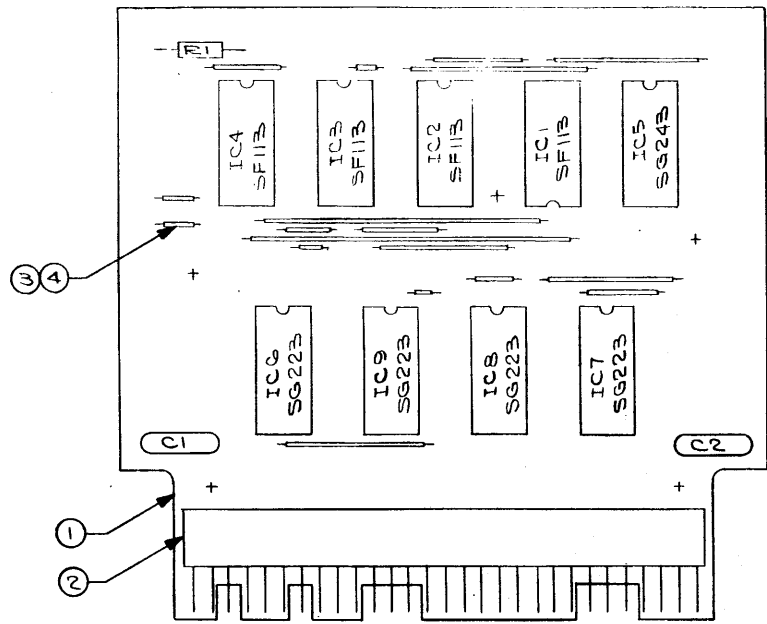


6	IC6 THRU IC1	MC799P	INTEGRATED CIRCUIT-MOTOROLA
1	C1	UK10-104	CAPACITOR-.1µF±20%,10V CRL
AR 3	AWG 24		WIRE-SOLID COPPER,TINNED
1	2	007022029-000-001	CONNECTOR - ELCO
1	1	SEL 900	PRINTED CIRCUIT (FOR REV. A51140)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR.	b. BOYD	2-28-67	SCHEMATIC & ASSEMBLY DIGITAL BUFFER (M)
CC.	RKM	3-1-67	
ENG.	<i>W. Boyd</i>	4/20/67	
PROJ. APP.	<i>W. Boyd</i>	4/20/67	
APP.	<i>W. Boyd</i>	4/20/67	
USE ON			

CODE IDENT NO  
20886

SIZE  
D 8749



110 NS

9.143 MHz  
I  
0190  
139

To 8234

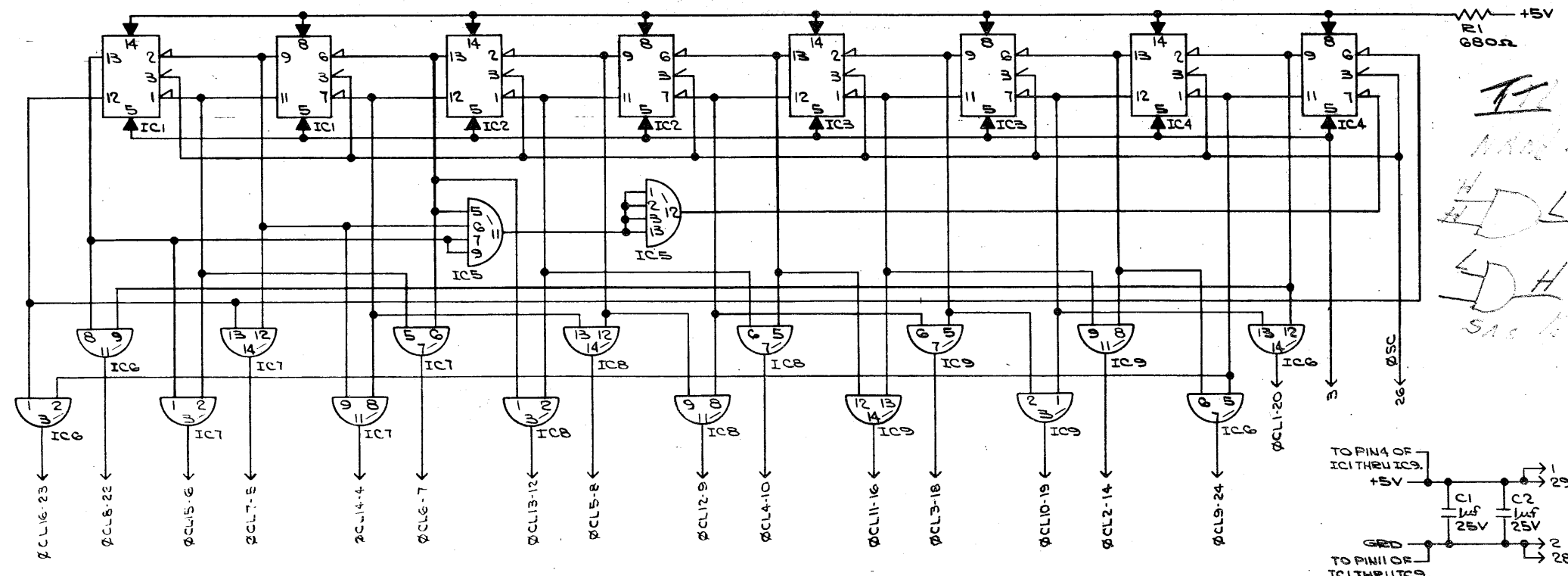
TTL

16 signals at 110NS each

Normal 810A  
TTL  
LDH  
HDL  
15NS TO OPERATE

- NOTES:
1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.
  2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE  $\pm 5\%$ ,  $\frac{1}{4}$  W.
  3. FOR DRILLING DWG. SEE DB800-980.
  - FOR DIMENSIONAL DWG. SEE CB800

REV	DESCRIPTION	DATE	APPD
A	6T-251; IC1 THRU IC4 WERE SG113 ON LIST OF MATERIAL. C.P. 7-20-67 RKM	7/20/67	AK
B	6T-252; IC5 WAS SF243 ON PARTS LIST. C.P. 7-24-67 RKM	7/24/67	AK
C	6T-445; ADDED 8757 & 86201 ADDRESSES REVISED AND LINE TITLES ADDED. AS. 10-25-67 AS	10/25/67	AK



TTL  
NAND Logic  
LDH  
HDL  
5NS TO OPERATE

ITEM	DWG. OR PART NO.	DESCRIPTION
1	R1	RCOTGFGB1J RESISTOR-680 $\Omega$ , ALLEN BRADLEY
4	IC9 IC8 IC7 IC6	SG223
1	IC5	SG243 INTEGRATED CIRCUIT-SYLVANIA
4	IC4 IC3 IC2 IC1	SF113
2	C2 C1	5C13 CAPACITOR- $\frac{1}{2}$ uf $\pm 20\%$ , 25V, SPRAGUE
AR 4	AWG 24	SLEEVING-TEFLON, THINWALL
AR 3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-7022-029-000-001 CONNECTOR-ELCO
1	1	SEL 960 PRINTED CIRCUIT (REV. SEE A5140)

Systems Engineering Laboratories	
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310	
DR <i>Edwards</i>	6-12-67
CHK RKM	6-22-67
ENGR: <i>Telford</i>	
PROJ <i>Edwards</i>	
APPD <i>Edwards</i>	6/29/67
NEXT ASSY	

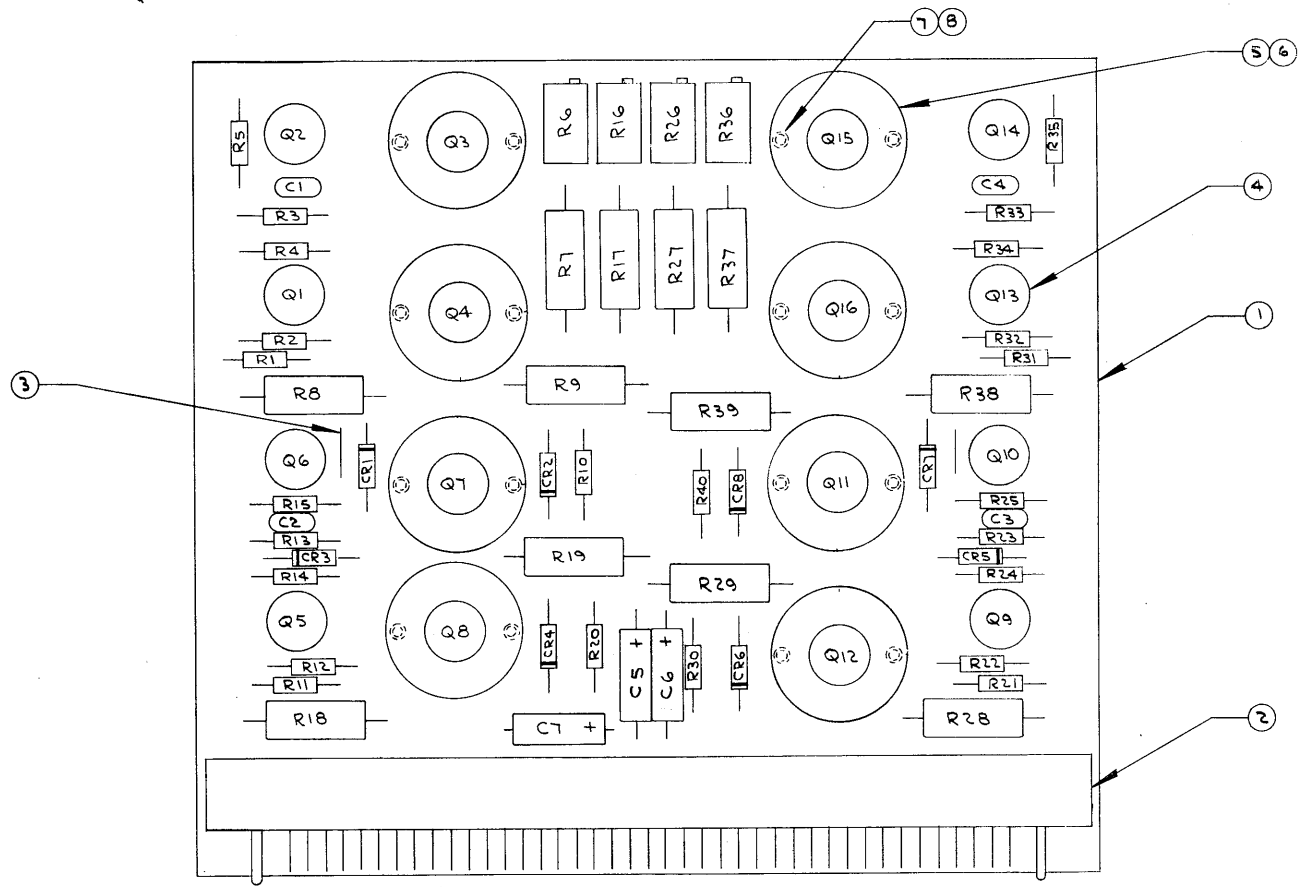
  

CODE IDENT NO.	SIZE	REV.
20886	D	8757

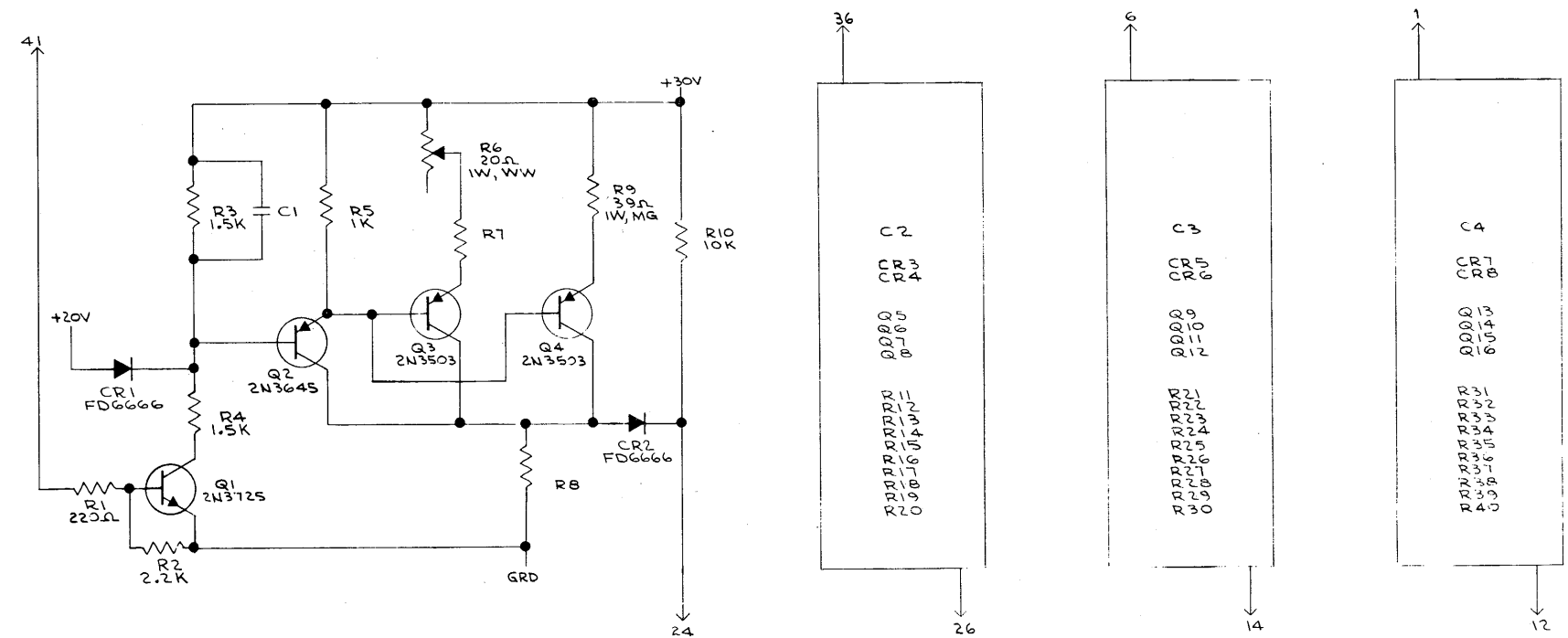


NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5%, 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL DWG. SEE C13975.  
 4. SELECT AT TEST.

REV	DESCRIPTION	DATE	APP'D
A	66-43B; ADDED DASH 2	12/20/66	RKM
B	67-398; ADDED-3; 4; 5 RKM 10-2-67	10/27/67	RKM
C	67-512; VALUE OF RT WAS 27Ω ON DASH 3, 4, 5 WAC 11-21-67	11/21/67	RKM



QTY	REF	DESCRIPTION	ITEM
1	R28	RC32GF121J	RESISTOR-120Ω, 1W, ALLEN BRADLEY
1	R38	RC32GF820J	RESISTOR- 82Ω, 1W, ALLEN BRADLEY
1	R18	RC32GF121J	RESISTOR- 120Ω, 1W, ALLEN BRADLEY
1	R38	RL42AD510J	RESISTOR-51Ω, 2W, ±200PPM/°C, MG, IRC
1	R38	RL42AD560J	RESISTOR-56Ω, 2W, ±200PPM/°C, MG, IRC
4	R30, 40, R10, 20	RC07GF103J	RESISTOR-10K, ALLEN BRADLEY
1	R8	RC32GF151J	RESISTOR-150Ω, 1W, ALLEN BRADLEY
1	R8	RC32GF181J	RESISTOR-180Ω, 1W, ALLEN BRADLEY
4	R2, 3, 8, 18	NOTE 4	RESISTOR- NOTE 4
4	R29, 39	RL32AD390J	RESISTOR-39Ω, 1W, ±200PPM/°C, MG, IRC
3	R7	RL32AD270J	RESISTOR-27Ω, 1W, ±200PPM/°C, MG, IRC
4	R26, 30, R6, 16	325EW-66-200	POTENTIOMETER-20Ω, 1W, W, BOURNS
4	R25, 35, R5, 15	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
8	R33, 34, R23, 34, R13, 14, R3, 4	RC07GF152J	RESISTOR-1.5K
4	R22, 32, R2, 12, R21, 31	RC07GF222J	RESISTOR-2.2K
4	R1, 11	RC07GF221J	RESISTOR-220Ω, ALLEN BRADLEY
8	Q15, 16, Q11, 12, Q7, 8, Q3, 4	2N3503	TRANSISTOR- FAIRCHILD
4	Q10, 4, Q2, 6	2N3645	TRANSISTOR- FAIRCHILD
4	Q9, 13, Q1, 5	2N3725	TRANSISTOR- FAIRCHILD
8	CR8, CR1	FD6666	DIODE- FAIRCHILD
1	C7	150D665X0035B2	CAPACITOR-6.8uf ±20%, 35V, SPARGUE
2	C5, 6	150D475X0050B2	-4.7uf ±20%, 50V, SPARGUE
1	C3	NOTE 4	- NOTE 4
1	C3	ID151	- 150μf ±10%, 500V, CRL
1	C3	ID750	- 75μf ±10%, 500V, CRL
2	C2, 4	NOTE 4	- NOTE 4
2	C1, 3	ID271	- 270μf ±10%, 500V, CRL
1	C1	ID101	- 100μf ±10%, 500V, CRL
1	C1	NOTE 4	CAPACITOR- NOTE 4
16	WASHER	- #3 FLAT, S.S.	
16	SCREW	- #3-48 X 3/16 PHILIPS FLAT HD, S.S.	
8	GREASE	- THERMACOTE GREASE-THERMALLOY	
8	HEAT SINK	- THERMALLOY	
8	UNIPAD	B10369	
8	WIRE	- SOLID COPPER, TINNED	
1	CONNECTOR	- BLC0	
1	PCB	SEL E41	PRINTED CIRCUIT (FOR REV. SEE A51140)
-5	ITEM		DWG. OR PART NO.



CODE IDENT NO.  
20886

DR.	Z. MARCINIA	10-10-66
CK.	J.S.N.	1-17-67
ENG.		
PROJ. APP.		
USED ON		

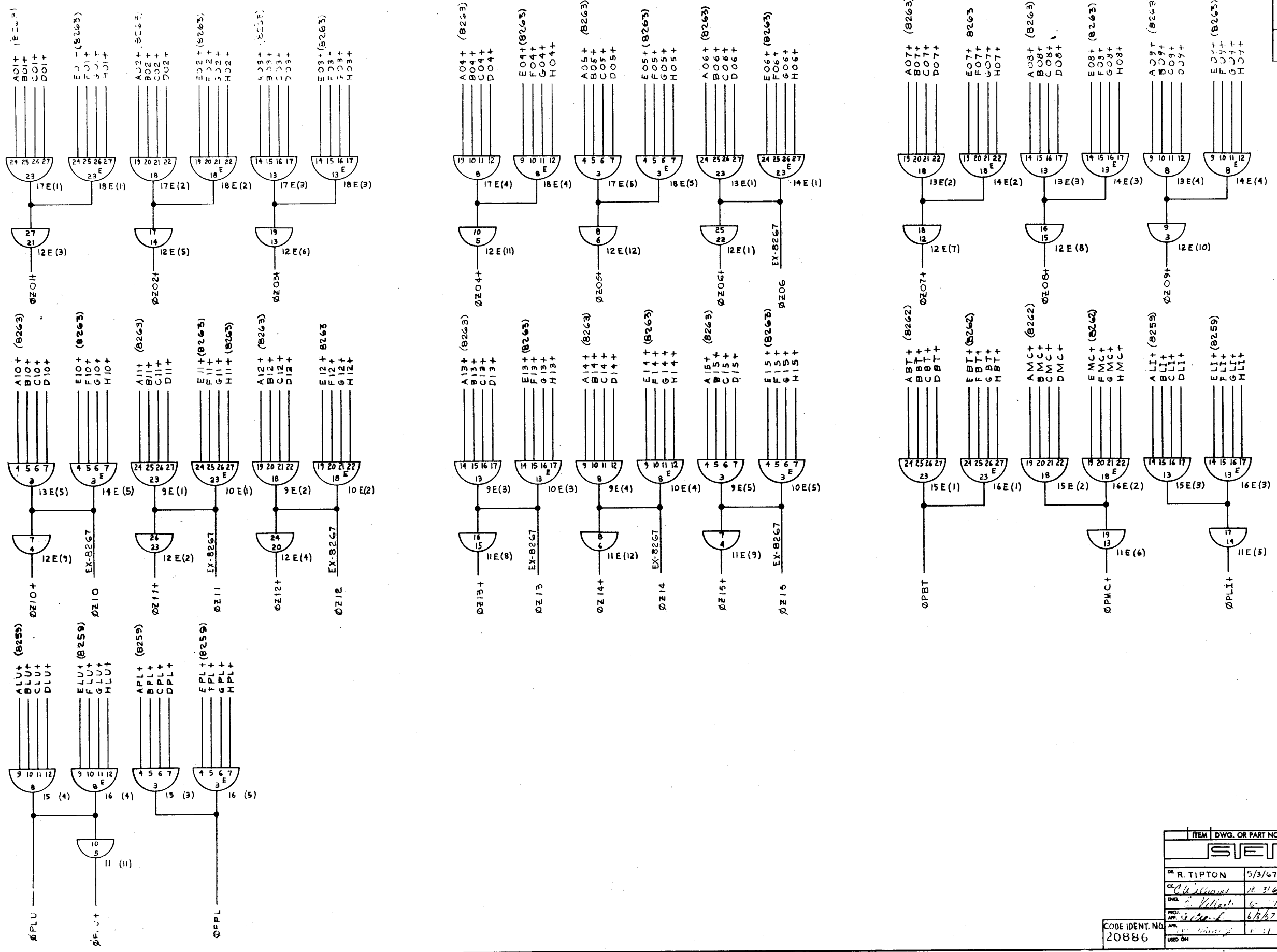
**SCHEMATIC & ASSEMBLY  
DUAL CURRENT  
DRIVER**

SIZE	D	8959	REV	C
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REV	DESCRIPTION	DATE	APP'D
D	53021		
A	67-198 UPDATED TO LATEST CHANGES C. PRUNA 6/20/67	12/25/67	[Signature]
B	67-415 ADDRESSSES AND CARD LOCATIONS REVISIED E.P.C. 10-30-67	10/30/67	[Signature]

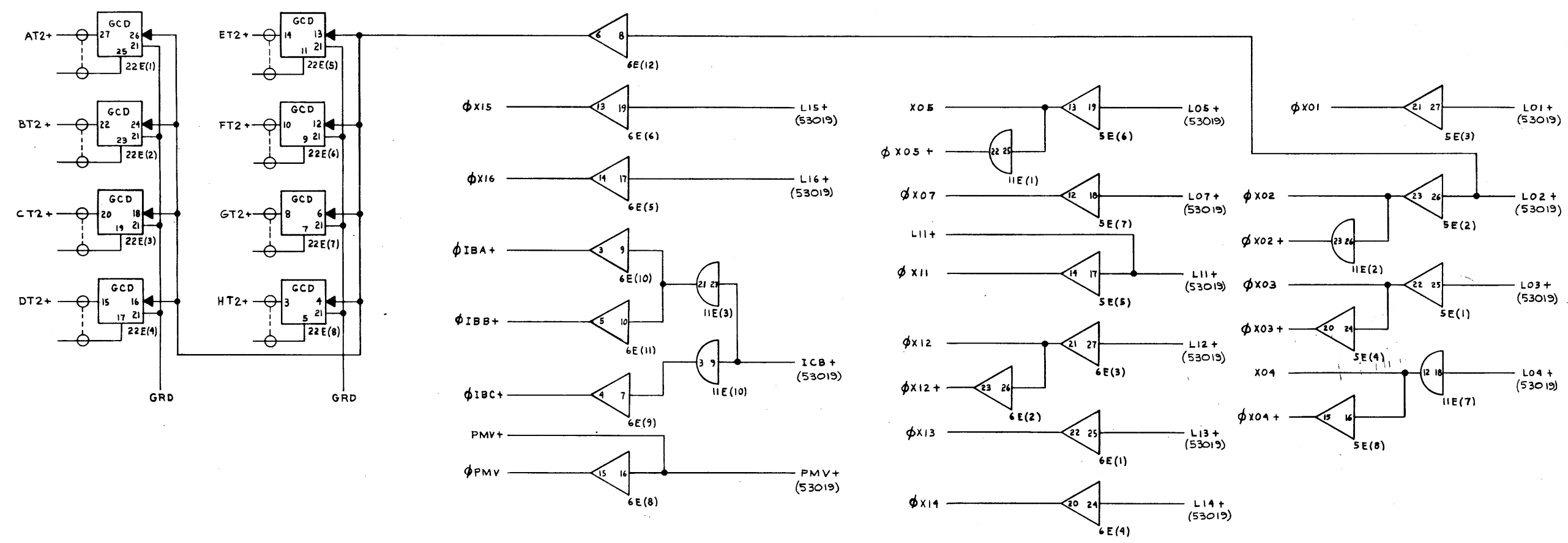
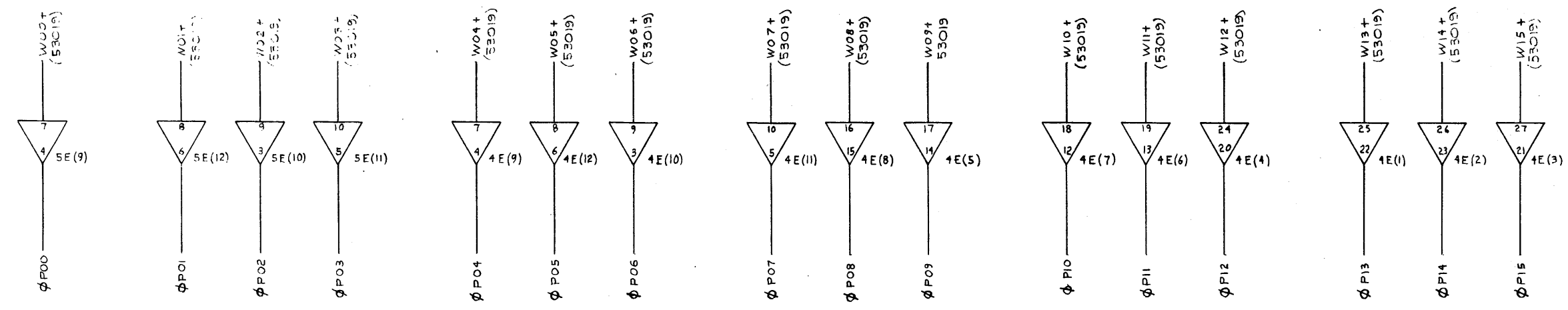
NOTES:  
1.



ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	R. TIPTON 5/3/67	LOGIC DIAGRAM BPC ADDRESS TO MEMORY 1R2				
CC	C. Williams 11-31-67					
ENG	W. Villars 6-1-67					
PROJ. APP.	C. Pruna 6/6/67					
CODE IDENT. NO.	20886	SIZE	D	53021	REV	B
USED ON						

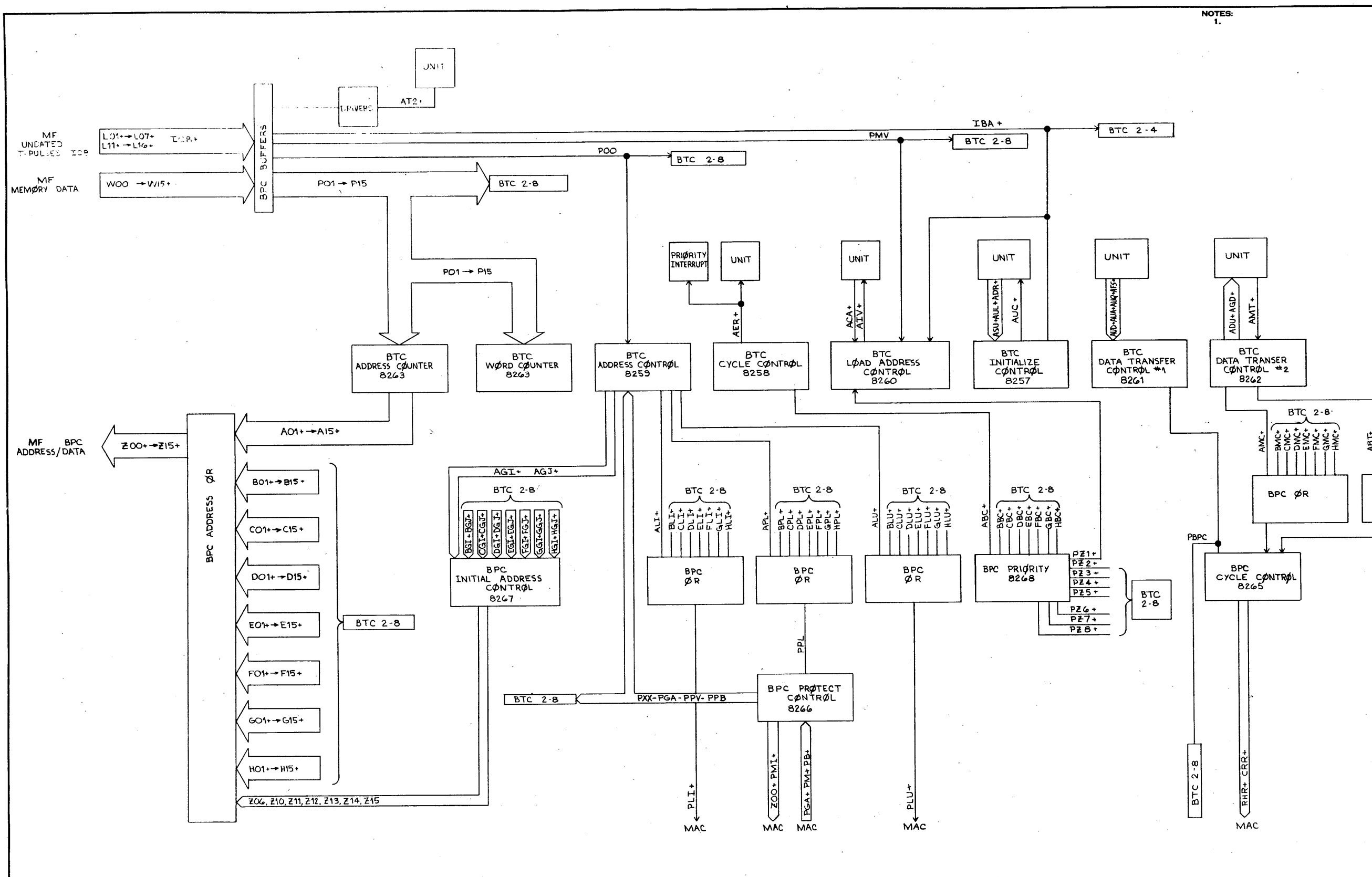
NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	53022		
A	67-198 UPDATED TO LATEST CHANGES C. PRUNA 6/20/67	6/20/67	[Signature]
B	67-445; CARD LOCATION LETTERS WERE F. AS 10-27-67	10/29/67	[Signature]



ITEM	DWG. OR PART NO.	DESCRIPTION	
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. R. TIPTON	5/3/67	LOGIC DIAGRAM BPC BUFFER-DRIVERS IR2	
CR. Williams	10/31/67		
ENG. J. Williams	2/1/67		
PROJ. APP. Williams	2/1/67		
CODE IDENT. NO. 20886	APP. USED ON 9126	SIZE D	REV 53022

REV	D	53073	DATE	10/27/67	APP'D	A
REV	A	67 445 UNIT NO. 1R2 ADDED TO TITLE BLOCK. C.THEW 10-27-67	DATE	10/27/67	APP'D	A

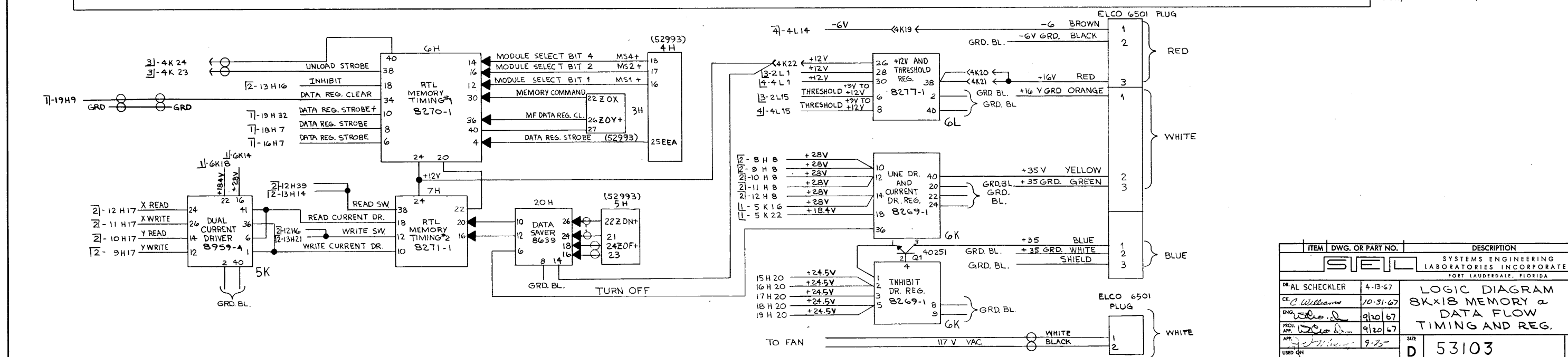
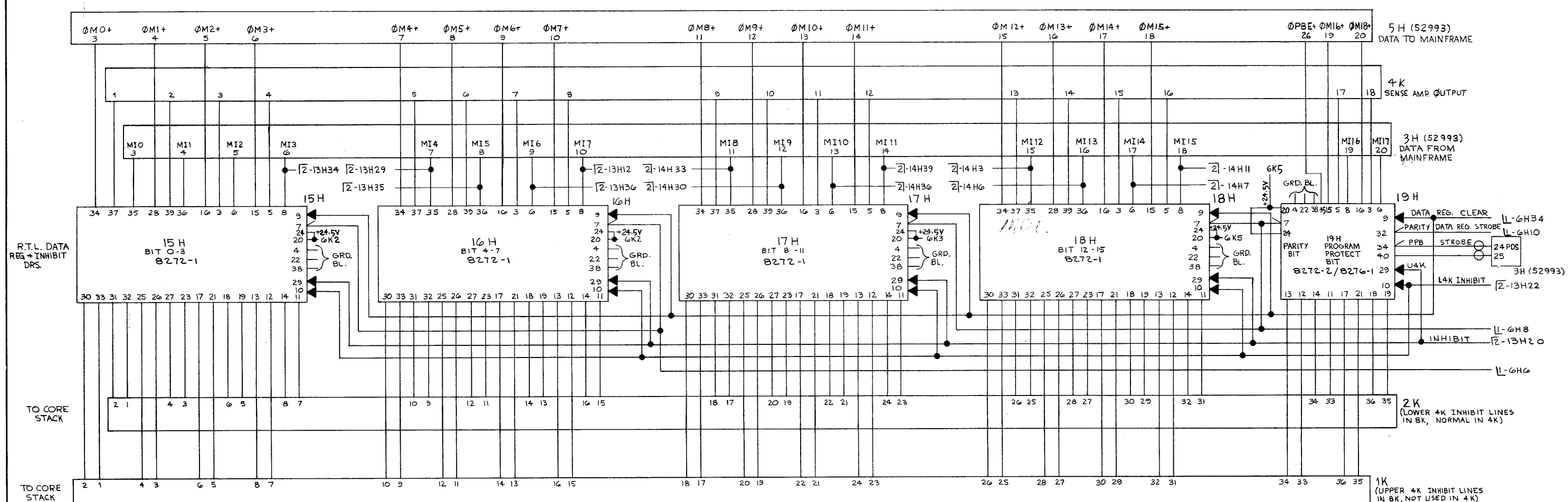


NOTES:  
1.

ITEM	DWG. OR PART NO.	DESCRIPTION
SEL		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR. AL SCHECKLER		BLOCK DIAGRAM BTC - BPC 1R2
ENGR. C. Williams	10-31-67	
ENGR. Williams	9-20-67	
APP. Williams	9-20-67	
CODE IDENT NO.	20886	SIZE
		D
		53073
		REV
		A

NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	53103		REV B
A	67-445; ADDRESSES REVISED & LINE TITLES ADDED SH. 142 C. THEW 10-27-67	10/27/67	
B	68-199; DELETED CONNECTION BETWEEN PIN 40 ON 6H & PIN 27 ON 3H.	4/19/68	

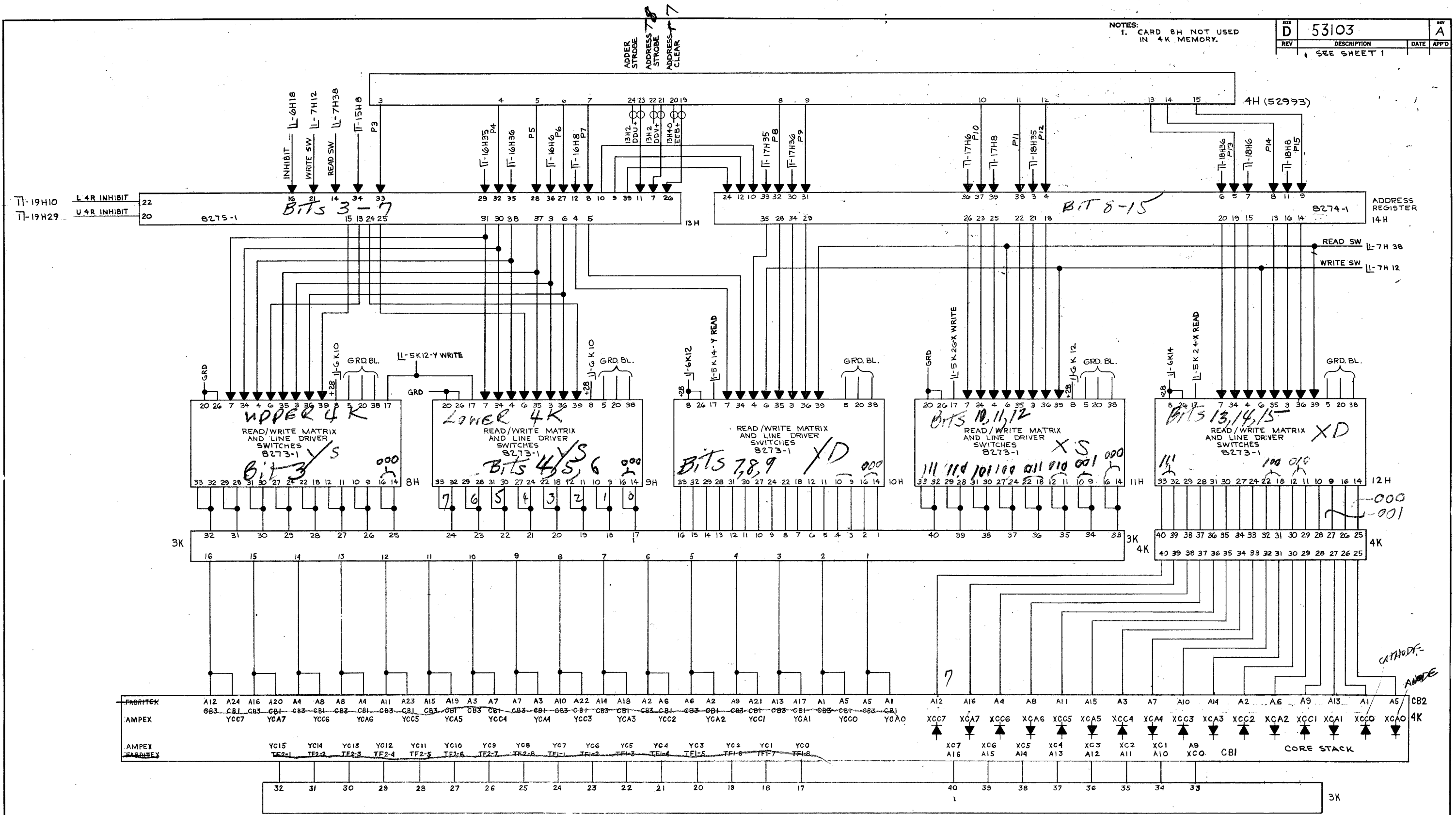


ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. AL SCHECKLER	4-13-67	LOGIC DIAGRAM 8Kx18 MEMORY a DATA FLOW TIMING AND REG.
CC. C. Williams	10-31-67	
ENG. W. D. ...	9/20/67	
PROJ. APP. ...	9/20/67	
USED ON	9-25-	

REV	DESCRIPTION	DATE	APP'D
D	53103		REV B

NOTES:  
1. CARD 8H NOT USED  
IN 4K MEMORY.

REV	D	DESCRIPTION	DATE	APP'D
		53103		A
		SEE SHEET 1		

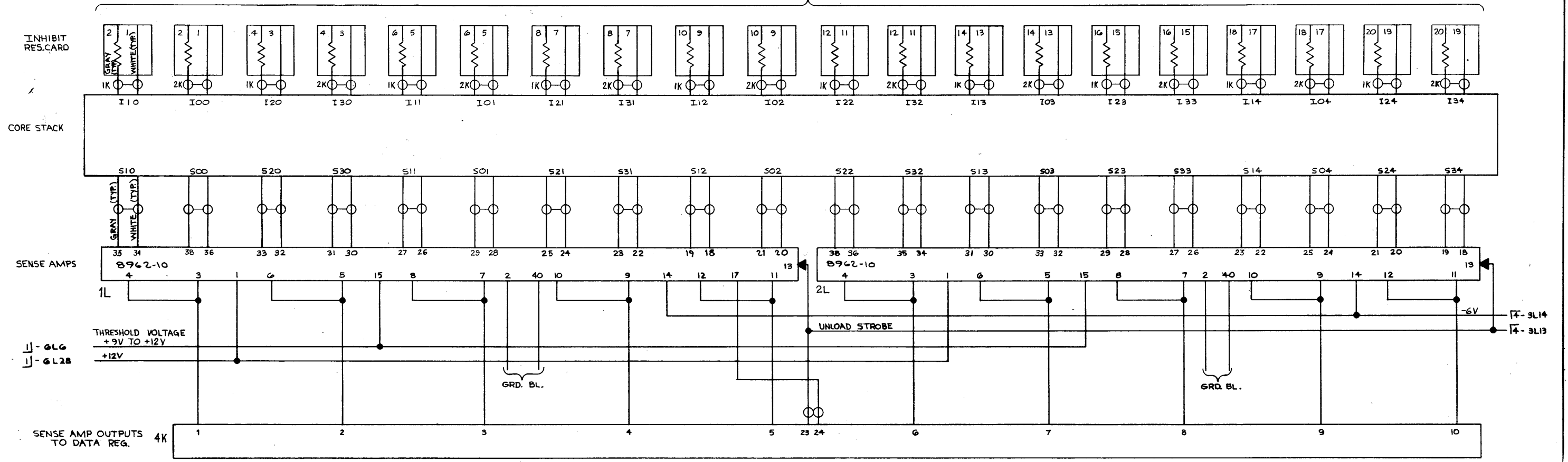


ITEM	DWG. OR PART NO.	DESCRIPTION		
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	AL SCHECKLER 4-11-67	LOGIC DIAGRAM 8Kx18 MEMORY & ADDRESSING		
ENGR.	C. Williams 10-31-67			
PROJ. MGR.	W. Wilson 9-20-67			
APP'D.	J. Wilson 9-25-67			
REV	D	DESCRIPTION	DATE	APP'D
		53103		A

NOTES:  
 1. ALL RESISTORS ARE 50% 1%  
 NON-INDUCTIVE 3 WATT WIRE-  
 WOUND RESISTORS, OMTRONICS  
 TYPE N-3.

REV	D	DESCRIPTION	DATE	APP'D

FROM R.T.L. DATA REG 4 INHIBIT DR.



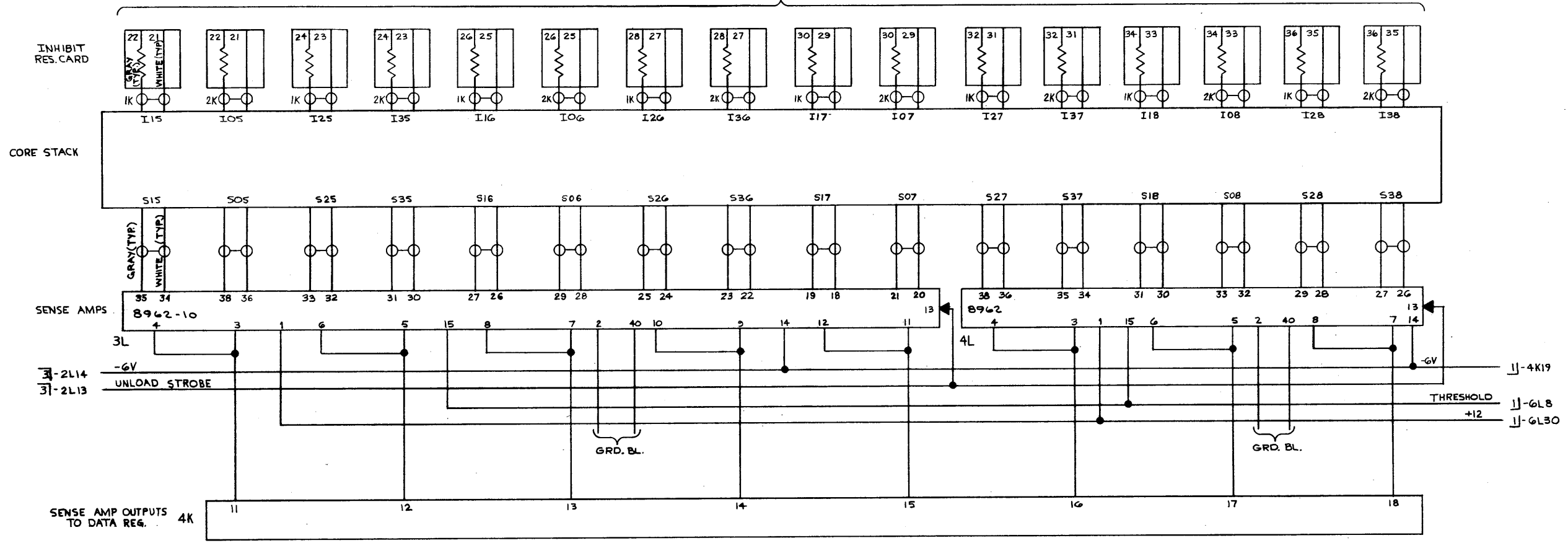
ITEM	DWG. OR PART NO.	DESCRIPTION			
		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR. AL SCHECKLER	4-11-67	LOGIC DIAGRAM CORE STACK WIRING 8KX18MEM a			
CK					
ENG. <i>[Signature]</i>	9/10/67				
APP. <i>[Signature]</i>	9/20/67				
REV		SIZE	D	53103	REV



NOTES:  
 1. ALL RESISTORS ARE 50Ω  
 1% HIGH-INDUCTIVE 3 WATT  
 WIRE WOUND RESISTORS,  
 OMTRONICS TYPE N-3.

REV	D	53103	DATE	APP'D
-----	---	-------	------	-------

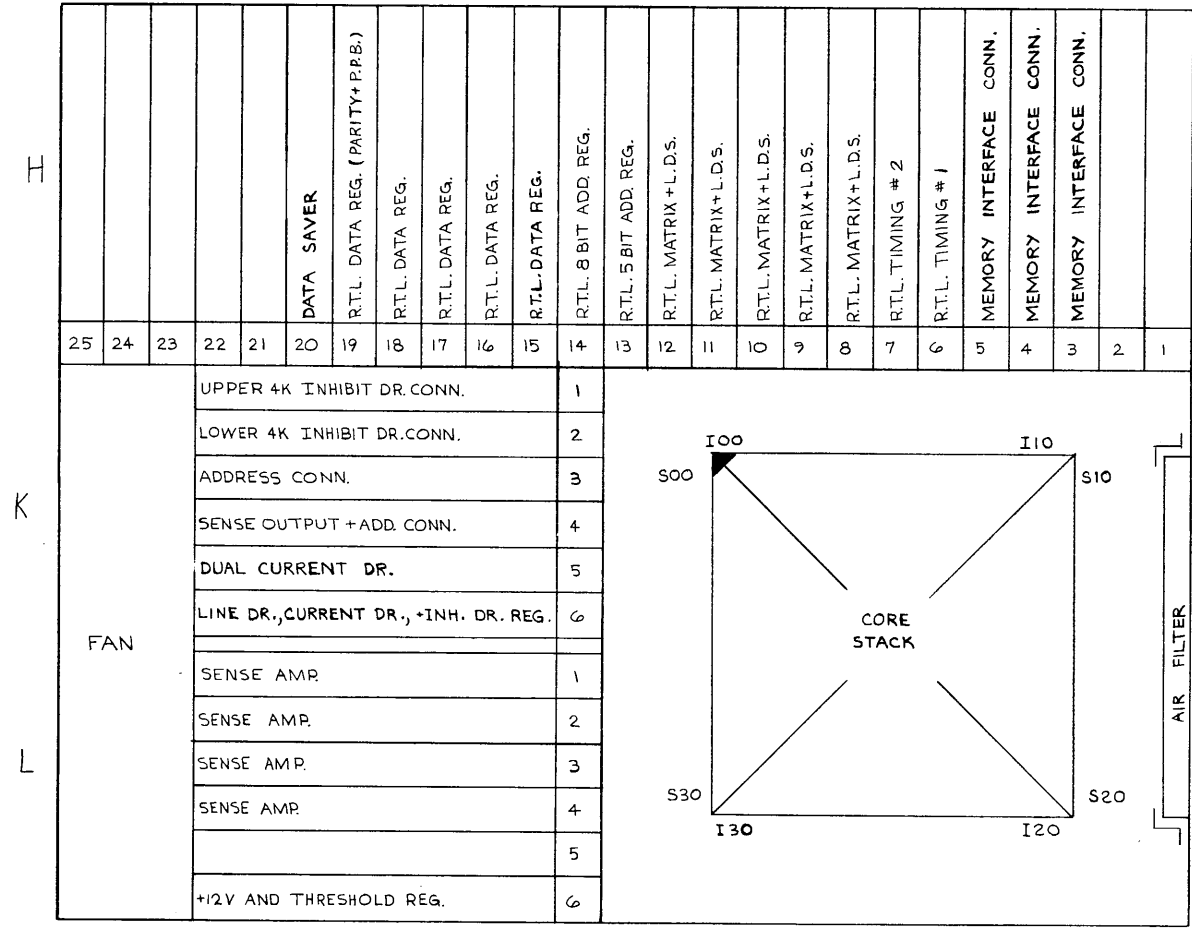
FROM R.T.L. DATA REG 4 INHIBIT DR.



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. AL SCHECKLER	4-12-67	LOGIC DIAGRAM CORE STACK WIRING BKX18MEM a
ENGR. <i>W. C. ...</i>	9/20/67	
PROJ. <i>W. C. ...</i>	9/20/67	
APP. <i>W. C. ...</i>		
USED ON		
SIZE	D	53103

NOTES:  
 1. S09, S19, S29, & S39 ARE TERMINATED INDIVIDUALLY TO FOUR RESISTORS (330Ω, 1/4W).  
 2. I09, I19, I29, & I39 ARE TERMINATED INDIVIDUALLY TO FOUR RESISTORS (47Ω, 1/4W).

REV	D	53103	REV	A
DESCRIPTION	68-199; ADDED NOTES		DATE	1/19/68
APPROVED	A		DATE	1/19/68



CARD SIDE VIEW

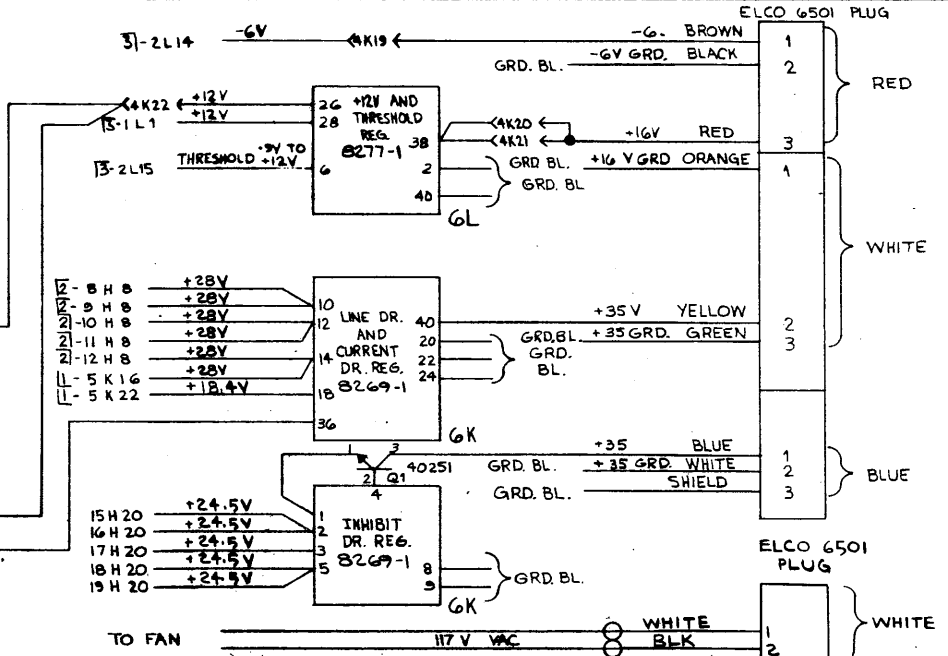
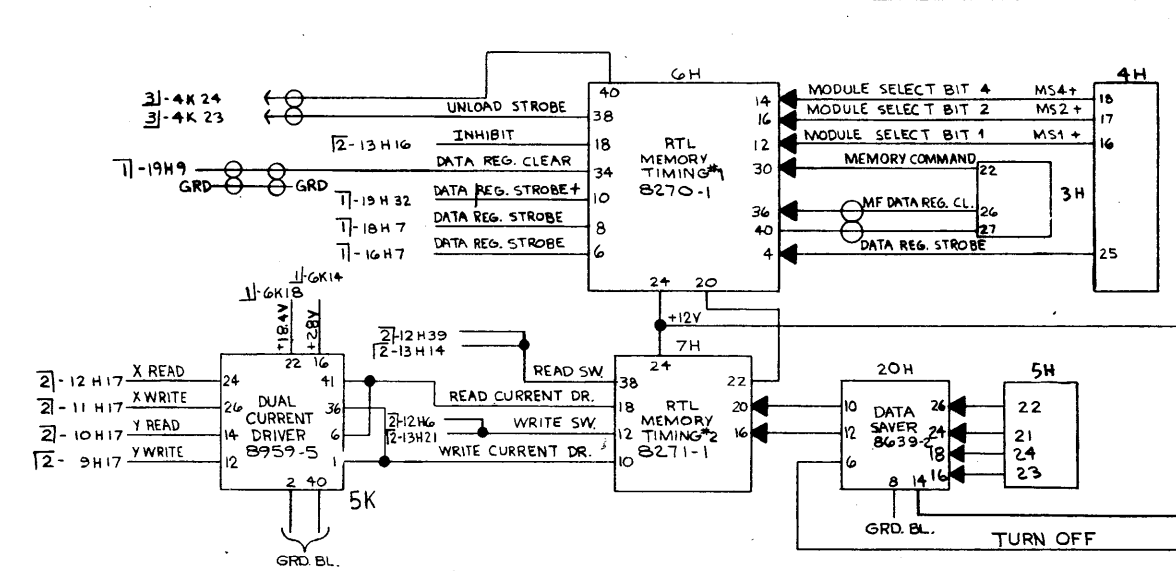
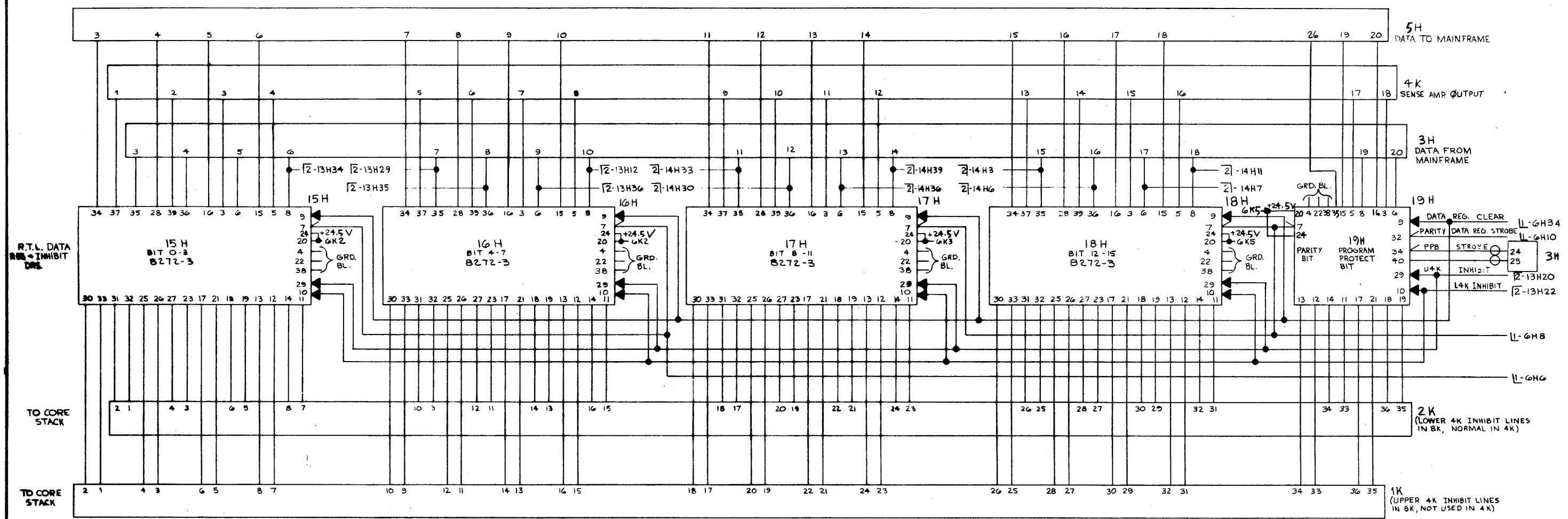
CARD NAME	CARD LOCATION	CARD TYPE	8K x 16	8K x 16 + PARITY	8K x 16 + PARITY + MEMORY PROTECT
R.T.L. MEMORY TIMING #1	6H	8270-1	1	1	1
R.T.L. MEMORY TIMING #2	7H	8271-1	1	1	1
R.T.L. READ/WRITE MATRIX AND LINE DR. SW.	8H THRU 12H	8273-1	5	5	5
R.T.L. 5 BIT ADDRESS REG. + 8K CONTROL	13H	8275-1	1	1	1
R.T.L. 8 BIT ADDRESS	14H	8274-1	1	1	1
R.T.L. DATA REGISTER AND INHIBIT DR.	15H THRU 18H	8272-1	4	4	4
R.T.L. DATA REGISTER AND INHIBIT DR.	19H	8272-2	0	1	0
R.T.L. PARITY PROTECT DATA REG. + INHIBIT DR.	19H	8276-1	0	0	1
DATA SAVER	20H	8639-2	1	1	1
INHIBIT RESISTOR CARD	1K AND 2K	8278-1	2	2	2
CORE STACK CONNECTOR CARD	3K AND 4K	8960-1	2	2	2
DUAL CURRENT DRIVER	5K	8959-4	1	1	1
LINE DR. AND CURRENT DR. REG.	6K	8269-1	1	1	1
U.A. SENSE AMP	1L THRU 3L	8962-10	3	3	3
U.A. SENSE AMP	4L	8962-2	1	0	0
U.A. SENSE AMP	4L	8962-4	0	1	0
U.A. SENSE AMP	4L	8962-6	0	0	1
+12V AND THRESHOLD REG.	6L	8277-1	1	1	1

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	AL SCHECKLER 5-8-67	CARD LAYOUT & USAGE CHART a 8K x 18 MEMORY
ENGR.	<i>W.C. ...</i> 9/20/67	
PROJ. MGR.	<i>W.C. ...</i> 9/20/67	
APP'D.	<i>J. Manning</i> 9-25	
USED ON	SIZE D	REV A



NOTES:  
1.

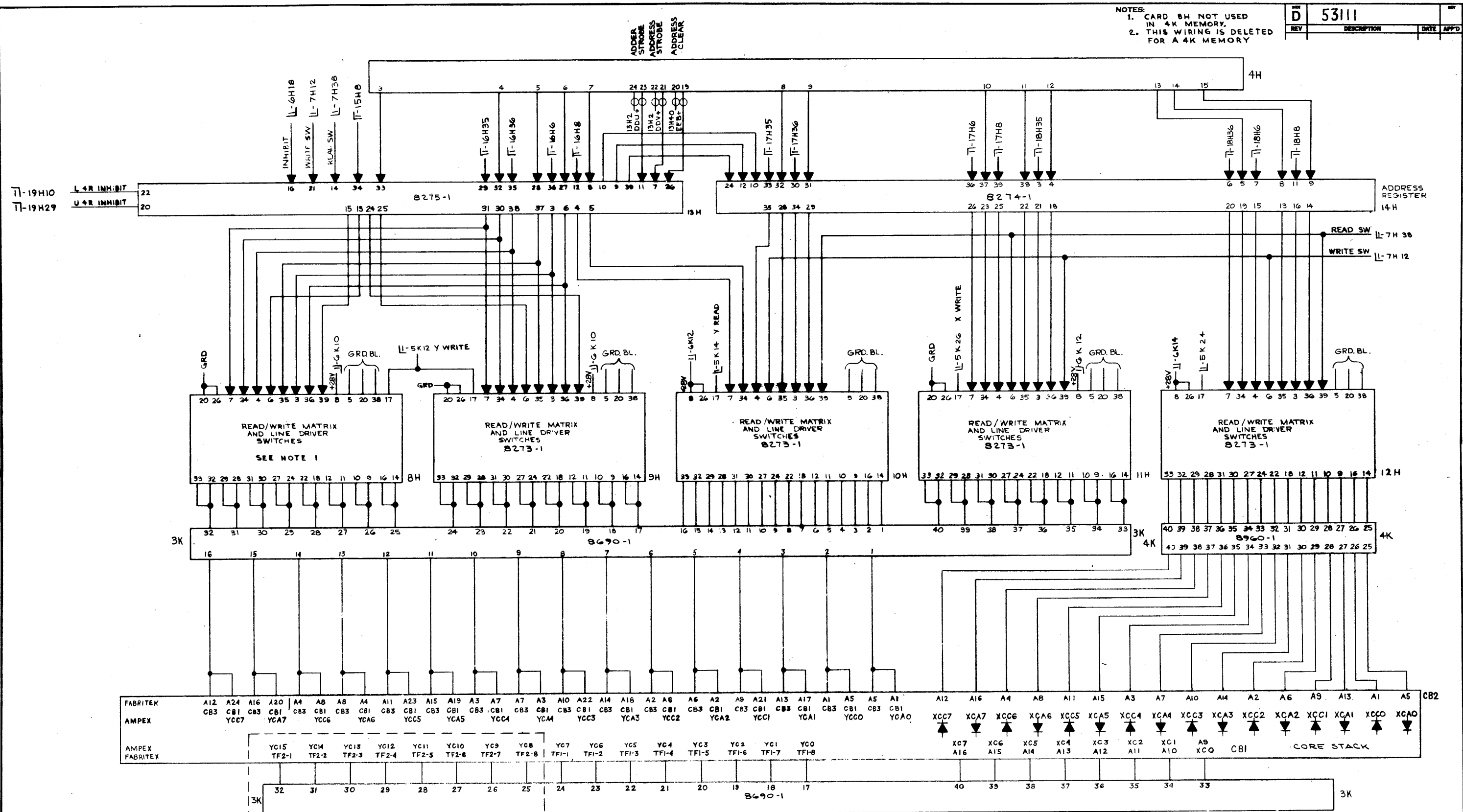
REV	DESCRIPTION	DATE	APP'D
D	53111		



ITEM	DWG. OR PART NO.	DESCRIPTION
		LOGIC DIAGRAM 4Kx18 MEMORY a DATA FLOW, TIMING AND REG.
DR. AL SCHECKLER	4-13-67	
CK		
ENG.		
PRO. APP.		
USED ON	9126	
	D	53111

NOTES:  
 1. CARD 8H NOT USED IN 4K MEMORY.  
 2. THIS WIRING IS DELETED FOR A 4K MEMORY

REV	D	53111	DESCRIPTION	DATE	APP'D
-----	---	-------	-------------	------	-------



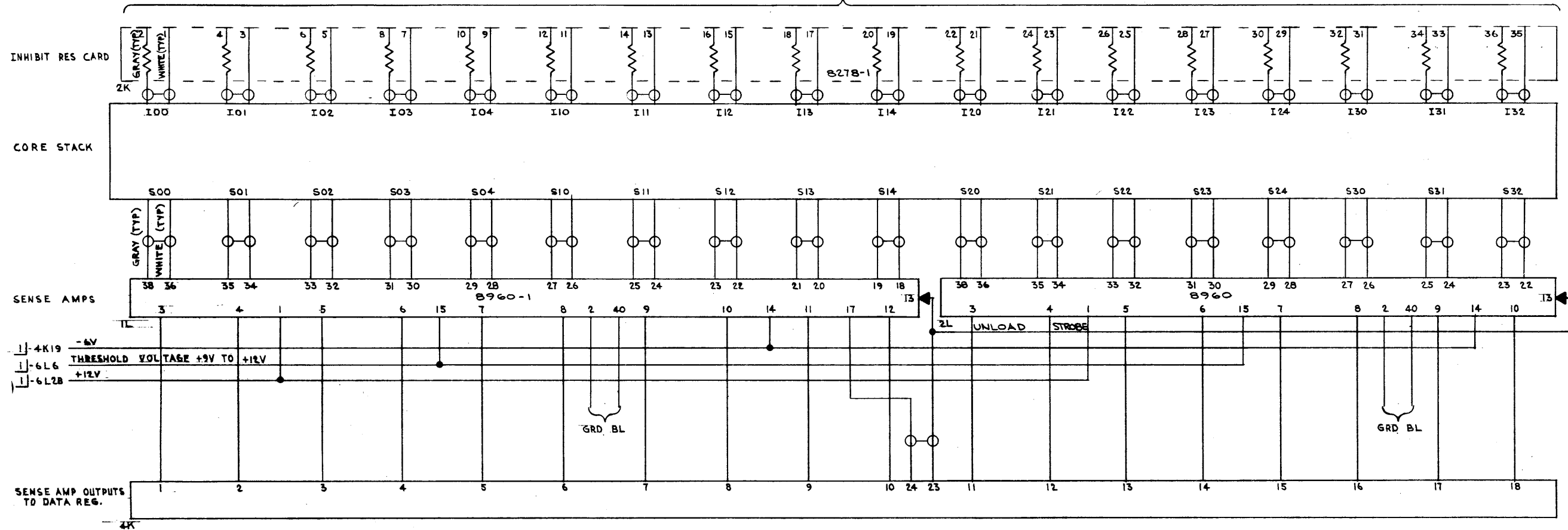
SEE NOTE 2

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. AL SCHECKLER	4-11-67	LOGIC DIAGRAM 4Kx18 MEMORY ADDRESSING
CC		
ENG. (C) (S) (E) (L)		
PROJ. APP. (S) (E) (L)		
REV	9-22-67	SIZE
USED ON	912G	D 53111

NOTES:  
 1. ALL RESISTORS ARE 50Ω  
 17% NON-INDUCTIVE 3WATT  
 WIRE WOUND RESISTORS,  
 OMRONICS TYPE N-3.

SIZE	D	53111	REV.
REV.	DESCRIPTION	DATE	APPD

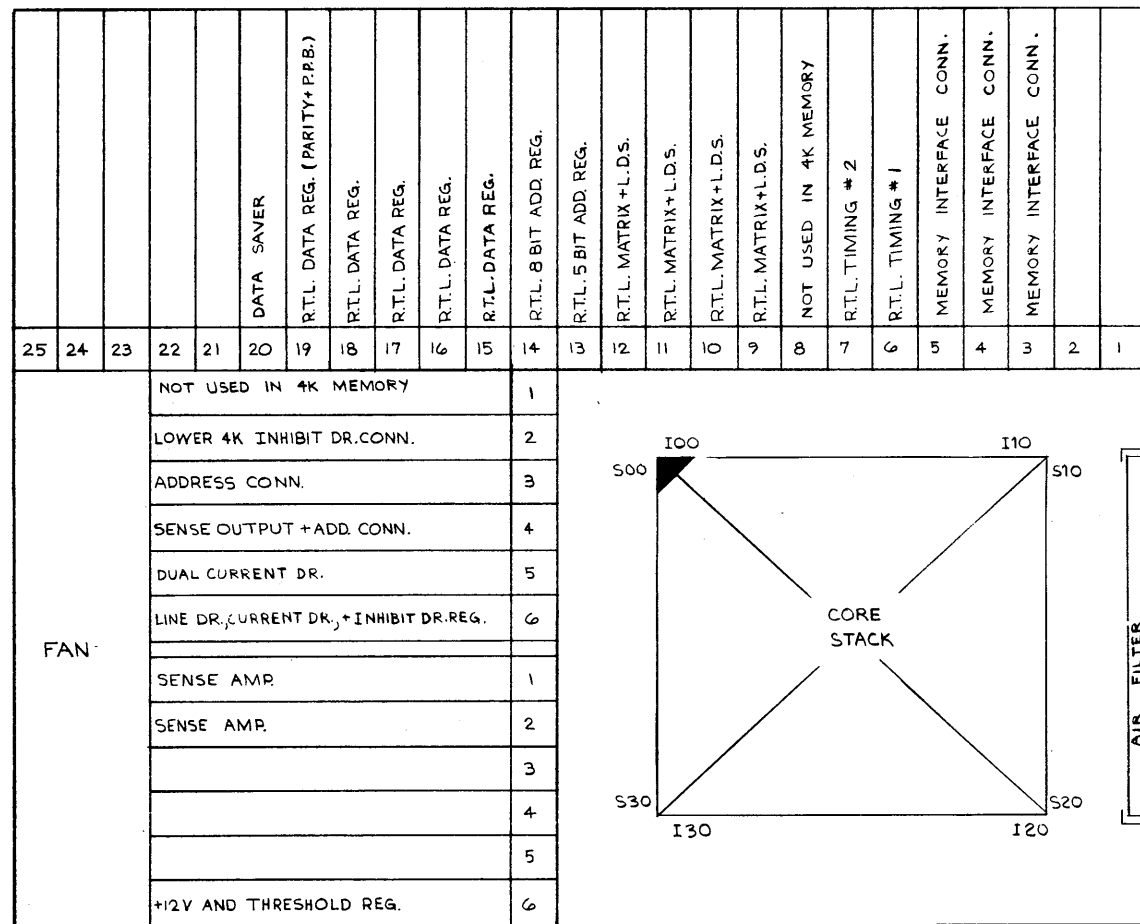
FROM R.T.L. DATA REG AND INHIBIT DR



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	<b>Systems Engineering Laboratories</b> 6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
	DR.R. SANBORNE	5-24-67	LOGIC DIAGRAM
	CHK		4Kx18 MEMORY a
	ENG. [Signature]	8/20/67	CORE STACK WIRING
PROJ. [Signature]	8/20/67		
APPD. [Signature]	8/20/67		
NEXT ASSY			
CODE IDENT NO.	SIZE	REV.	
20886	D	53111	

NOTES:  
 1. S33 & S34 ARE TERMINATED INDIVIDUALLY TO TWO RESISTORS (330Ω, 1/4W)  
 2. I33 & I34 ARE TERMINATED INDIVIDUALLY TO TWO RESISTORS (470Ω, 1/4W)

REV	DESCRIPTION	DATE	APP'D
D	53111		B
A	68-199; ADDED NOTES 1 & 2 Revised 4-19-68 RKM	4/19/68	[Signature]
B	68-309 DUAL CURRENT DR WAS 8959-5, ADDED SENSE AMP RESISTOR TERM 83282-1. J. PINEDO, 6-7-68 W	6/7/68	[Signature]



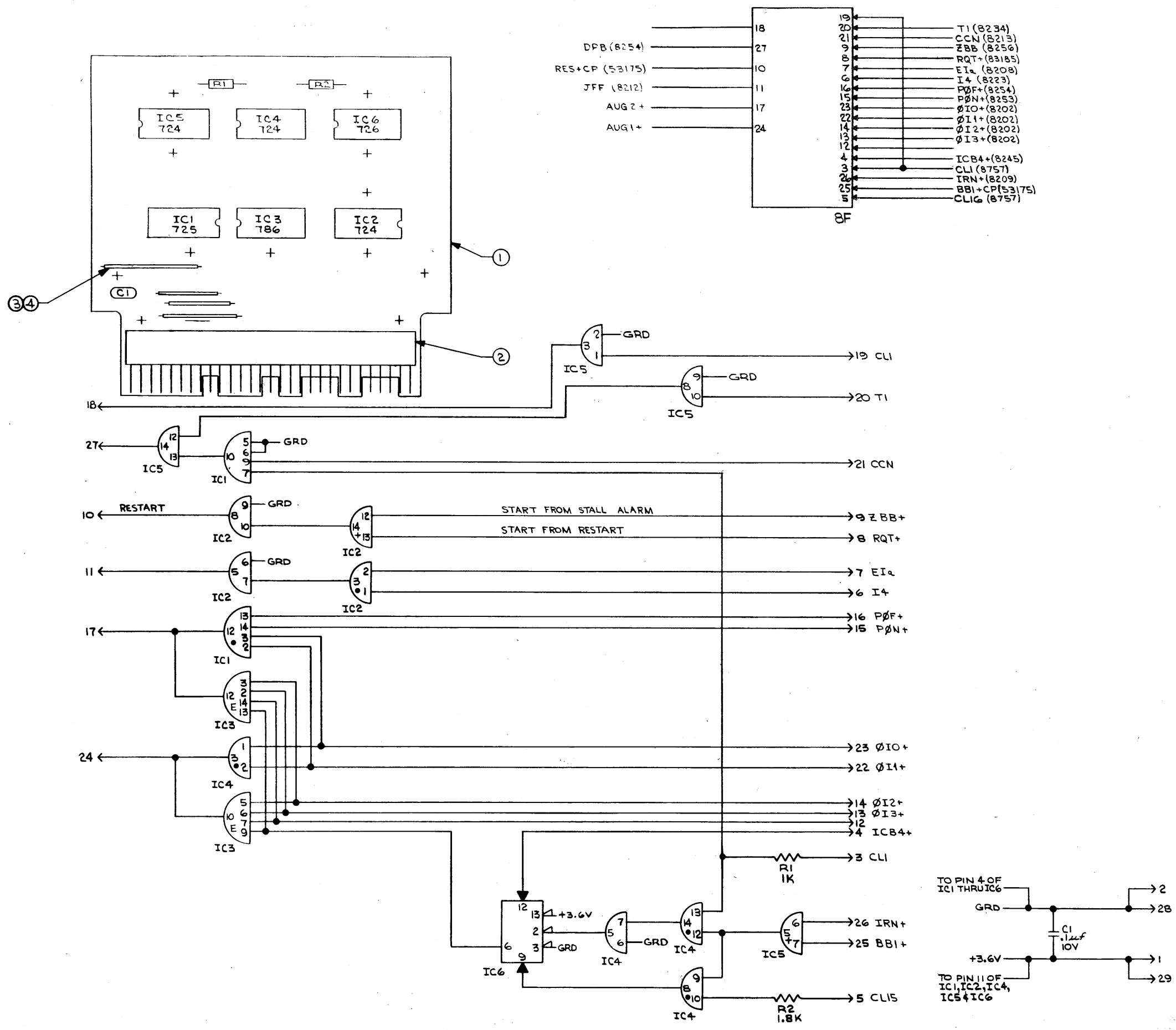
CARD SIDE VIEW

CARD NAME	CARD LOCATION	CARD TYPE	4Kx16	4Kx16 + PARITY	4Kx16 + PARITY + MEMORY PROTECT
R.T.L. MEMORY TIMING #1	6H	8270-1	1	1	1
R.T.L. MEMORY TIMING #2	7H	8271-1	1	1	1
R.T.L. READ/WRITE MATRIX AND LINE DR. SW.	9H THRU 12H	8273-1	4	4	4
R.T.L. 5 BIT ADDRESS REG. + 8K CONTROL	13H	8275-1	1	1	1
R.T.L. 8 BIT ADDRESS	14H	8274-1	1	1	1
R.T.L. DATA REGISTER AND INHIBIT DR.	15H THRU 18H	8272-3	4	4	4
R.T.L. DATA REGISTER AND INHIBIT DR.	19H	8272-2	0	1	0
R.T.L. PARITY PROTECT DATA REG. + INHIBIT DR.	19H	8276-1	0	0	1
DATA SAVER	20H	8639-2	1	1	1
INHIBIT RESISTOR CARD	2K	8278-1	1	1	1
CORE STACK CONNECTOR CARD	3K AND 4K	8960-1	2	2	2
DUAL CURRENT DRIVER	5K	8959-4	1	1	1
LINE DR. AND CURRENT DR. REG.	6K	8269-1	1	1	1
U.A. SENSE AMP	1L	8962-10	1	1	1
U.A. SENSE AMP	2L	8962-8	0	0	1
U.A. SENSE AMP	2L	8962-7	0	1	0
U.A. SENSE AMP	2L	8962-6	1	0	0
+12V AND THRESHOLD REG.	6L	8277-1	1	1	1
SENSE AMP RESISTOR TERMINATOR	4K	83282-1	1	1	1

ITEM	DWG. OR PART NO.	DESCRIPTION
	5-8-67	CARD LAYOUT & USAGE CHART
DR. AL SCHECKLER	5-8-67	4Kx18 MEMORY a
ENGR. [Signature]	9/20/67	
PROJ. APP. [Signature]	9/29/67	
APP. [Signature]	9-29-	
USED ON	9126	
REV	D	53111
APP'D		B

NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 5%, 1/4W.  
 3. FOR DRILLING AND DIMENSIONAL SEE D 8318600

SIZE	REV.	DESCRIPTION	DATE	APPD
D		83186		B
A		6T-315; REVISED TO AGREE WITH LATEST P.C. BACKGROUND. RI WAS 1.8K. ADDED LOGIC BF. BIP 8/31/67	8/31/67	RKM
B		6T-445; ADDRESSES REVISED AND LINE TITLES ADDED. AS 10/27/67	10/27/67	AE



QTY	REF	PART NO.	DESCRIPTION
1	R2	RC07GF182J	RESISTOR-1.8K, ALLEN BRADLEY
1	R1	RC07GF102J	RESISTOR-1K, ALLEN BRADLEY
1	IC6	MC 726 P	INTEGRATED CIRCUIT-MOTOROLA
1	IC3	MC 786 P	
3	IC5	MC 724 P	
1	IC4	MC 724 P	
1	IC2	MC 724 P	
1	IC1	MC 725 P	
1	C1	UK-10-104	CAPACITOR-.1uF +80% -20%, 10V, CRL.
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE-SOLID COPPER, TINNED
1	2	00-1022-029-000-001	CONNECTOR-ELCO
1	1	3186	PRINTED CIRCUIT (FOR REV. SEE A53107)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

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**Systems Engineering Laboratories**  
 8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR C.E.M.	8/4/67
CHK RKM	8-7-67
ENGR J. West	8-15-67
PROJ	
APPD	
NEXT ASSY	

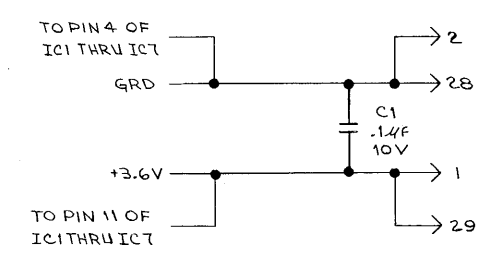
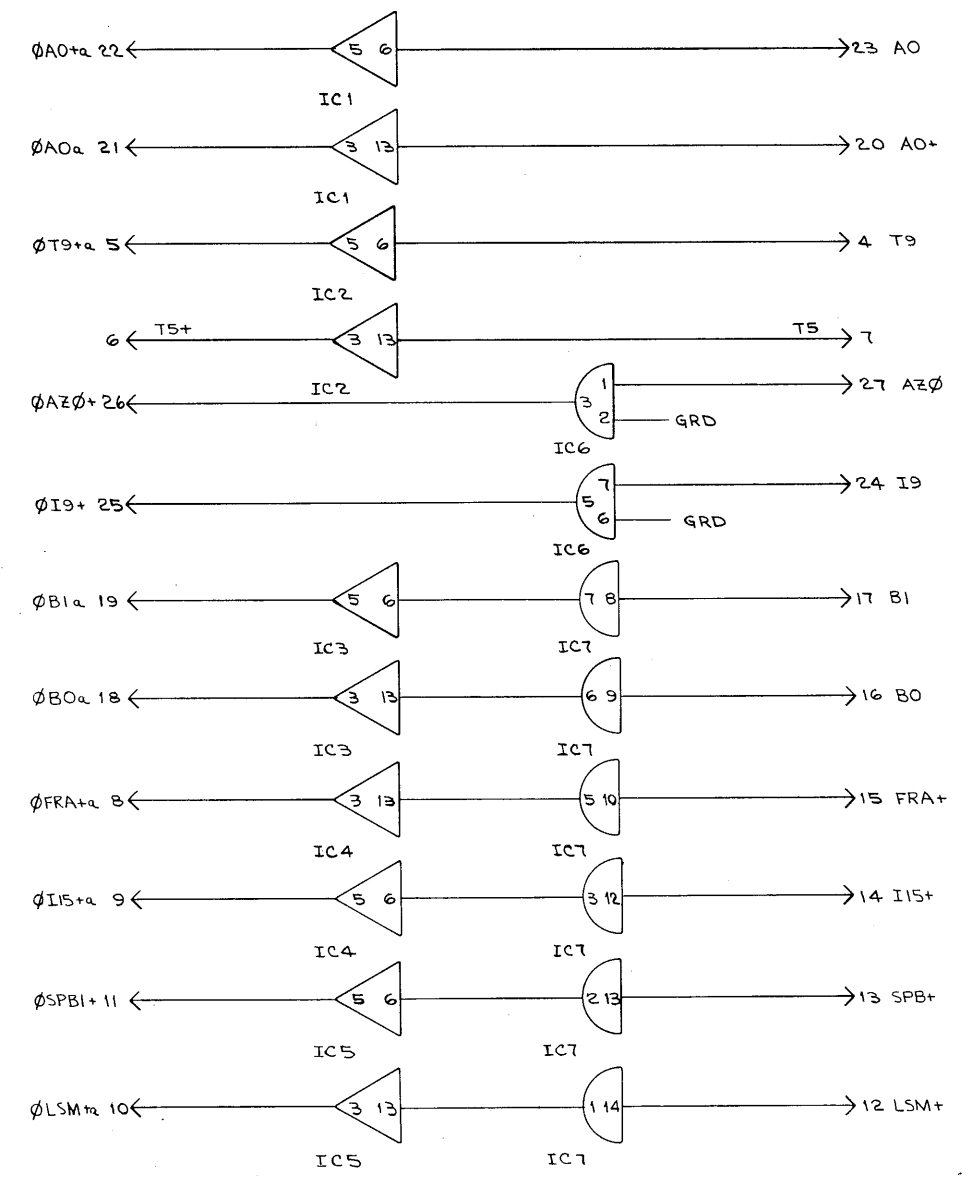
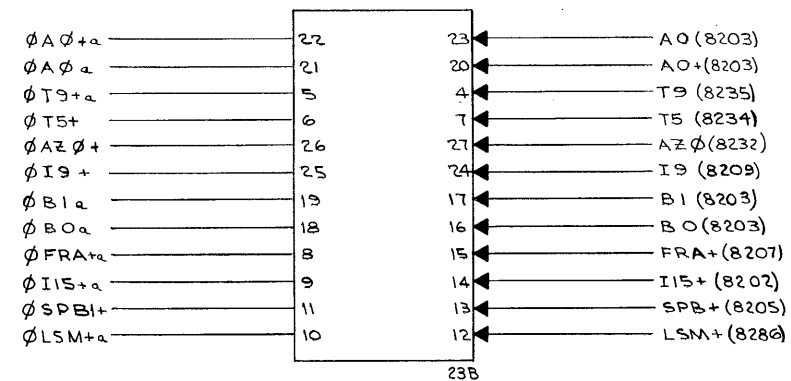
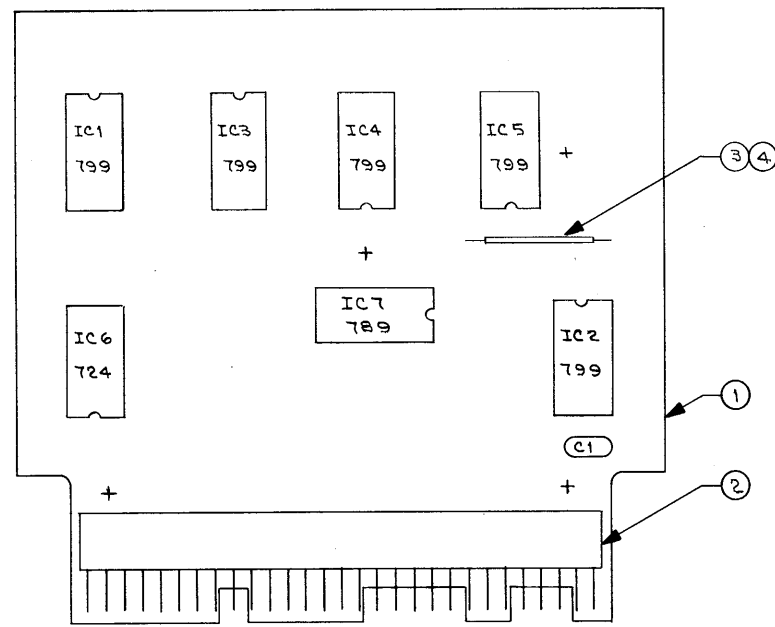
**SCHEMATIC & ASSEMBLY  
 RTL AUGMENT  
 CONTROL**

CODE IDENT NO.	SIZE	REV.
20886	D	83186
		B



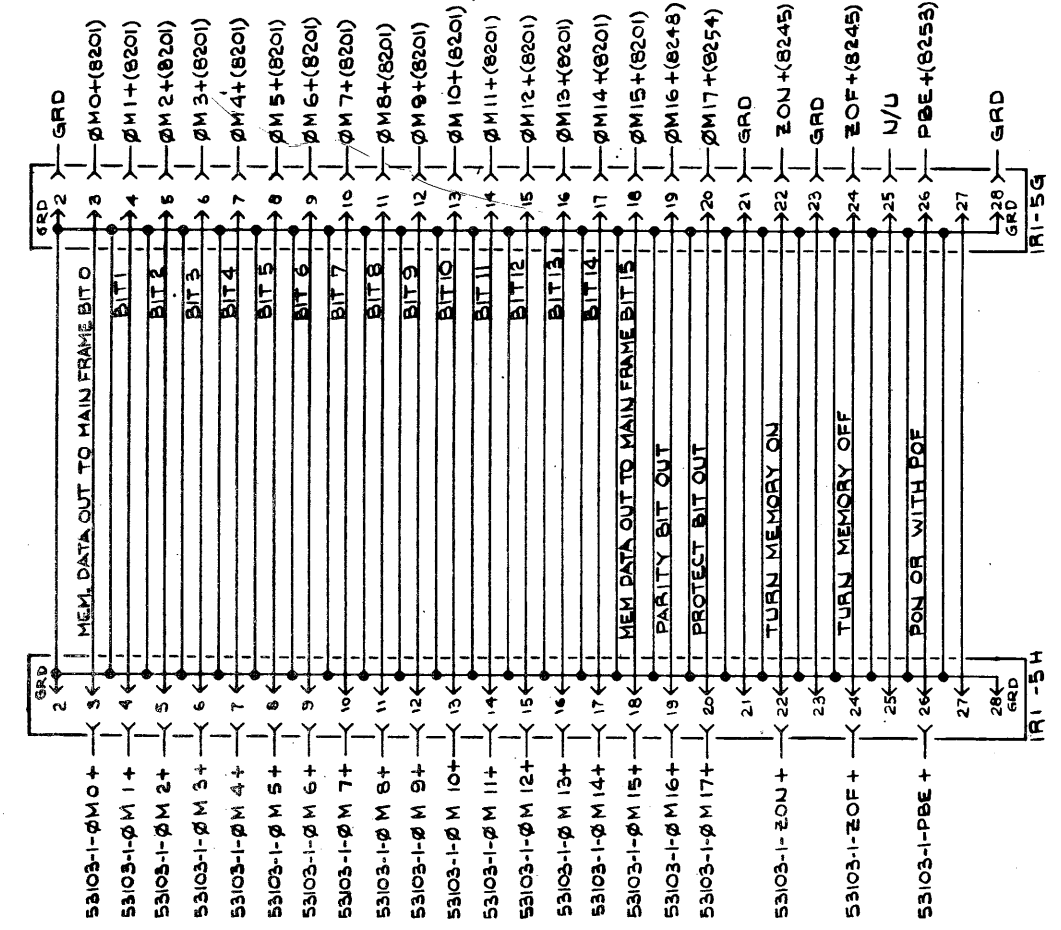
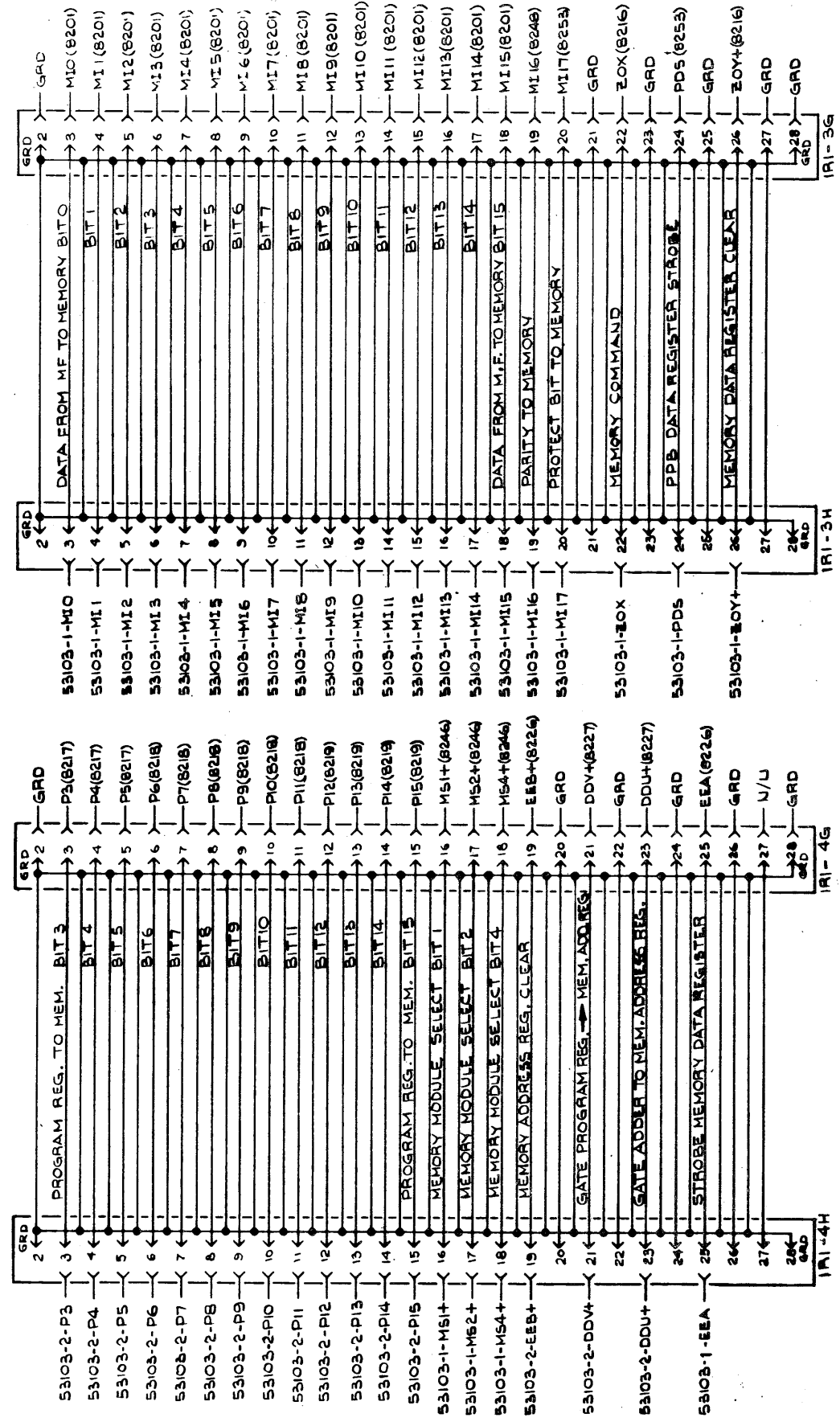
NOTES:  
 1. ALL ITEMS AS SPECIFIED IN LIST OF MATERIAL OR APPROVED EQUIVALENT.  
 2. FOR DRILLING AND DIMENSIONAL DWG SEE D8318700.

SIZE	D	83187	REV.	B
REV.		DESCRIPTION	DATE	APPD
A		67-445; ADDRESSES REVISED, LINE TITLES ADDED AND CARD NUMBERS ADDED. AS. 10-27-67. CW	10/27/67	
B		68-199; PINS 6&7 WERE SPARE. <i>W. Hand</i> 4-18-68 RKM	4/18/68	



1	IC7	MC 799P	
1	IC6	MC 724P	
	IC5		
	IC4		
5	IC3	MC 799P	INTEGRATED CIRCUIT - MOTOROLA
	IC2		
	IC1		
1	C1	UK10-104	CAPACITOR - .14F+80-20%, 10V, CRL
AR	4	AWG 24	SLEEVING-TEFLON, THINWALL
AR	3	AWG 24	WIRE - SOLID COPPER, TINNED.
1	1	00-7022-029-000-000	CONNECTOR - ELCO
1	1	3187	PRINTED CIRCUIT - (FOR REV. SEE A53170)
-1	ITEM	DWG. OR PART NO.	DESCRIPTION

<b>Systems Engineering Laboratories</b>			
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310			
DRC PRUNA	8-2-67	SCHEMATIC & ASSEMBLY RTL MISC. BUFFERS	
CHK RKM	8-3-67		
ENGR <i>E. W. Hart</i>	8-15-67		
PROJ <i>W. Hand</i>	8-15-67		
APPD <i>E. W. Hart</i>	8-15-67	CODE IDENT NO.	SIZE
NEXT ASSY		20886	D 83187
			REV. B



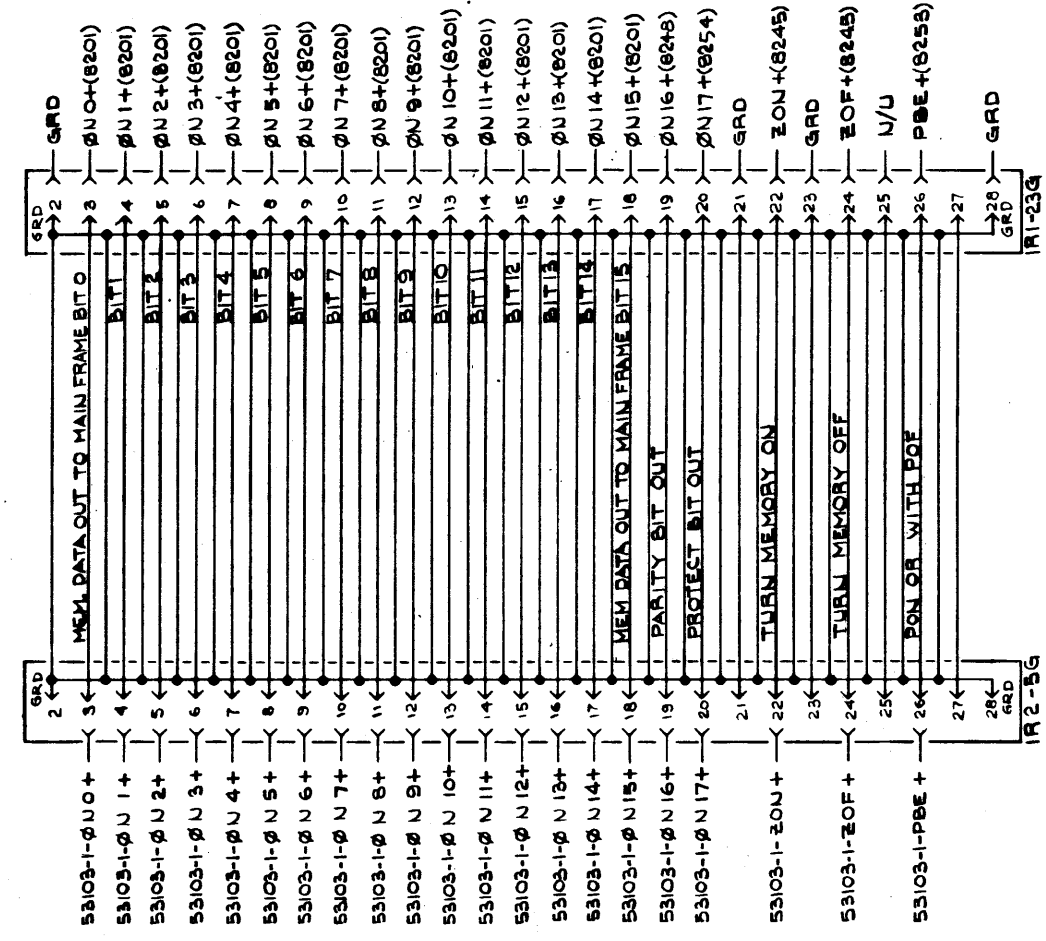
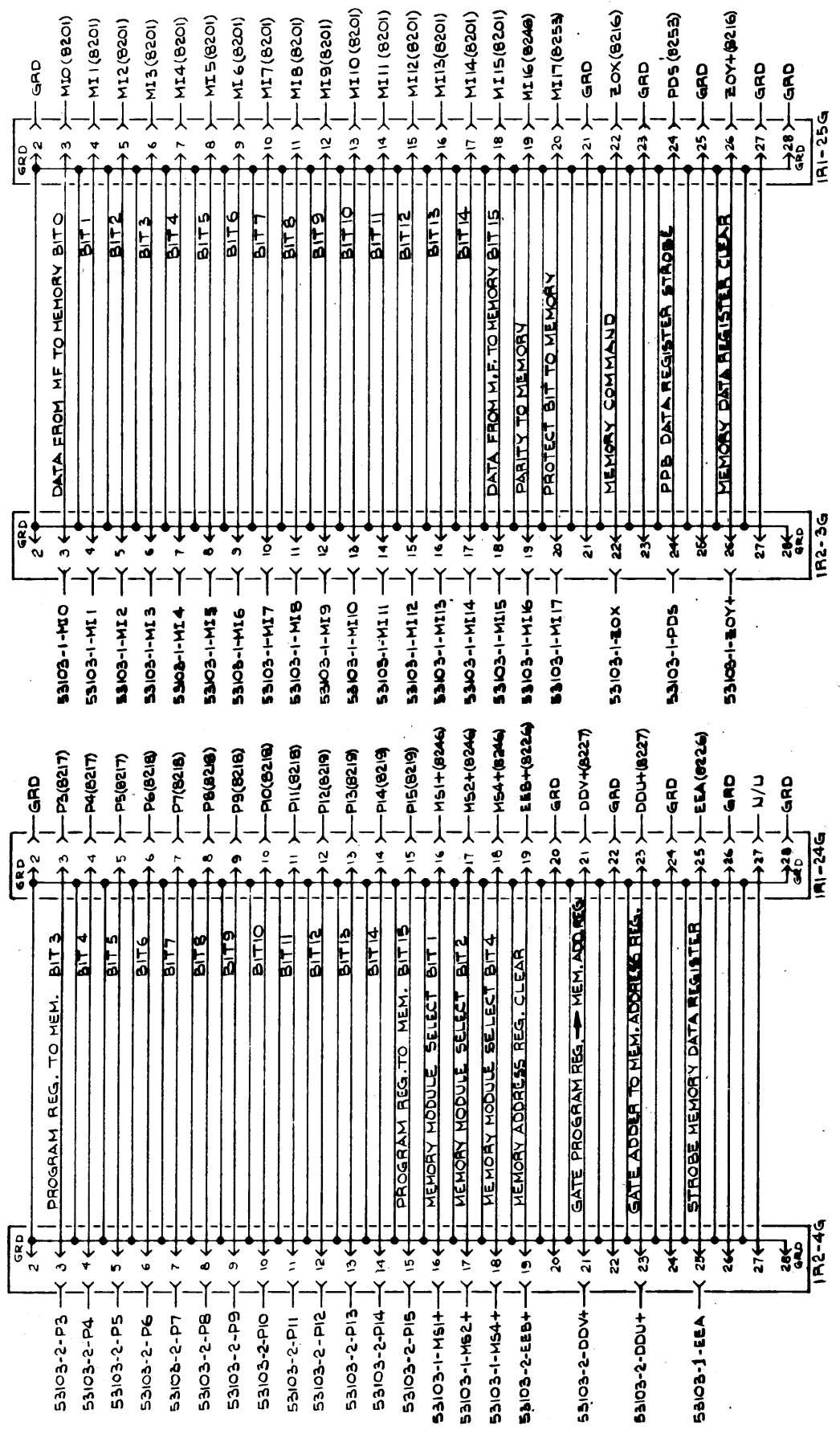
NOTES:  
1.

REV	DESCRIPTION	DATE	APPD
D	52993		
A	67-445 UPDATED TO LATEST CHANGES. ADDED SHEET 2 J. PINEDO. 10-27-67 ML	10/27/67	

ITEM	DWG. OR PART NO.	DESCRIPTION
SEL		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR	J. PINEDO	WIRING DIAGRAM INTERCONNECTING CABLES MEMORY MODULE # 1
CE		
ENG		
PROJ. LEAD		
APP.		
USED ON	D	52993

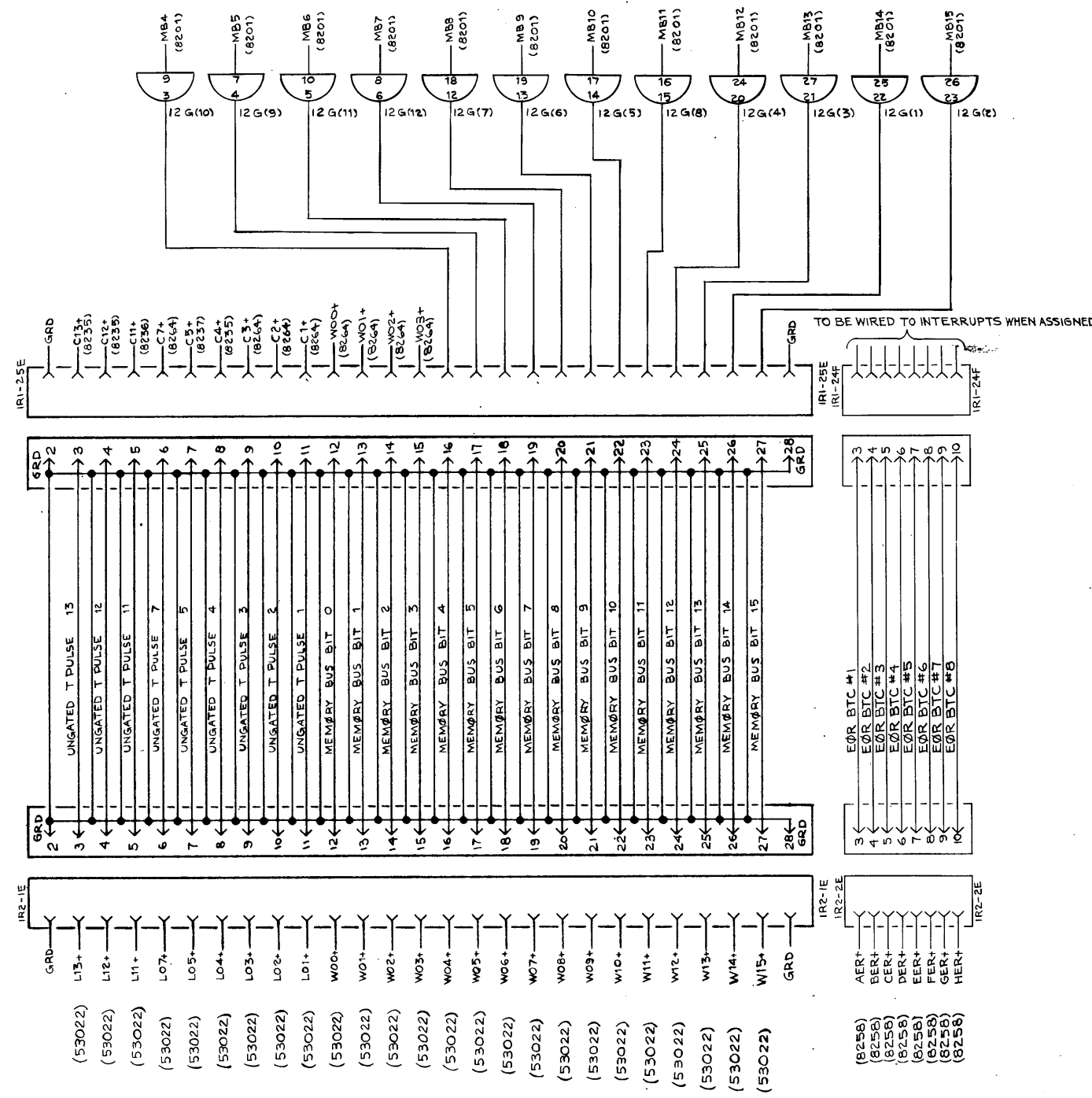
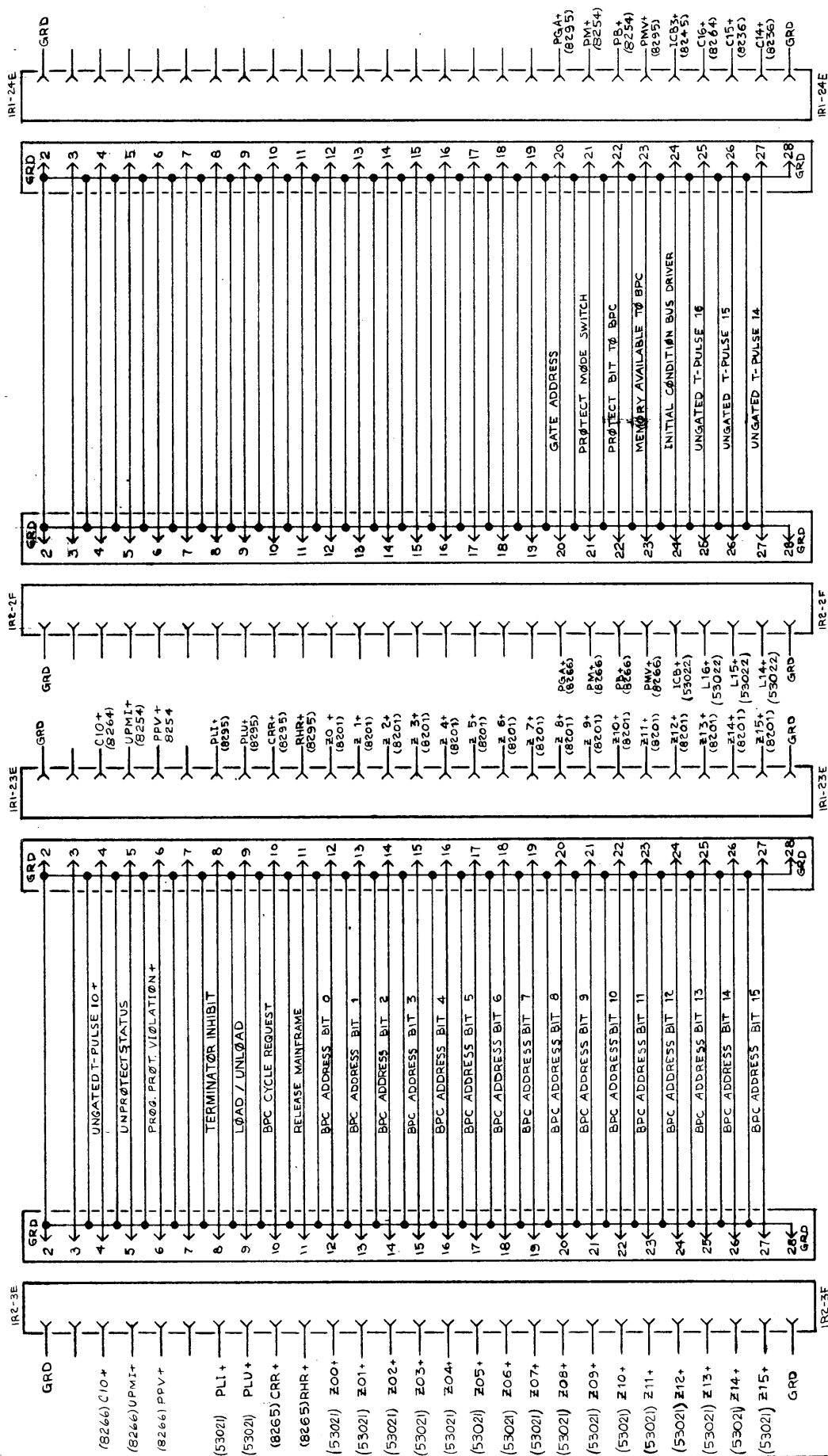
NOTES:  
1.

REV	D	52993	DATE	10/27/67
DESCRIPTION	67-445: THIS SHEET ADDED			
ADDN	J. PINEDO, 10-27-67 M.L.			



ITEM	DWG. OR PART NO.	DESCRIPTION
SEL		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR	J. PINEDO	10-27-67
CHKD	W. Williams	10-31-67
ENG	W. Williams	11-1-67
PROJ. AP.	W. Williams	11-21-67
USED BY		
REV	D	52993
DATE		10/27/67

WIRING DIAGRAM  
INTERCONNECTING CABLES  
MEMORY MODULE # 2



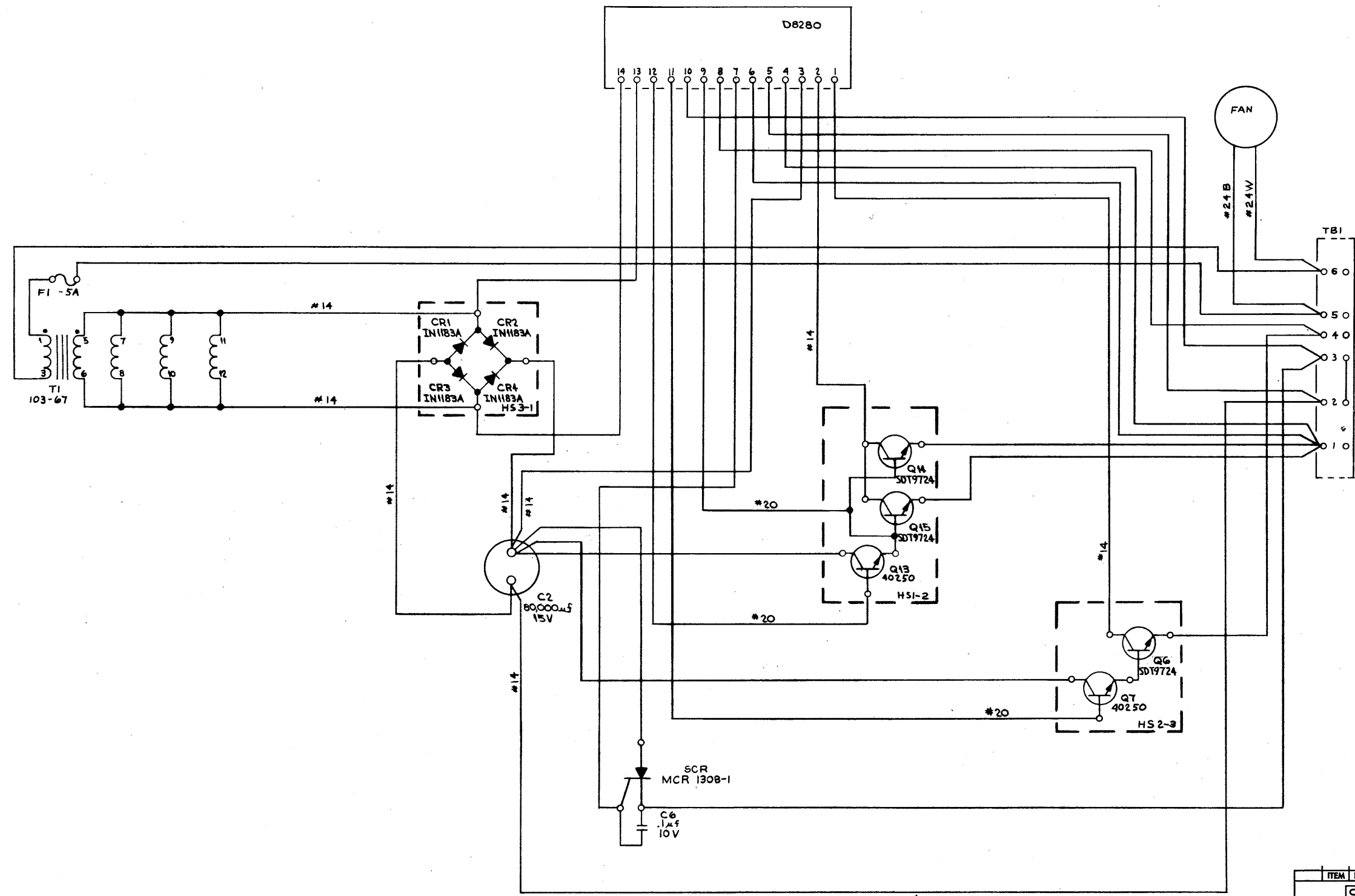
NOTES:  
1.

REV	DESCRIPTION	DATE	APPD
D	53019		B
B	68-199; IRI-25E WAS IRI-25F ADDED WIRING TO BE ASSIGNED 4/19/68 RKM	4/19/68	[Signature]

ITEM	DWG. OR PART NO.	DESCRIPTION	
 SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
BY	J. PINEDO 5/3/67	<b>WIRING DIAGRAM</b> <b>INTERCONNECTING CABLES</b> <b>BPC-MEMORY INTERFACE</b>	
BY	A. Williams 10/31/67		
BY	[Signature] 9/20/67		
BY	[Signature] 9/20/67		
REV	D	53019	B

NOTES:  
 1. ALL WIRES UNLESS OTHERWISE SPECIFIED TO BE 1/8 GA. WHITE.

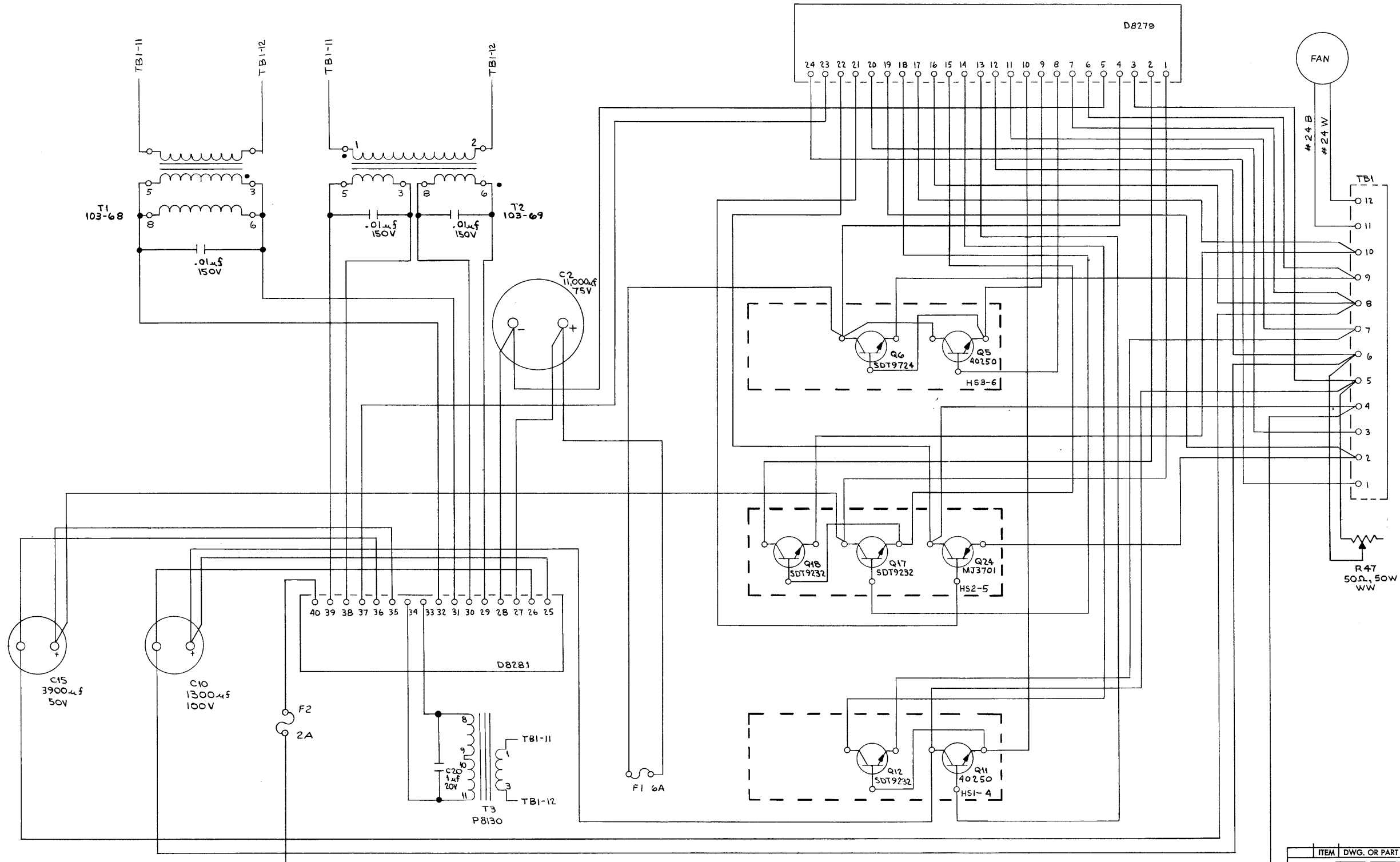
REV	DESCRIPTION	DATE	APP'D
D	53039		



ITEM	DWG. OR PART NO.	DESCRIPTION		
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	R. WHITE 3-31-67	WIRING DIAGRAM POWER SUPPLY MODEL 221		
ENGR.	<i>[Signature]</i> 4/20/67			
PROJ. MGR.	<i>[Signature]</i> 4/20/67			
APP'D	<i>[Signature]</i> 5-20-67			
CODE IDENT NO	20886	SIZE	D	53039

NOTES:  
1. FOR SCHEMATIC SEE D53140.

REV	DESCRIPTION	DATE	APP'D
D	53040		
A	G7-43G; ADDED R47, C10 WAS 3900 $\mu$ f, 50V. RKM 10-19-67 ul	10/1/67	OK
B	G7-475; ADDED F2, A2 FUSE TO -16V SUPPLY CIRCUIT. H.R.L. 11-2-67 CRAWLEY	11/3/67	OK

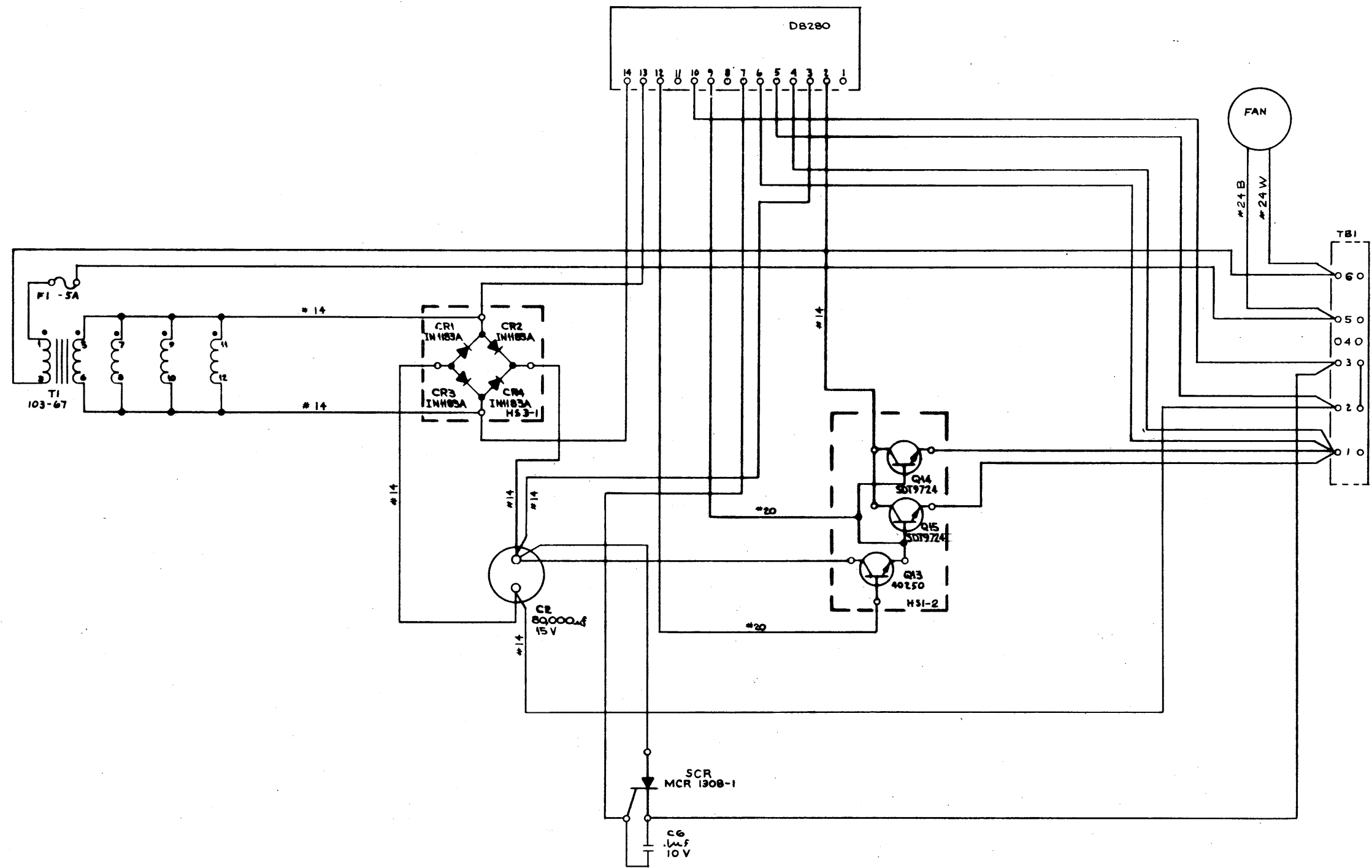


ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	R. WHITE 3-30-67	WIRING DIAGRAM POWER SUPPLY MODEL 222 MEMORY
CK.		
ENG.	W. S. [Signature] 9/20/67	
PROJ. APP.	[Signature] 8/20/67	
APP.	[Signature] 1/28/68	

CODE IDENT NO	20886	SIZE	D	53040	REV	B
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NOTES:  
1.

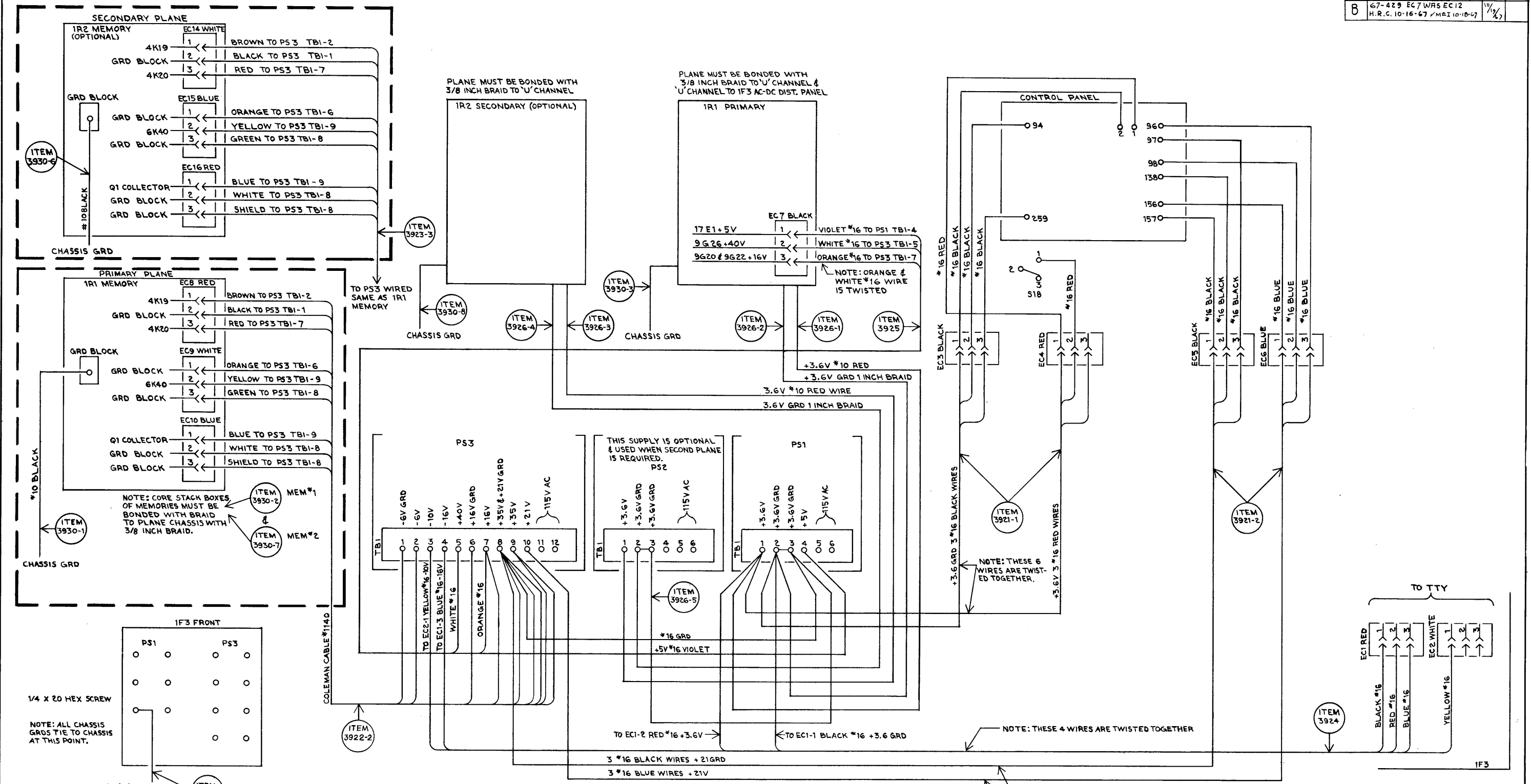
REV	D	53041
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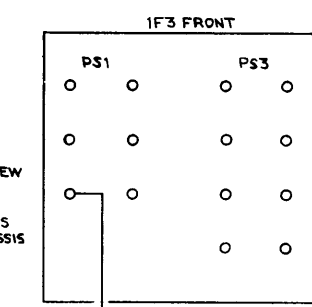
ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR	R. WHITE 3-31-67	WIRING DIAGRAM POWER SUPPLY MODEL 223				
CK						
ENG.						
PROJ. APP.						
APP.						
CODE IDENT NO	20886	SIZE	D	53041	REV	

NOTES:  
1.

REV	D	53063	REV	B
DESCRIPTION	67-324: ITEM 3926-3 WAS 3926-2		DATE	9/8/67
	HRL 9-7-67 VHR 9-7-67			
	67-429 EC7 WAS EC12			
	H.R.C. 10-16-67 / MEI 10-18-67			



1/4 X 20 HEX SCREW  
NOTE: ALL CHASSIS GRDS TIE TO CHASSIS AT THIS POINT.



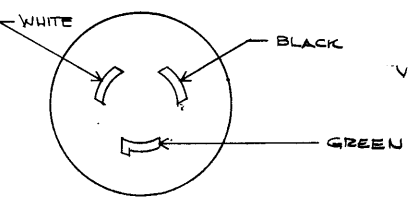
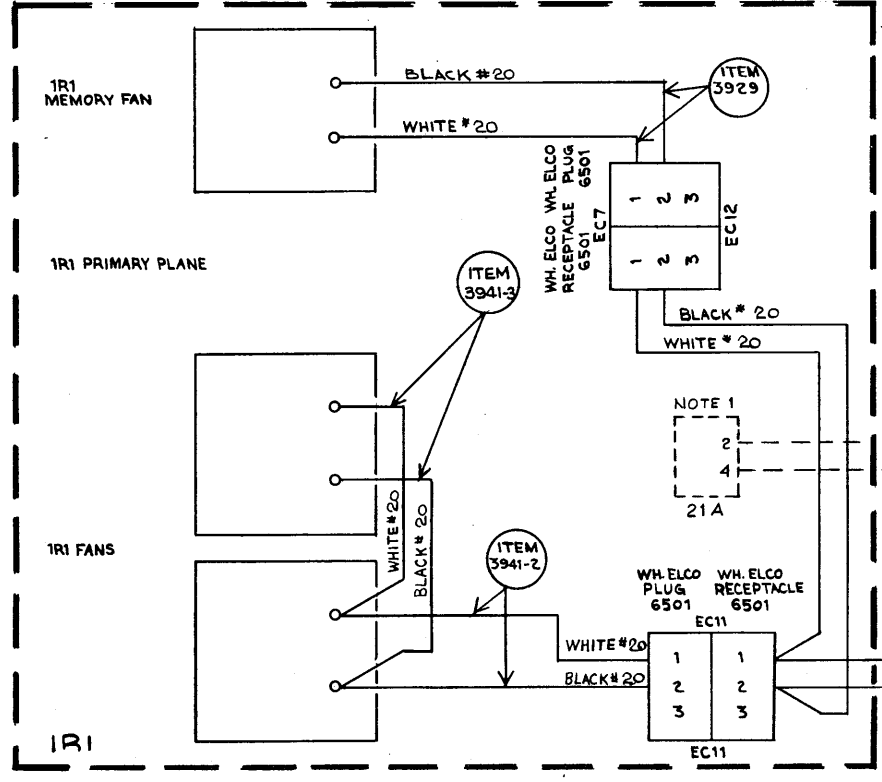
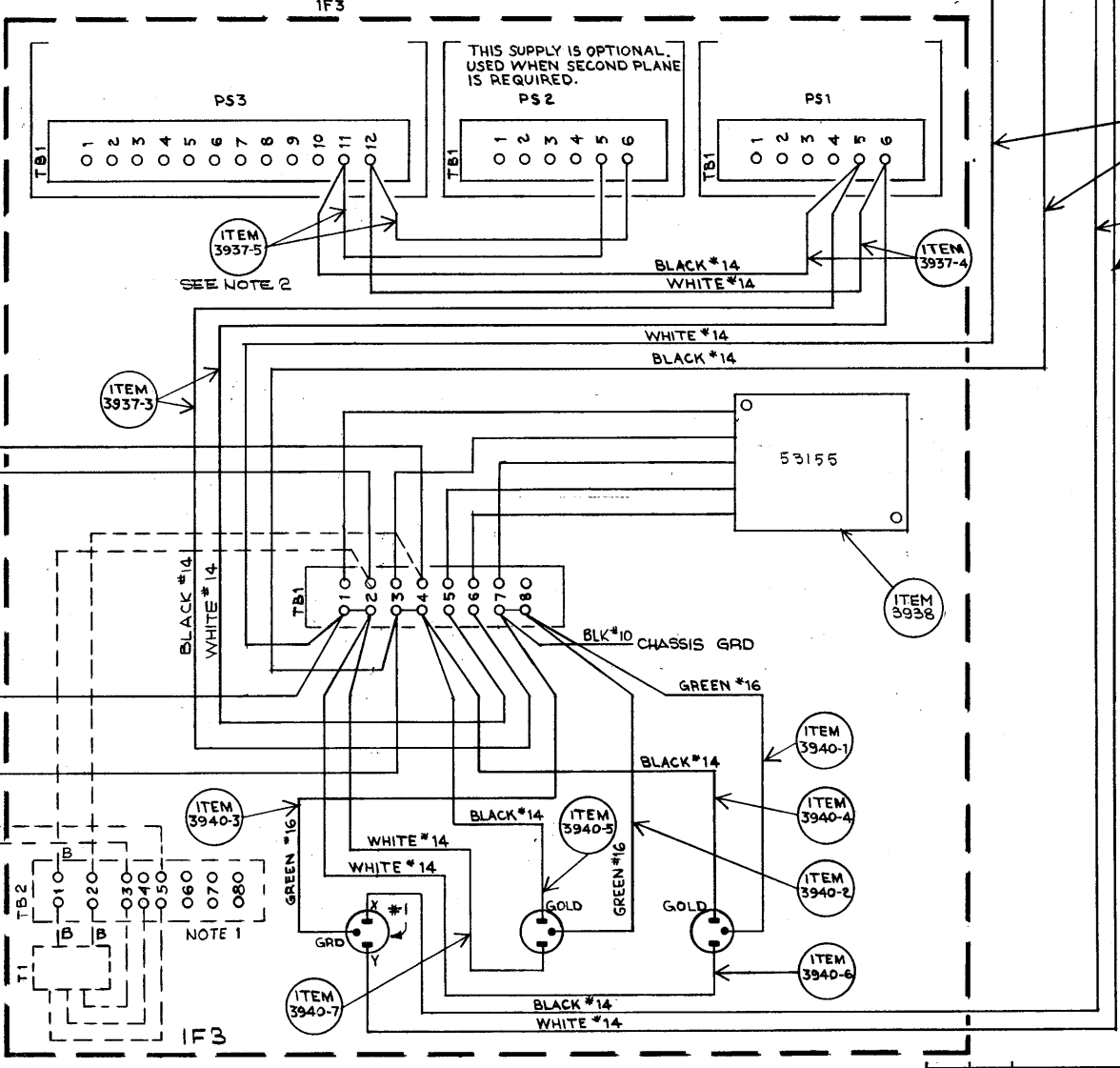
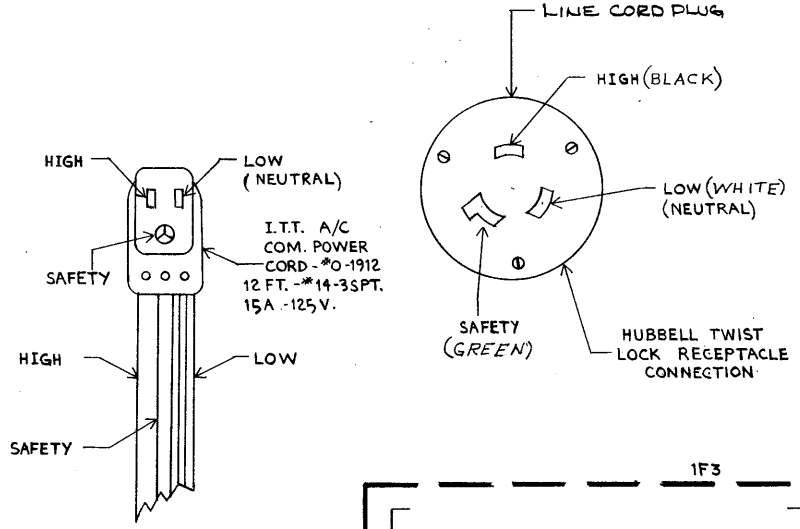
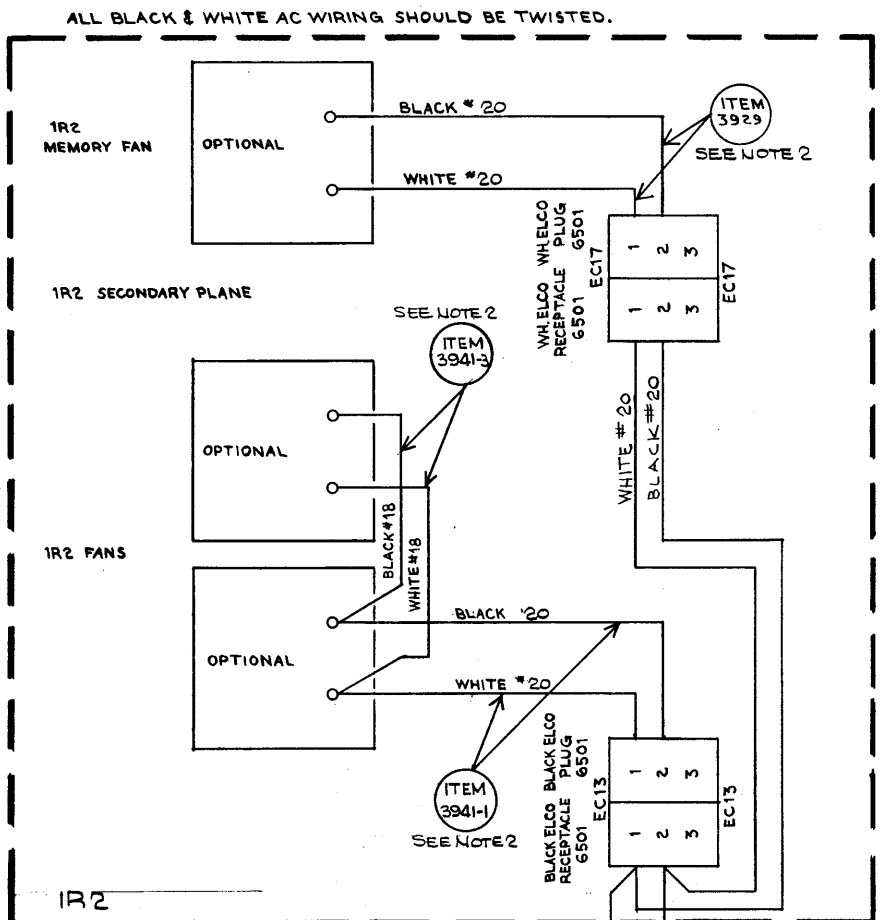
COLEMAN CABLE #1140

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR.	D. LLOYD 5-20-67	WIRING DIAGRAM
CK.		
ENG.	Dr. Manning 6-22-67	DC POWER DIST. 810a
PROJ. APP.	W. D. 8/22/67	
CODE IDENT NO.	20886	SIZE
USED ON		D 53063
		REV B



NOTES:  
 1. ADD TRANSFORMER & TERMINAL STRIP FOR 60 Hz CLOCK OPTION (T1 & TB2)  
 2. ALL OPTIONS USED ON SEC. PLANE OR SINGLE P/S.

REV.	DESCRIPTION	DATE	APPD
D	53064		F
A	67-240; UPDATED TO LATEST CHANGES. M. CASE 7-14-67 <i>cau</i>	7/14/67	<i>cau</i>
B	67-279; UPDATED TO LATEST CHANGES. J. PINEDO. 8-10-67 <i>cau</i>	8/10/67	<i>cau</i>
C	67-324; ADDED WIRE COLOR CODE TO HUBBELL TWIST LOCK CONNECTOR HEL 9-7-67/HRC3-7-67	9/7/67	<i>cau</i>
D	67-429; EC12 WIRE SEC7 H.R.C. 10-16-67 / MRE 10-18-67	10/18/67	<i>cau</i>
E	68-97 - ADDED T1; TB2 & 21A. WIRING TBI-4 TO TBI-2 TO T1 PRIMARY; TB2-3 TO T1 SECONDARY TO 1R121A2; TBI-2 TO TBI-1 TO T1 PRIMARY; TB2-4 TO T1 SECONDARY; TB2-5 TO T1 SECONDARY TO 1R121A2. ADDED NOTE 1 LAUCK 2-22-68 CRAWLEY	2/23/68	<i>cau</i>
F	68-312; UPDATED TO INCLUDE LATEST CHANGES J. PINEDO, 6-7-68 <i>cau</i>	6/7/68	<i>cau</i>



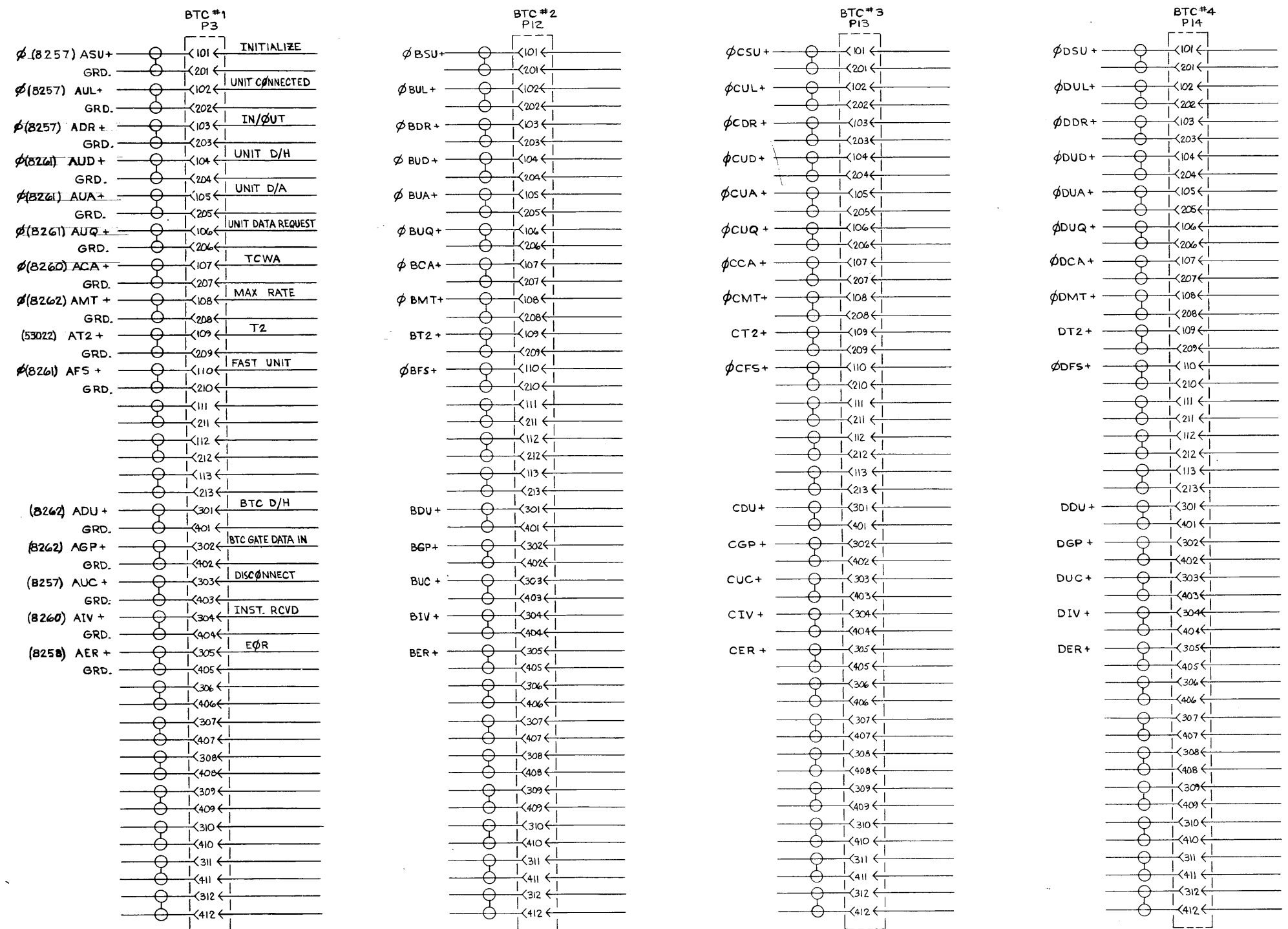
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ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b>		
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR. D. LLOYD	5-23-67	WIRING DIAGRAM
CHK C. Williams	10-31-67	
ENGR J. M. Manning	6-22-67	
PROJ W. C. Reed	10-22-67	AC POWER DISTRIBUTION 810a
APPD J. M. Manning	10-31	
NEXT ASSY		

CODE IDENT NO.	SIZE	REV.
20886	D 53064	F

NOTES:  
1. #22 RED/BLACK TWISTED SOLID WIRE.

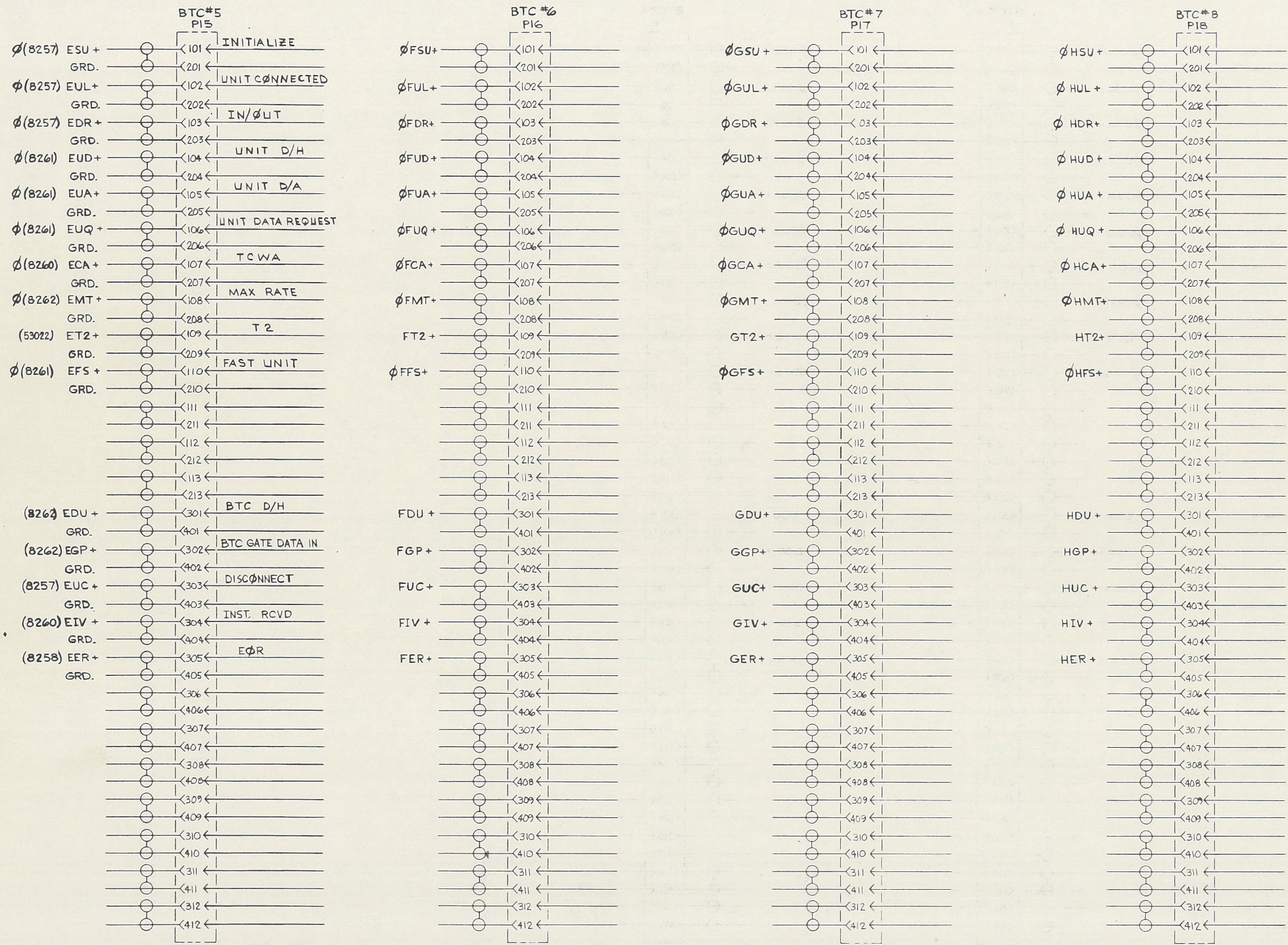
REV	DESCRIPTION	DATE	APP'D
D	53072		BY B
A	67-198 UPDATED TO LATEST CHANGES C.PRUNA 6-19-67 CAW.	6/23/67	CAW
B	68-199; P12 WAS P14, P13 WAS P15, & P14 WAS P16. <del>REVISION 7-19-68</del> RKM	4/19/68	RKM



ITEM	DWG. OR PART NO.	DESCRIPTION	
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. AL SCHECKLER	4-26-67	WIRING DIAGRAM BTC TO UNIT 1,2,3,4 50 PIN CONNECTOR	
CK.			
ENG. E. Villanti	6/8/67		
APP. [Signature]	6/14/67		
CODE IDENT NO 20886	USED ON 9126	SIZE D	REV B

NOTES:  
1. #22 RED/BLACK TWISTED SOLID WIRE.

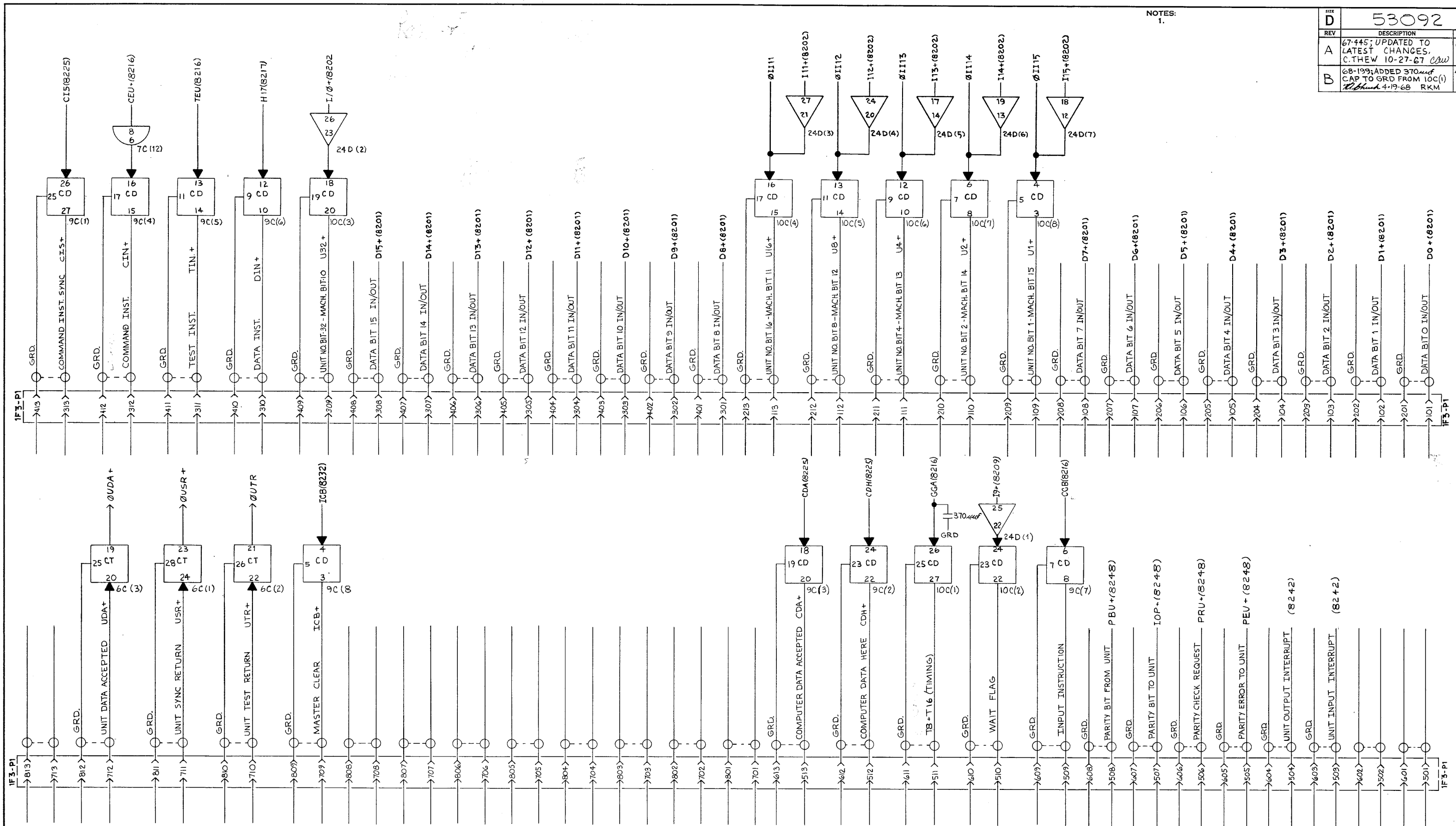
REV	DESCRIPTION	DATE	APP'D
D	53072		
A	67-198 UPDATED TO LATEST CHANGES C.PRUNA 6-20-67 CAW	4/23/67	[Signature]
B	68-199; P15 WAS P17, P16 WAS P18, P17 WAS P19, P18 WAS P20 *Revised 4-19-68 RKM	4/19/68	[Signature]



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA
DR.	AL SCHECKLER 4-26-67	WIRING DIAGRAM BTC TO UNIT #5, 6, 7, 8 50 PIN CONNECTOR
CK.		
ENG.	C. W. [Signature] 4/2/67	
PROJ. APP.	[Signature] 6/18/67	
CODE IDENT NO.	20886	USED ON 9126
SIZE	D	53072
REV	B	

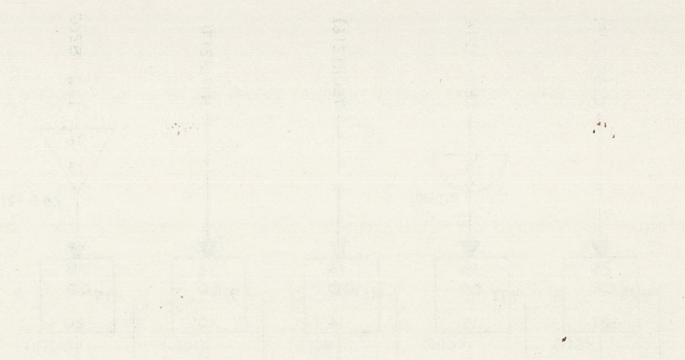
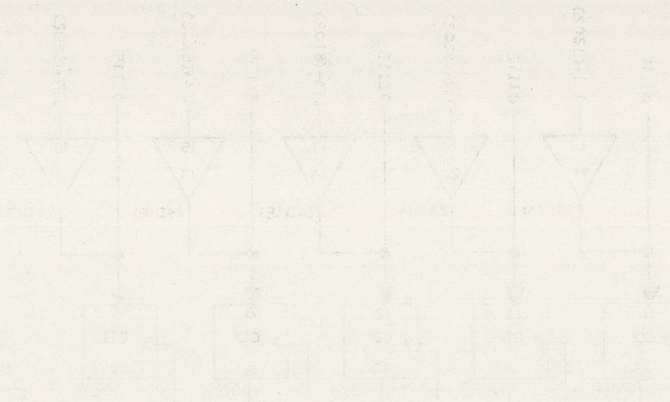
NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	53092		B
A	67-445; UPDATED TO LATEST CHANGES. C.THEW 10-27-67	10/27/67	[Signature]
B	68-199; ADDED 370μF CAP TO GRD FROM 10C(1) [Signature] 4/19/68	4/19/68	[Signature]



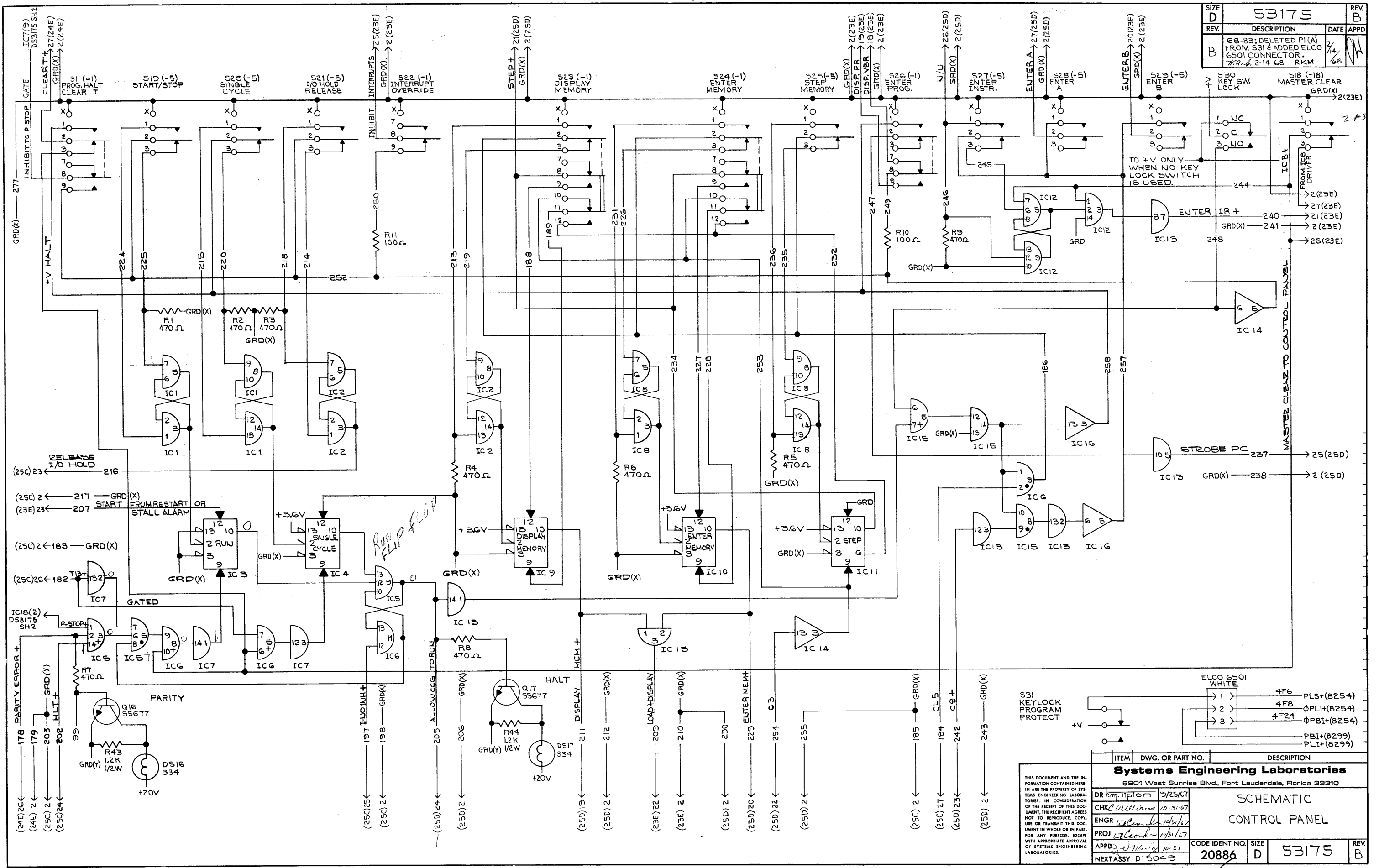
ITEM	DWG. OR PART NO.	DESCRIPTION				
<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR.	A. L. Scheckler 4-27-67	WIRING DIAGRAM BASIC INPUT/OUTPUT CABLE 104 PIN IF3-P1 AMP				
CK.	C. Williams 10-31-67					
ENG.	[Signature] 9/20/67					
PROJ. APP.	[Signature] 9/20/67					
CODE IDENT. NO.	20886	SIZE	D	53092	REV	B

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

SIZE	D	53175	REV	B
REV.	B	DESCRIPTION	DATE	APPD
		68-83; DELETED PI(A) FROM S31 & ADDED ELCO 6501 CONNECTOR. 7/4/68 2-14-68 RKM	2/14/68	



ELCO 6501 WHITE

1	4F6	PLS+(8254)
2	4F8	ΦPLI+(8254)
3	4F24	ΦPBI+(8254)
		PBI+(8299)
		PLI+(8299)

S31 KEYLOCK PROGRAM PROTECT

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b>		
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR	Km. Ippon	9/25/67
CHKD	Williams	10-31-67
ENGR	W. J. ...	10/31/67
APPD	W. J. ...	10-31
NEXT ASSY	DI 5049	

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CODE IDENT NO.	SIZE	REV.
20886	D	B

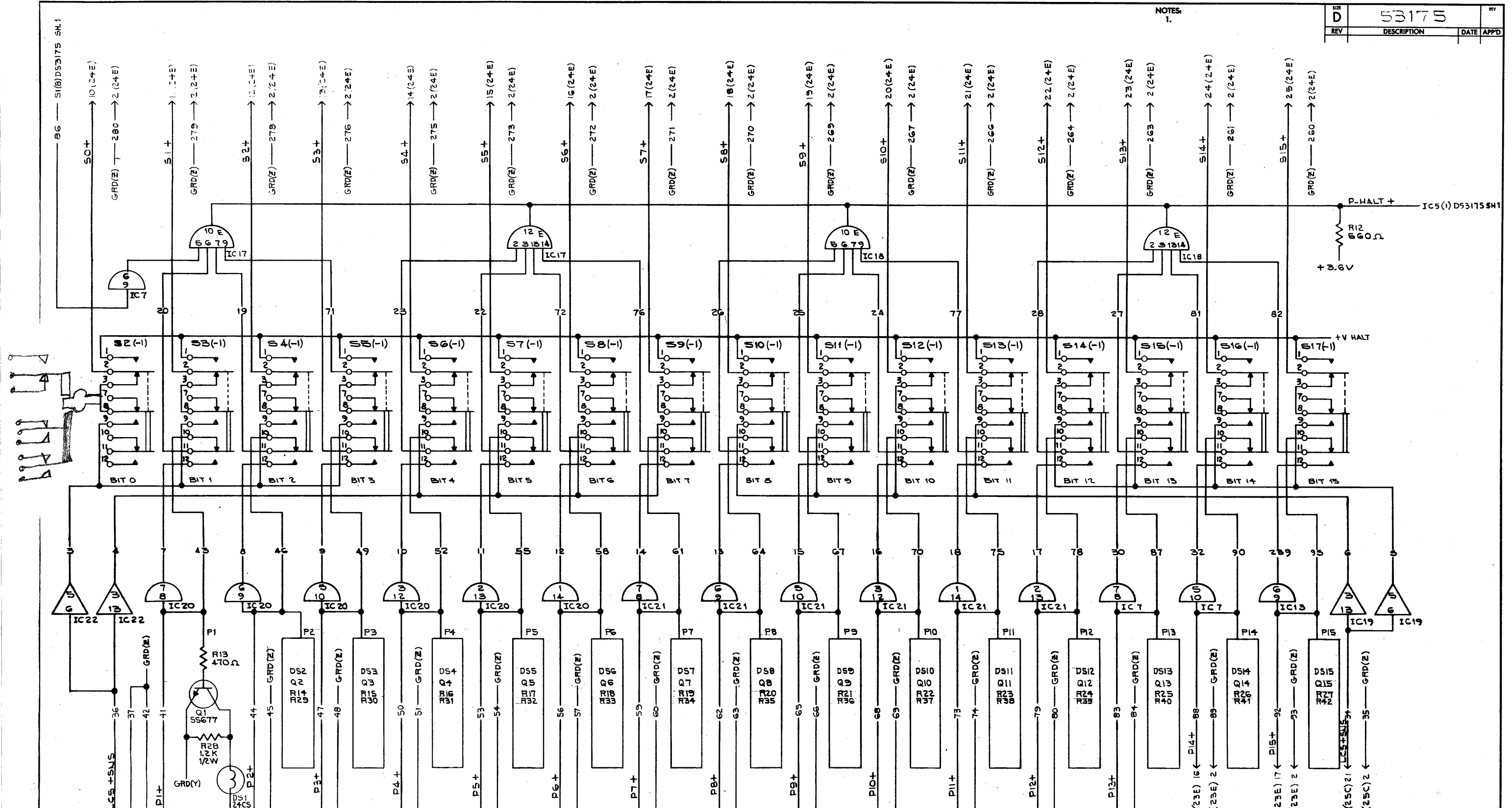
SCHEMATIC CONTROL PANEL

1 SHEET OF 3

See 5049 for parts location

NOTES:  
1.

REV	DESCRIPTION	DATE	APPD
D	53175		



ITEM	DWG. OR PART NO.	DESCRIPTION
1	DS1	RELAY
2	DS2	RELAY
3	DS3	RELAY
4	DS4	RELAY
5	DS5	RELAY
6	DS6	RELAY
7	DS7	RELAY
8	DS8	RELAY
9	DS9	RELAY
10	DS10	RELAY
11	DS11	RELAY
12	DS12	RELAY
13	DS13	RELAY
14	DS14	RELAY
15	DS15	RELAY

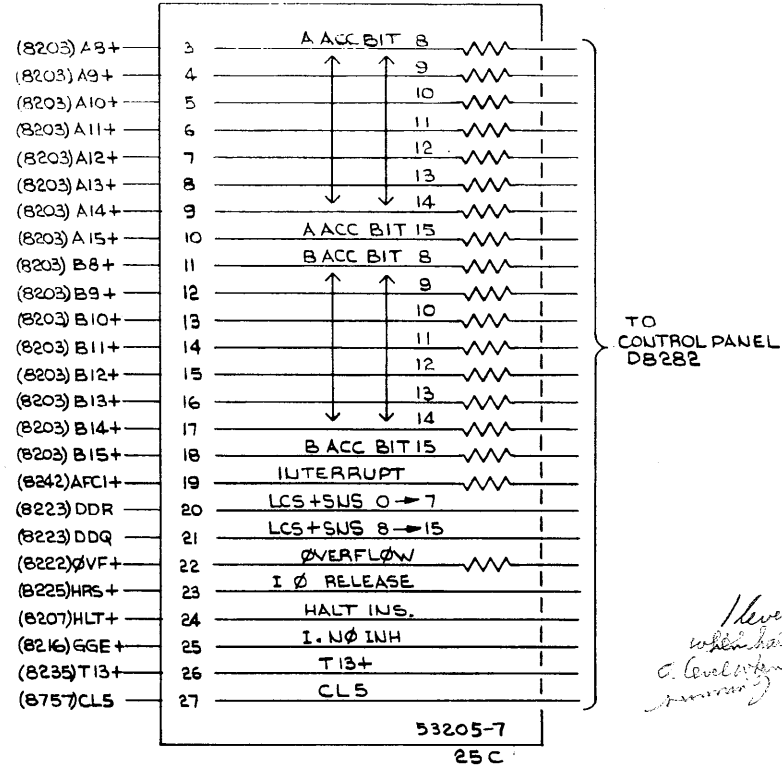
DR	F. M. J. P.	9/22/67
ENGR	W. Williams	10/31/67
PROJ. MGR.	W. Williams	10/31/67
APP'D	W. Williams	10/31/67
USED ON	D15049	

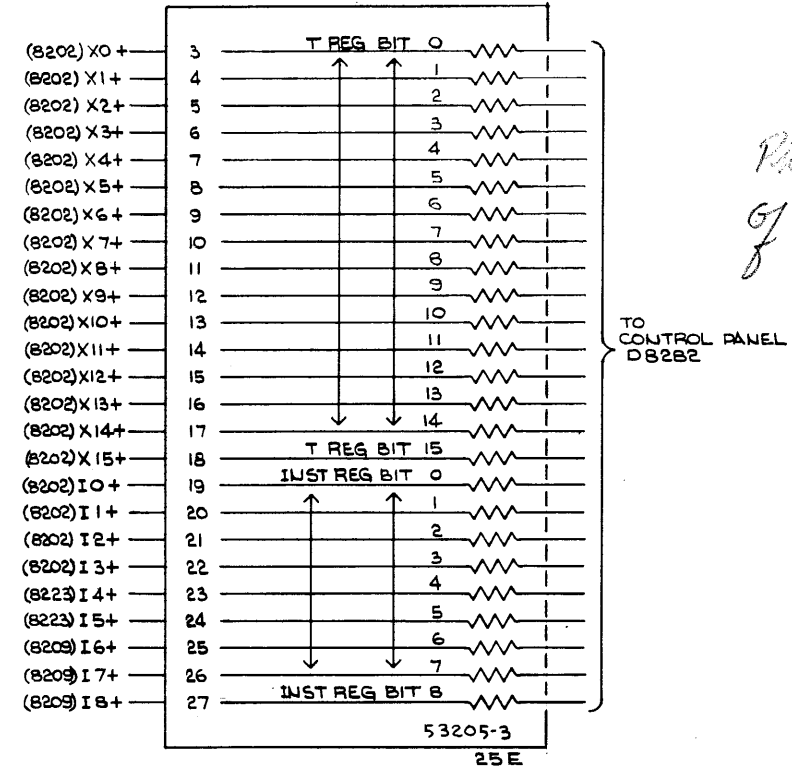
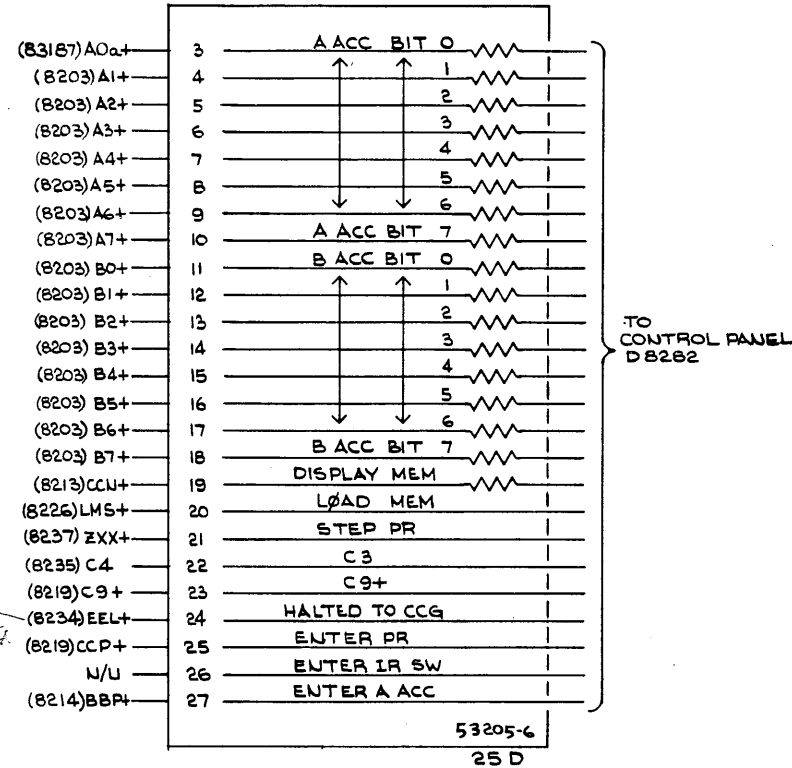
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
SCHEMATIC CONTROL PANEL	
REV	D
53175	

NOTES:  
 1. ALL RESISTORS 470Ω 1/4W  
 2. REFER TO A1002 FOR SWITCH DETAIL

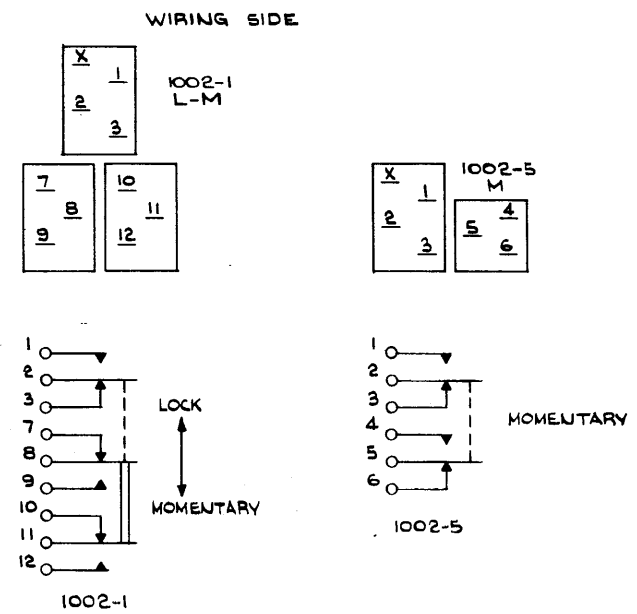
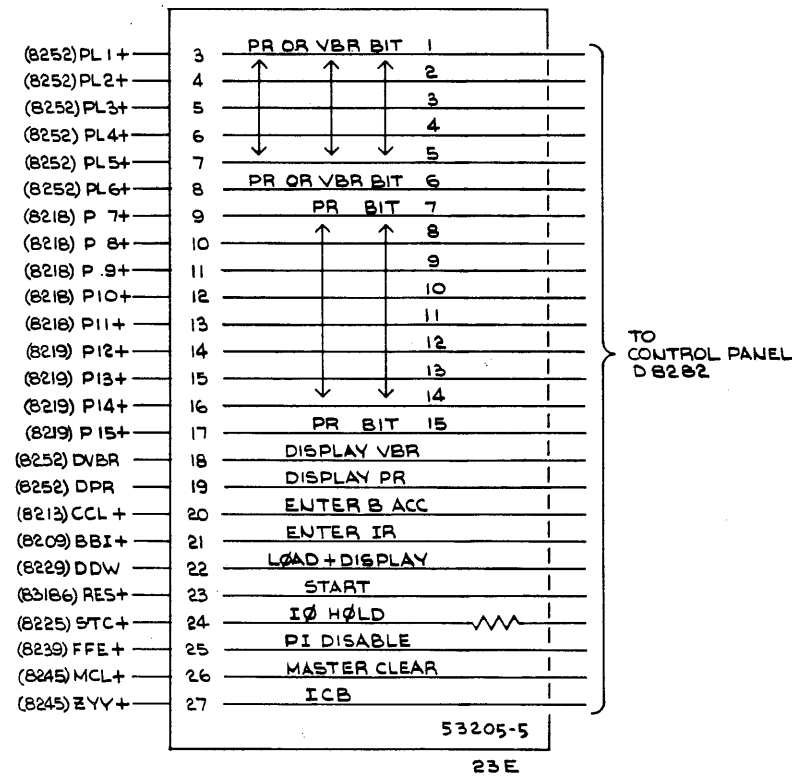
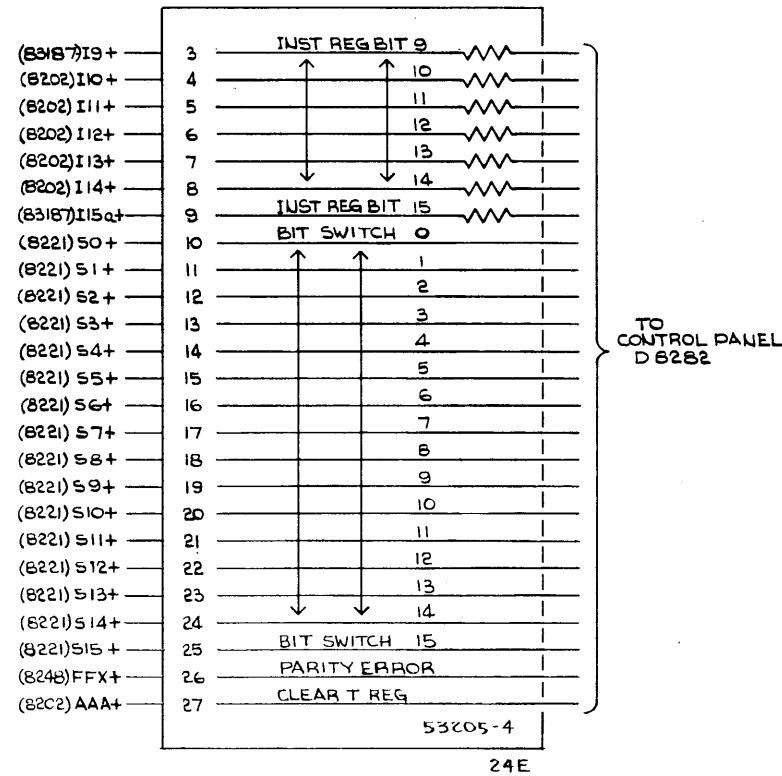
SIZE	D	53175	REV.	
REV.		DESCRIPTION	DATE	APPD



*Level which has a level when running*



*Physical layout of components 5282*



ITEM		DWG. OR PART NO.		DESCRIPTION	
<b>Systems Engineering Laboratories</b>					
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310					
DR J. PINEDO	10-30-67	WIRING DIAGRAM			
CHKD Williams	10/31/67	RIBBON CONNECTORS CONTROL PANEL			
ENGR [Signature]	10/31/67				
PROJ [Signature]	10/31/67				
APPD [Signature]	10/31	CODE IDENT NO.	SIZE	53175	REV.
NEXT ASSY		20886	D		

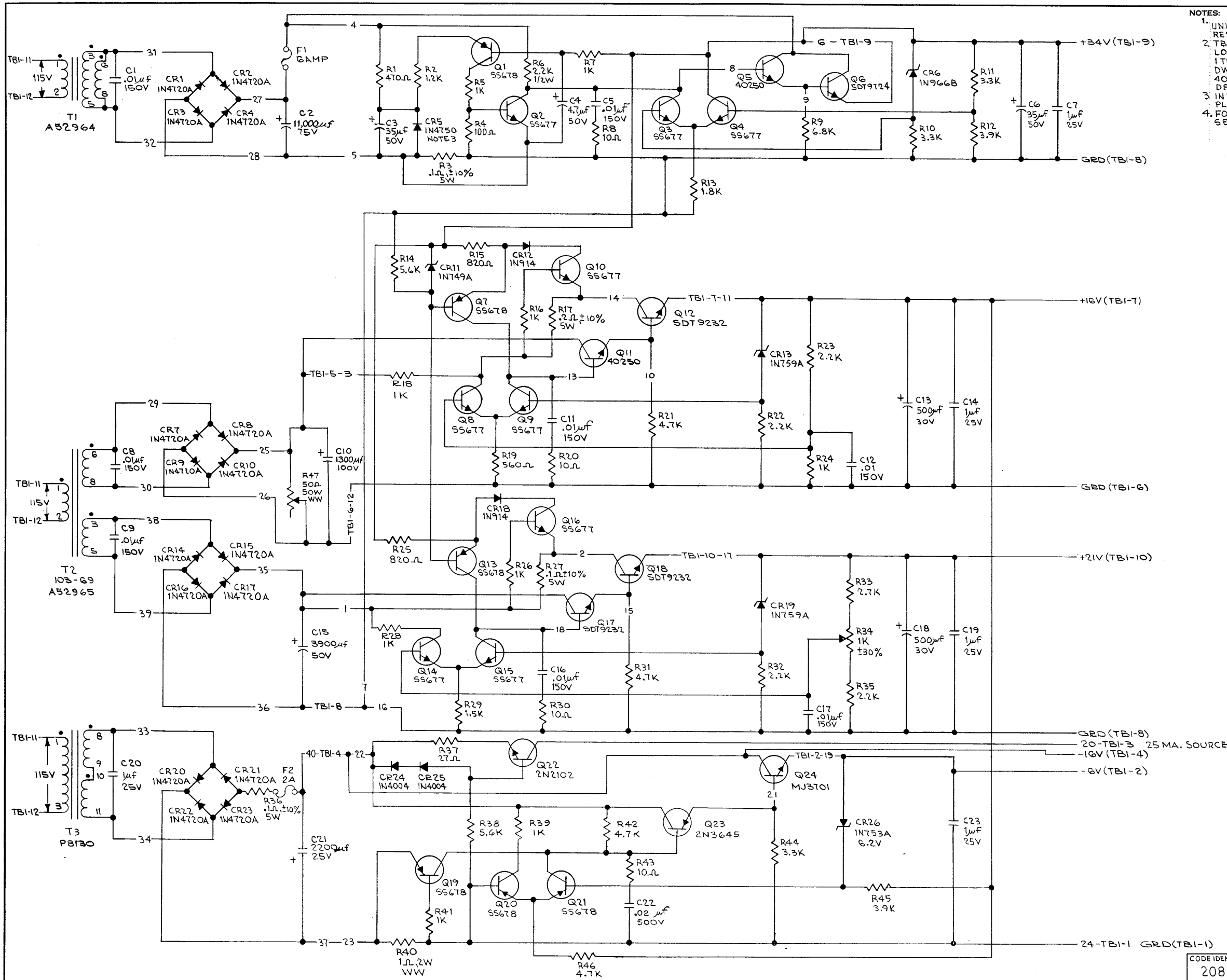
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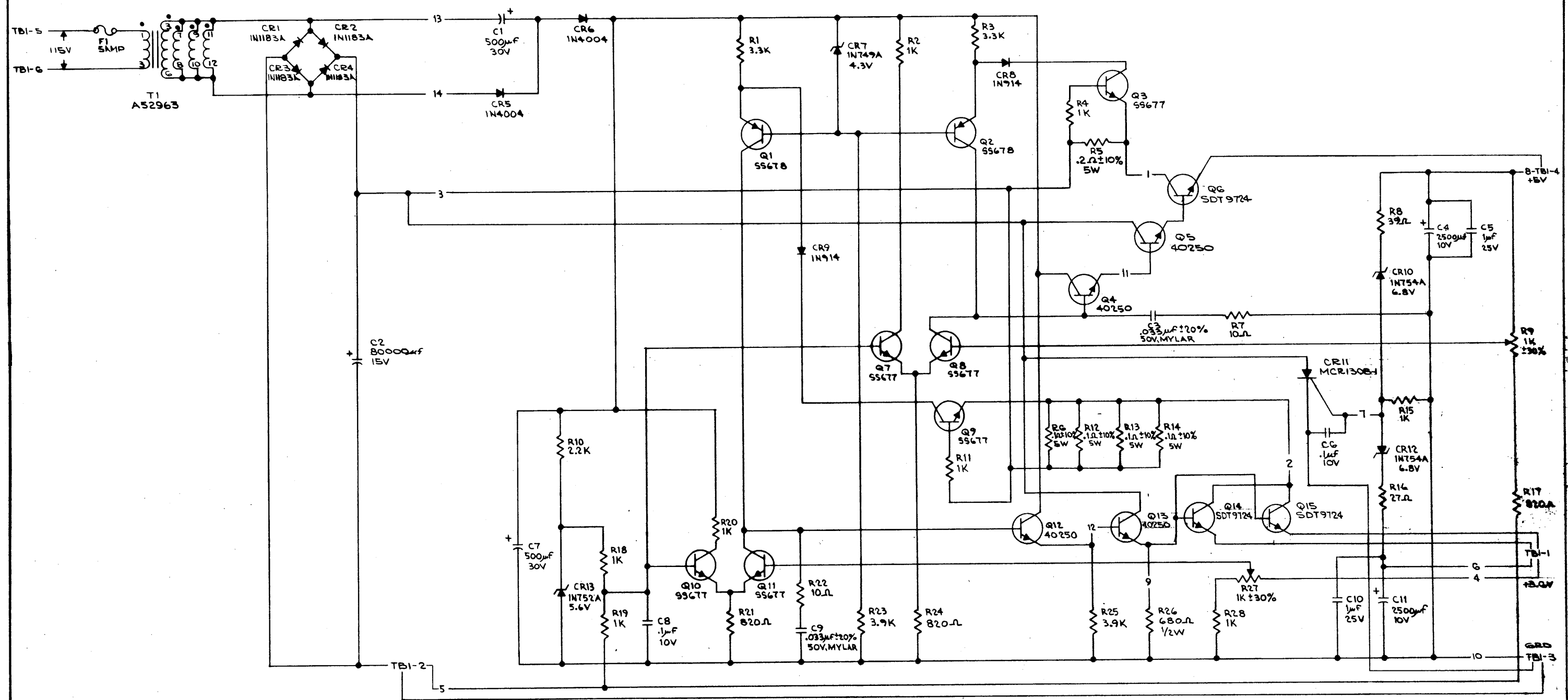
NOTES:  
 1. UNLESS OTHERWISE SPECIFIED RESISTORS ARE 1/4 W.  
 2. TBI-1 THRU TBI-10 ARE LOCATED ON CHASSIS. POINTS 1 THRU 24 ARE LOCATED ON DWG DB279. POINTS 25 THRU 40 ARE LOCATED ON DWG DB281.  
 3. IN971B MAY BE USED IN PLACE OF IN4750.  
 4. FOR WIRING DIAGRAM SEE D53040.

REV	DESCRIPTION	DATE	APP'D
D	53140		
A	67-388; VALUE OF C22 WAS .022μf, 1000V. RKM 9-28-67	10/5/67	RKM
B	67-436 C10 WAS 3900μf, 50V, ADDED R47 (50Ω, 50W TYPE 4DA TUBULAR ADJUST. POWER RESISTOR) BETWEEN TBI-5 & TBI-6, CHANGED Q20 & Q21 SYMBOLS FROM NPN TO PNP, ADDED 25MA. SOURCE TO 20-TBI-3 & ADDED LINE TO -16V (TBI-4) (GLEHFACT 10-18-67 RKM	10/19/67	RKM
C	67-475; ADDED 2AMP FUSE TO SUPPLY (-16V) CIRCUIT. C2 WAS 1,100μf CRAWLEY H.R. LAUCK 11-2-67	11/3/67	RKM
D	67-520; R27 WAS .2Ω WAC 11-21-67 RKM	11/21/67	RKM

ITEM	DWG. OR PART NO.	DESCRIPTION
 SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	RLW/C.P.	7/19/67
CC.	RKM	7-24-67
ENG.		9/20/67
PROJ. APP.		9/20/67
APP.		9/20/67
CODE IDENT NO.	20886	
SIZE	D	53140
REV	D	

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED  
 RESISTORS ARE  $\pm 5\%$ ,  $1/4$  W.  
 2. TBI-1 THRU TBI-4 ARE  
 LOCATED ON CHASSIS. POINTS  
 1 THRU 14 ARE LOCATED ON  
 DWG. D8280

D	53141		
REV	DESCRIPTION	DATE	BY



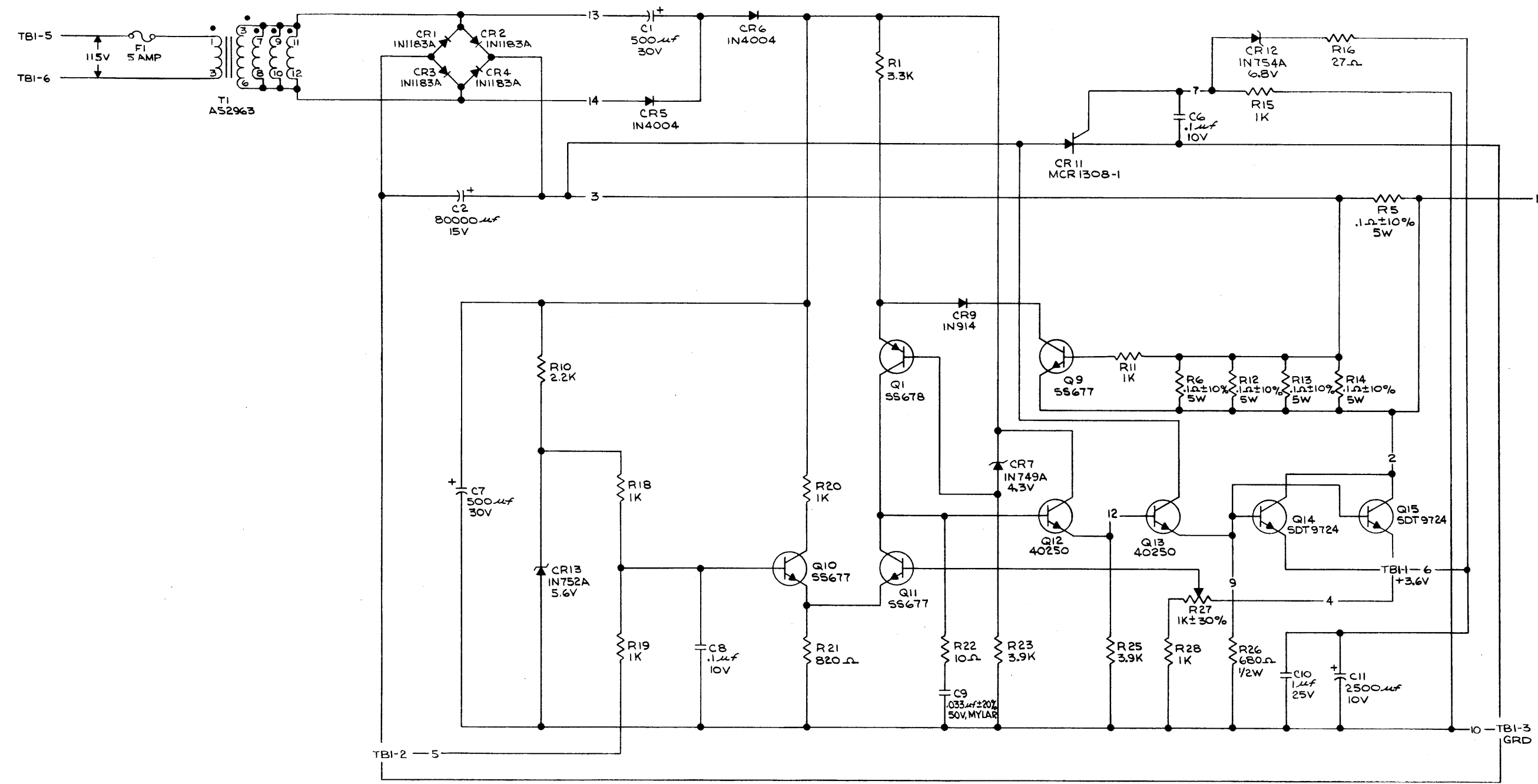
ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b>		
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. C. MAGNUSON	7/18/67	SCHEMATIC 3.0V & 5V POWER SUPPLY 1A06F1 221
CK. RICKM	1-21-67	
ENG. C. C. G. (S)	(S)	
APP. C. C. G. (S)	(S)	
USED ON		

CODE IDENT. NO.  
20886

D	53141
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NOTES:  
 1. UNLESS OTHERWISE SPECIFIED  
 RESISTORS ARE  $\pm 5\%$ , 1/4W.  
 2. TBI-1 THRU TBI-4 ARE  
 LOCATED ON CHASSIS.  
 POINTS 1 THRU 4 ARE  
 LOCATED ON DWG D8280

SIZE	D	53142	REV.	
REV.		DESCRIPTION	DATE	APPD.



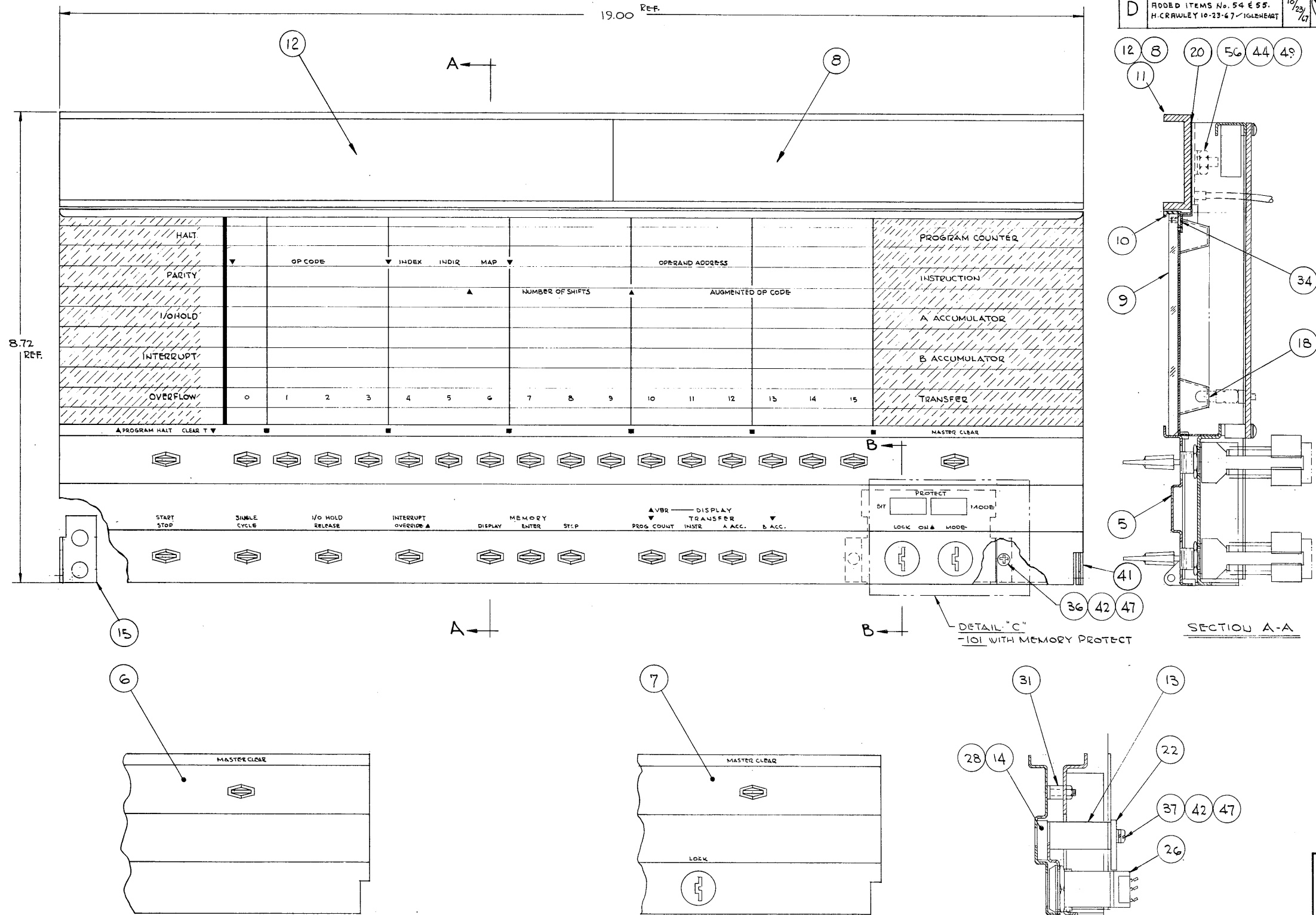
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	<b>Systems Engineering Laboratories</b> 6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
	DR. C. MAGNUSON	7/19/67	SCHMATIC
	CHK RKM	7-24-67	3.6V
	ENGR <i>[Signature]</i>	8/20/67	POWER SUPPLY
PROJ <i>[Signature]</i>	8/20/67	MODEL 223	
APPD <i>[Signature]</i>	8/20/67	CODE IDENT NO.	SIZE
NEXT ASSY		20886	D 53142
			REV.



REV.	DESCRIPTION	DATE	APPD.	REV.	DESCRIPTION	DATE	APPD.	REV.	DESCRIPTION	DATE	APPD.
H	68-150: DELETED; INDEX A LAUCK 3-13-68	3/28/68		E	67-44B ITEM 20 LENGTH WAS 5/16, ADDED PICTORIAL REPRESENTATION OF LAMP & SOCKET TO SEC. A-A IGLEHEART 10-24-67 CRAWLEY	10/24/67		B	67-356: QTY ITEM #2 WAS 20 ITEM #47 WAS (8-6-10) ADDED ITEMS 40, 27 & 21 TO L.O.R. REVISED DWG TO SHOW HDW & NEW HINGE CONFIGURATION H.R. LAUCK 9-12-67 CRAWLEY	9/13/67	
				F	67-45B DELETED ITEMS 2, 3, 4 & 8; ITEM 30 WAS #4 SPACER, 1/4 LG. ALUM. IGLEHEART 10-30-67 CRAWLEY	10/30/67		C	67-372: ADDED -101 TO ITEM 15; ITEM 8 TO PANEL GLASS; ADDED ITEM 41, 45 & 57; ITEM 35 WAS 1/16 LG. H.R. LAUCK 9-20-67 CRAWLEY	9/22/67	
				G	68-48: ITEM 12 WAS D1012-101 LOGO SEL. ADDED DASH 10170 PART NO. C15400 ADDED ITEM 8 LAUCK 2-8-68 CRAWLEY	2/14/68		D	67-441 ITEM No. 29 DELETED ADDED ITEMS No. 54 & 55. H.CRAWLEY 10-23-67 IGLEHEART	10/23/67	

REV.	DESCRIPTION	DATE	APPD.
A	67-317 REVISED REDRAWN IGLEHEART 8-25-67 / RML 9-5-67	8/25/67	

REF	REF	REF	REF	57	D 53175	SCHEMATIC
2	2	2	2	56		* B-32 HEXNUT
2	2	2	2	55	TR-1	CABLE - ANCHOR PANDUIT.
2	2	2	2	54	SST-1	CABLE - TIE PANDUIT.
6	6	6	6	53		* 6 ESJA
8	8	8	8	52		* 4 ESJA
				51		
				50		
2	2	2	2	49		* B FLAT WASHER
8	8	8	8	48		* 6 FLAT WASHER
12	10	14	14	47		* 4 FLAT WASHER
				46		
2	2	2	2	45	B16102	PLATE, SHIM
2	2	2	2	44		* B SPLIT LOCKWASHER
2	2	2	2	43		* 6 SPLIT LOCKWASHER
8	6	10	10	42		* 4 SPLIT LOCKWASHER
1	1	1	1	41	B15892-102	PIVOT, CONTROL PANEL
4	4	4	4	40		* 4-40 X 3/16 SCREW SS 100° FH. PHILLIPS
2	2	2	2	39		* 6 SCREW - SELF TAPPING, 9/16 3/8 LG.
2	2	2	2	38		* 6-32 X 1/2 SCREW SS 9/16 PHILLIPS
5	3	5	5	37		* 4-40 X 3/16 SCREW SS 9/16 PHILLIPS
2	2	2	2	36		* 4-40 X 1/4 SCREW SS 9/16 PHILLIPS
4	4	4	4	35		* 4-40 X 1/2 SCREW SS 100° FH PHILLIPS
4	4	4	4	34		* 4-40 X 3/16 SCREW SS 100° FH PHILLIPS
2	2	2	2	33		* 6 NYLON WASHER
6	6	6	6	32		* 4 NYLON WASHER
4	4	4	4	31	# 8501	* 6 SPACER, ALUM., 250 LG. (H.H. SMITH)
3	3	3	3	30	9724-SS-0440-7	STANDOFF, MALE-FEMALE (AMATOM)
				29		
				28	# 732	RTV (Dow CORNING)
1	1	1	1	27	B16054-102	HINGE
1	1	2	2	26	#3492-5 SPDT	SWITCH-LOCK (CHICAGO)
8	8	8	8	25	*A-1002-5	SWITCH (SWITCHCRAFT)
21	21	21	21	24	*A-1002-1	SWITCH (SWITCHCRAFT)
1	1	1	1	23	D 8282	P.C. BOARD-ASSY.
1	1	1	1	22	D 8299	P.C. BOARD-LAMP DRIVER ASSY.
1	1	1	1	21	B16054-101	HINGE
1	1	1	1	20	C15954	SUPPORT-REFLECTOR
2	2	2	2	19	*9765	MAGNETIC CATCH (AMEROCK)
1	1	1	1	18	D15843	LAMP REFLECTOR & PARTITION
1	1	1	1	17	B15396	BRACKET-CABLE CLAMP
1	1	1	1	16	C15926	STOP-PANEL
1	1	1	1	15	B15892-101	PIVOT, CONTROL PANEL
1	1	1	1	14	B15931	GLASS, MEMORY PROTECT
1	1	1	1	13	C16009	BRACKET, MEMORY PROTECT
1	1	1	1	12	D16370-101	SEL LOGO NAMEPLATE
1	1	1	1	11	C15400-1	CHANNEL-LOGO
1	1	1	1	10	D15743	PANEL-GRIPPER
1	1	1	1	9	D15742	PANEL-CONTROL SILK SCREENING
1	1	1	1	8	D16372-101	MODEL DESIGNATION NAMEPLATE
1	1	1	1	7	D15812-103	PANEL-MARKING (SWITCH COVER)
1	1	1	1	6	D15812-102	PANEL-MARKING (SWITCH COVER)
1	1	1	1	5	D15812-101	PANEL-MARKING (SWITCH COVER)
				4		
				3		
				2		
1	1	1	1	1	D16004	CONTROL PANEL WELDMENT



DETAIL "D"  
-102 WITHOUT MEMORY PROTECT

DETAIL "E"  
-103 WITHOUT MEMORY PROTECT WITH LOCK ONLY

SECTION B-B

SECTION A-A

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**Systems Engineering Laboratories**  
8901 West Sunrise Blvd., Fort Lauderdale, Florida 33310

DR IGLEHEART 8-4-67  
CHK *[Signature]* 8-25-67  
ENGR *[Signature]* 8/25/67  
PROJ *[Signature]* 8/25/67  
APPD *[Signature]* 8-25-67  
NEXT ASSY: D15600

CONTROL PANEL ASSEMBLY

CODE IDENT NO. 20886  
SIZE D 15049

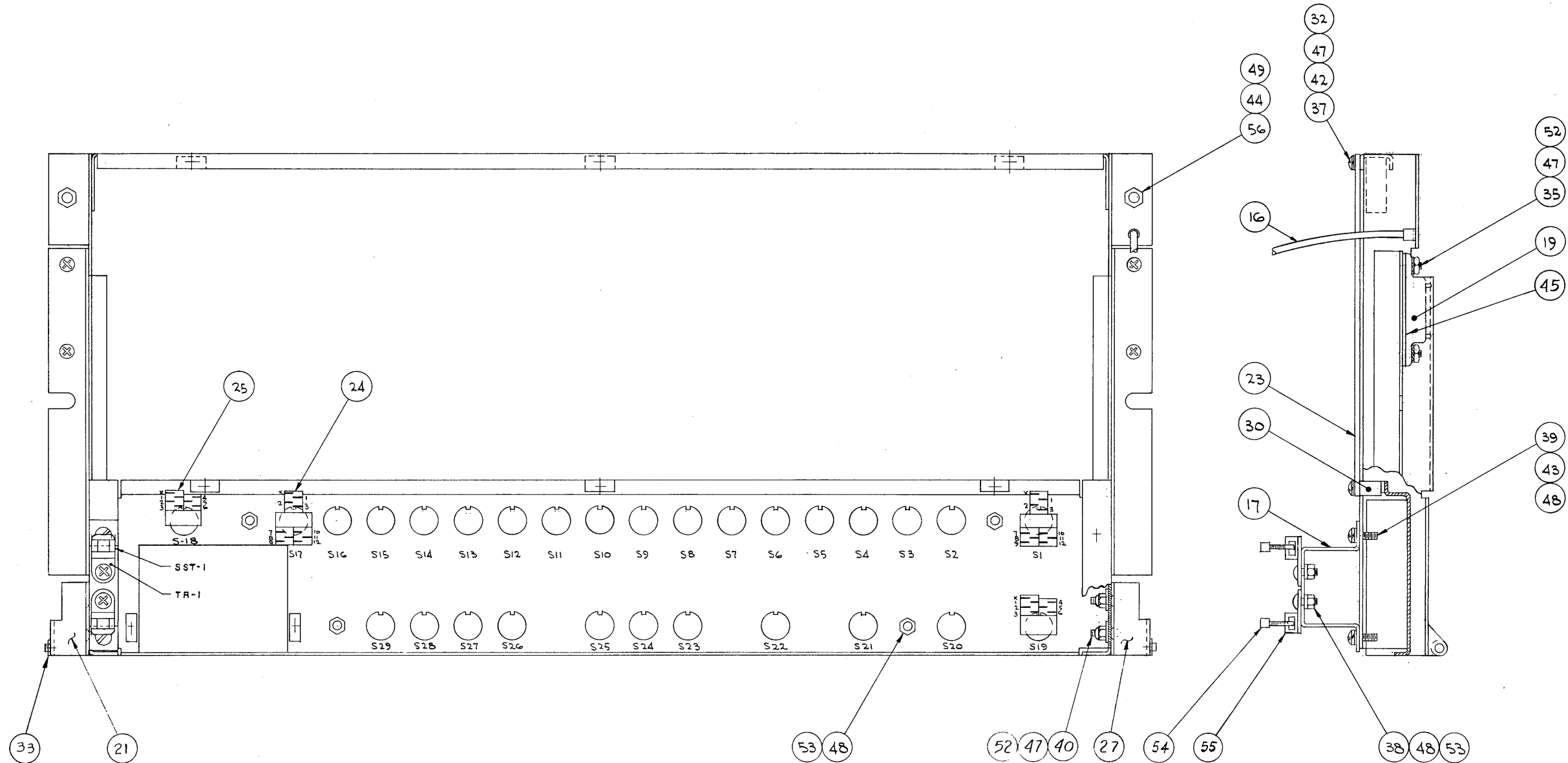
REV. H

SCALE: FULL

NOTES:  
1.

SIZE	D	REV.	H
REV.	DESCRIPTION	DATE	APPD
SEE SHEET 1 FOR REVISIONS			

REF. DESIG.	ITEM No
S 1	24
S 2	24
S 3	24
S 4	24
S 5	24
S 6	24
S 7	24
S 8	24
S 9	24
S 10	24
S 11	24
S 12	24
S 13	24
S 14	24
S 15	24
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S 17	24
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S 23	24
S 24	24
S 26	24
S 18	25
S 19	25
S 20	25
S 21	25
S 25	25
S 27	25
S 28	25
S 29	25

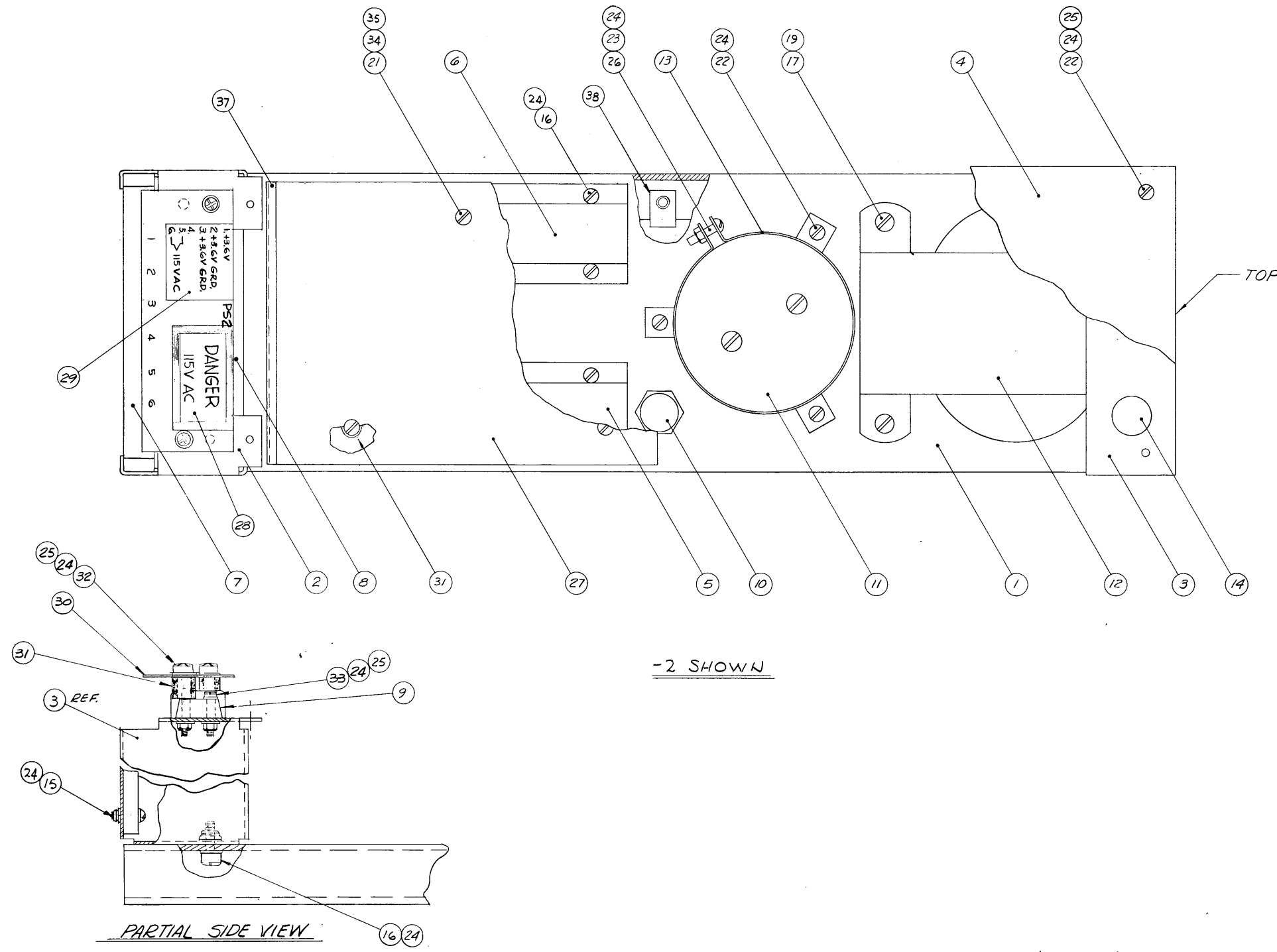


ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b> 6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR	IGLEHEART 8-2-67	CONTROL PANEL ASSEMBLY
CHK	<i>E.W. Head</i> 8-25-67	
ENGR	<i>G. Conner</i> 8/28/67	
PROJ	<i>W. Conner</i> 8/28/67	
APPD	<i>MRS</i> 8-25-67	
NEXT ASSY: D15600		

SCALE: FULL

NOTES:  
1.

SIZE	D	15513	REV	A
REV	A	DESCRIPTION	DATE	APP'D
		GT-555 DRAWING REVISED REFER TO SERIA. OF PREV. REV. IN FILE	12/1/67	[Signature]
		IGLEHEART 12-7-67	CRAWLEY	



-2 SHOWN

QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
6	6	38	SL 2/11-3-1 CLIP NUT SHUR-LOK
1	1	37	GS-3 GROMMET STRIP 4 3/8" LG. ELECTROVET
REF	REF	36	D53041 WIRING DIAGRAM
3	3	35	MS15795-303 #4 FLAT WASHER SS
3	3	34	MS35337-40 #4 SPLIT LOCK WASHER SS
2	2	33	MS35216-27 #6-32 X 1/2 LG. PAN HD. SCR. SS
2	2	32	MS35216-32 #6-32 X 1/4 LG. PAN. HD. SCR. SS
2	2	31	SPACER-3/16 ID. X 1/2 WALL X 1/2 LG. GRAD. XXX
1	1	30	MS-6-141 MARKER STRIP, JONES
1	1	29	12015-99-103 SCOTCHCAL LABEL
1	1	28	13004-99 WARNING LABEL
1	1	27	B280-2 S & A 3.6V & 5V POWER SUPPLY
1	1	26	MS35216-28 #6-32 X 3/8 LG. PAN. HD. SCREW SS
8	4	25	MS35337-41 #6 LOCK WASHER SS
37	33	24	MS15795-305 #6 FLAT WASHER SS
1	1	23	MS 20365-632 #6-ESNA-NUT
7	3	22	MS 35216-24 #6-32 X 3/8 LG. PAN. HD. SCR. SS
3	3	21	MS35216-20 #4-40 X 1" LG PAN. HD. SCR. SS
		20	
8	8	19	MS 15795-308 #10 FLAT WASHER SS
		18	
4	4	17	MS51958-61 #10-32 X 3/8 LG PAN. HD. SCR. SS
20	20	16	MS 35216-25 #6-32 X 3/8 LG. PAN. HD. SCR. SS
4	4	15	MS 35216-29 #6-32 X 3/4 LG. PAN. HD. SCR. SS
1	1	14	HKP FUSE HOLDER BUSS
1	1	13	4586-2 CLAMP SPRAGUE
1	1	12	52963 TRANSFORMER
1	1	11	3608036015DC6B CAPACITOR, SPRAGUE 80,000 MFD 15V
1	1	10	MCE-1305-1 SILICON CONTROLLED RECTIFIER-MOTOROLA
1	1	9	6-142 TERMINAL BLOCK, JONES
1	1	8	747 FAN, ROTRON SENTINAL
1	1	7	C 15284 FILTER ASS'Y.
1	1	6	C 15284 HEAT SINK
1	1	5	C 15283 HEAT SINK
1	1	4	C 15288-101 COVER
1	1	3	C 15286 BRACKET
1	1	2	C 15285 BRACKET-FAN
1	1	1	D 15235 CHASSIS
-2	-1	ITEM	DWG. OR PART NO. DESCRIPTION

SEL SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. E. LARSEN 3-28-67	3-28-67
CL. P. [Signature] 11/24/67	11/24/67
ENG. [Signature] 8/22/67	8/22/67
PROJ. APP. [Signature] 8/22/67	8/22/67
APP. [Signature] 8-22-67	8-22-67
USED ON	

ASSY. POWER SUPPLY (3.6 V.)

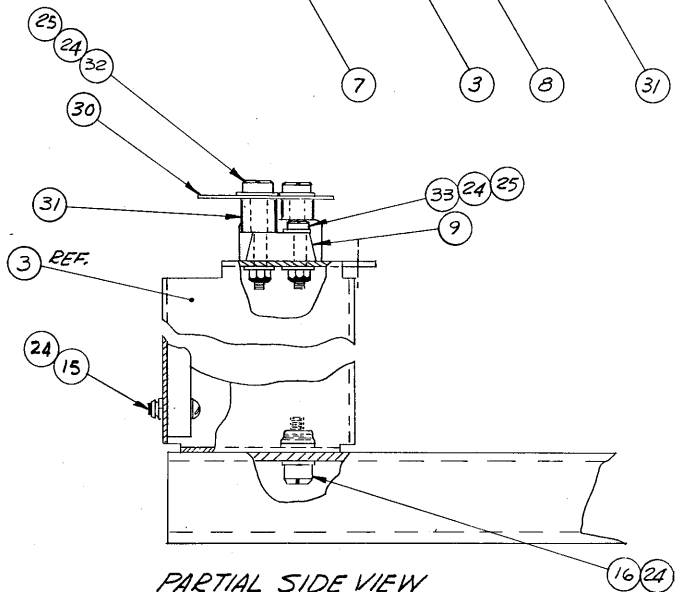
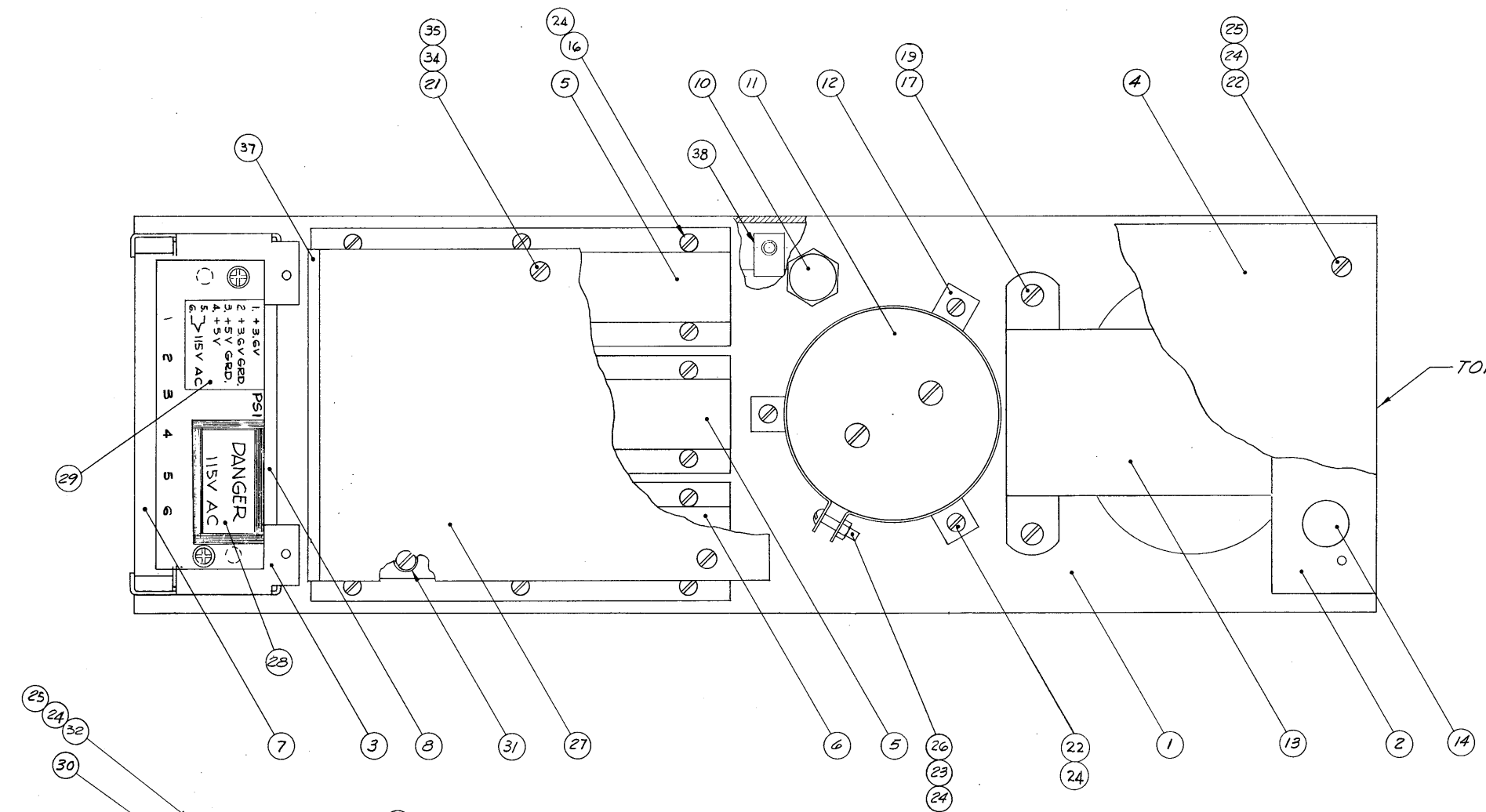
NEXT ASS'Y D15517 SCALE: FULL

SIZE	D	15513	REV	A
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NOTES:  
1.

SIZE	D	15514	REV	A
REV	A	GT-555: DRAWING REVISED REFER TO SERIAL OF PREV. REV. IN FILE 10140427 12-7-67 CRAWLEY	DATE	12/1/67



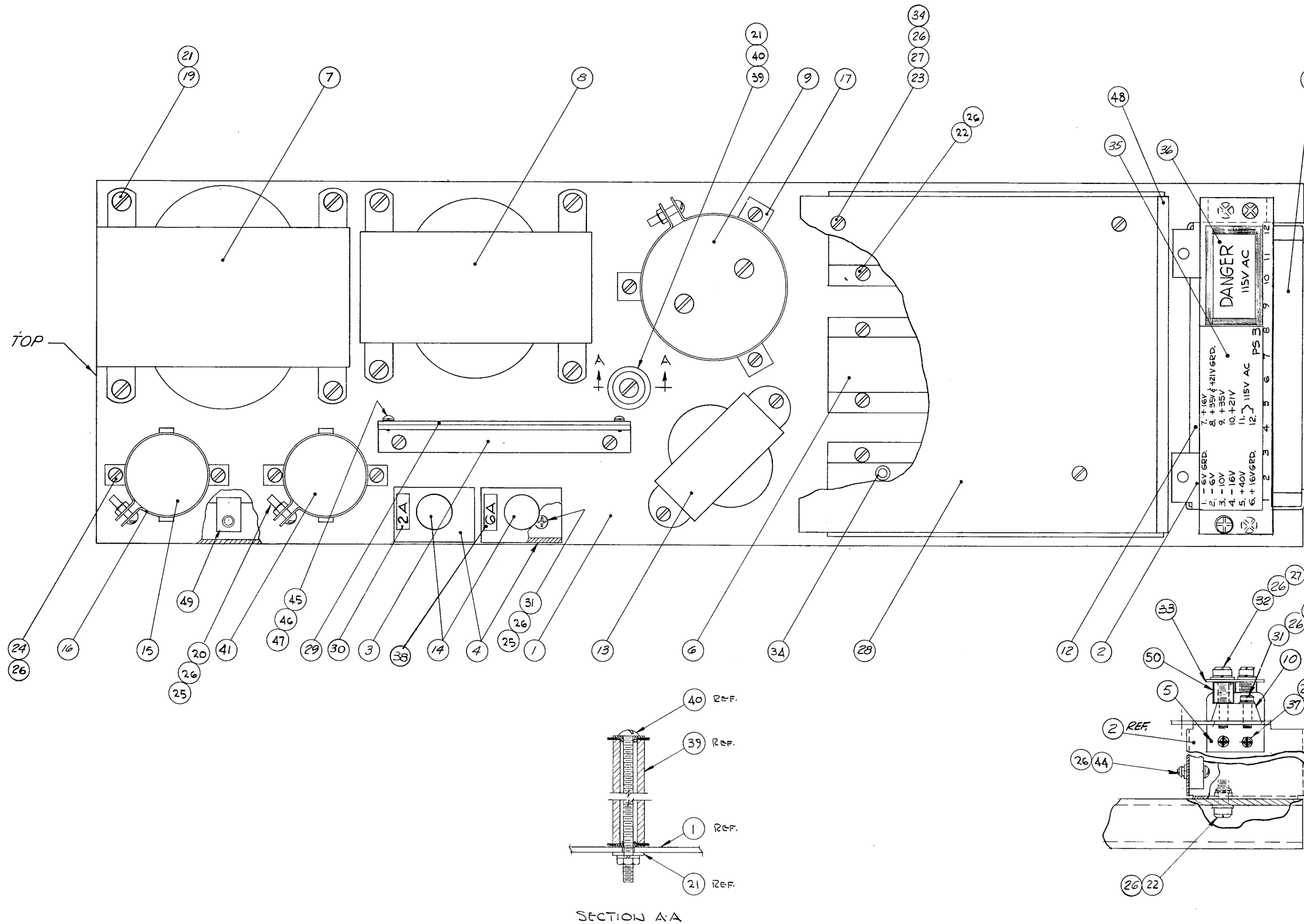
-2 SHOWN

ITEM	DWG. OR PART NO.	DESCRIPTION
6	38	SL 2.11-3-1 CLIP NUT SHUR-LOK
1	37	GS-3 GROMMET STRIP 4 3/4" LG. ELECTROVOLT
REF.	REF.	D53039 WIRING DIAGRAM
3	35	MS 15795-303 #4 FLAT WASHER SS
3	34	MS 35337-40 #4 SPLIT LOCK WASHER SS
2	33	MS 35216-27 #6-32 X 1/2 LG. PAN HD. SCR. SS
2	32	MS 35216-32 #6-32 X 1 1/4 LG. PAN HD. SCR. SS
5	31	SPACER 3/16" I.D. X 1/8" WALL X 1/2 LG. GRADUXX
1	30	MS-6-141 MARKER STRIP - "JONES"
1	29	12015-99-102 SCOTCHCAL LABEL
1	28	13004-99 WARNING LABEL
1	27	5280-1 5# A 3.6V #5V POWER SUPPLY
1	26	MS 35216-28 #6-32 X 3/8 LG. PAN HD. SCR. SS
8	25	MS 35337-41 #6 LOCK WASHER SS
37	24	MS 15795-305 #6 FLAT WASHER SS
1	23	MS 20365-632 #6 ESNA-NUT
7	22	MS 35216-24 #6-32 X 1 1/8 LG. PAN HD. SCR. SS
3	21	MS 35216-20 #4-40 X 1" LG. PAN HD. SCR. SS
	20	
8	19	MS 15795-308 #10 FLAT WASHER SS
	18	
4	17	MS 51958-61 #10-32 X 3/8 LG. PAN HD. SCR. SS
20	16	MS 35216-25 #6-32 X 3/8 LG. PAN HD. SCR. SS
4	15	MS 35216-29 #6-32 X 3/4 LG. PAN HD. SCR. SS
1	14	HKP FUSE HOLDER BUSS
1	13	52963 TRANSFORMER
1	12	4586-2 CLAMP SPRAGUE
1	11	3608036015DC6B CAPACITOR, SPRAGUE 50,000 MFD 15V.
1	10	MCR 1305-1 SILICON CONTROLLED RECTIFIER-MOTOROLA
1	9	6-142 TERMINAL BLOCK, JONES
1	8	747 FAN, ROTRON SENTINAL
1	7	C 15284 FILTER ASS'Y.
2	6	C 15284 HEAT SINK
1	5	C 15283 HEAT SINK
1	4	C 15288-102 COVER
1	3	C 15285 BRACKET, FAN
1	2	C 15286 BRACKET, END
1	1	D 15234 CHASSIS

SEL SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR. E. LARSEN 3-27-67	ASSY. POWER SUPPLY (3.6 & 5.0V)
CL. R. K. BROWN 12/1/67	
ENG. 1/22/67	
PROJ. APP. 8/22/67	
APP. 8-22-67	
USED ON	SIZE D 15514

NEXT ASSY D15517 SCALE: FULL

NOTES:  
1.



REV	DESCRIPTION	DATE	APP'D	REV
D	15515			E
A	67-306 ITEM 27 WAS FLAT HEAD SCREW QTY ITEM 27 WAS (1) QTY ITEM 25 WAS (2) SL CHUMLEY 8-25-67 V.H.R.C. 8-28-67	8-28-67	MRJ	
B	67-436 ITEM 15 WAS (2) 250D. ITEM 21 WAS (1) 250D. ADDED ITEMS 39, 40, 41, 42, 43 10-18-67 V.H.R.C.	10/2/67	MRJ	
C	67-475: ADDED 2 AMP FUSE TO ASSEMBLY ITEMS *A, 14 & 38 QTY WAS (1). ADDED ITEM *30. H.R. LAUCK 11-2-67 CRAWLEY	11/3/67	MRJ	
D	67-555: DRAWING REVISED REFER TO SERIA OF PREV. REV. IN FILE. 10-18-67 V.H.R.C. CRAWLEY	11/7/67	MRJ	
E	68-259: ADDED ITEM 34 TO PC BOARD. CALL-OUT. QTY ITEM 34 WAS 6. ADDED ITEM 50 *3503 SPACER (H.H. SMITH) QTY 2. ITEM 50 CALL-OUT ON CROSS SECTION VIEW WAS 34 LAUCK 5-6-68 CRAWLEY	5/7/68	MRJ	

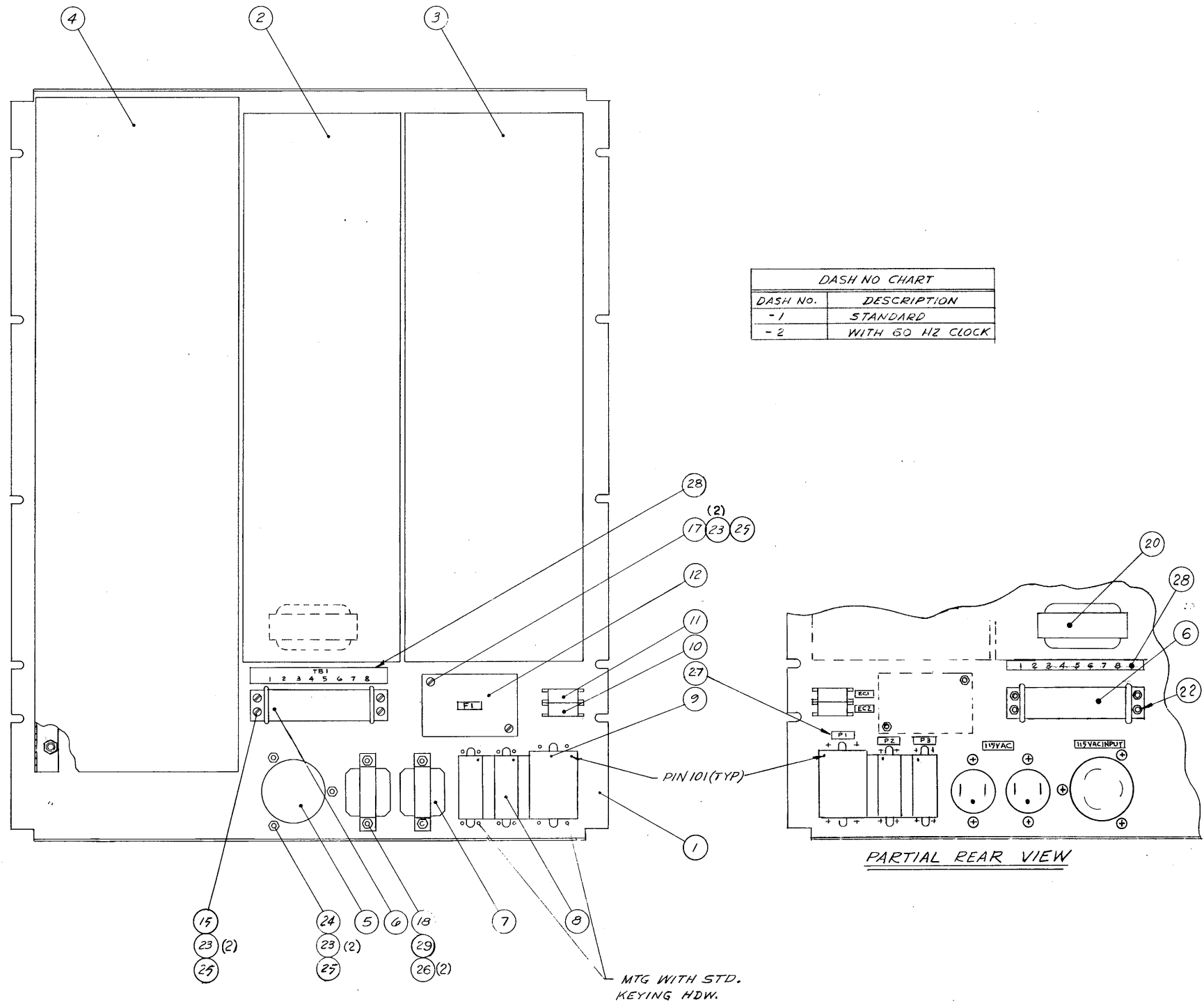
2	50	8503	SPACER (H.H. SMITH)
6	49	SL 211-3-1	CLIP NUT SHUE-LOK
1	48	G.S.-3	GROMMET STRIP-G.L.G. ELECTROVET
6	47	NAS 620C 4L	* 4 FLAT WASHER SS
6	46	MS 35216-40	* 4 SPLIT LOCK WASHER SS
2	45	MS 35216-10	* 4-40 X 1/8 LG. PAN HD. SCR. SS
4	44	MS 35216-29	* 6-32 X 3/4 LG. PAN HD. SCR. SS
REF.	43	D 53040	WIRING DIAGRAM
REF.	42	D 53140	SCHEMATIC
1	41	36D132F100AC6B	CAPACITOR, SPRAGUE, 1300MFD 100V
1	40	7PA50	THROUGH BOLT ASSY OHMITE
1	39	210-50-05 G3	RESISTOR, W/W 50Ω 50W-OHMITE
2	38	13246-99-19C	SCOTCHCAL
4	37	MS 35216-23	* 6-32 X 1/4 LG. PH PHILLIPS SC. SS
1	36	1300 A-99	WARNING LABEL
1	35	12015-99-101	SCOTCHCAL LABEL
4	34		SPACER-3/16 I.D. X 1/8 WALL X 1/2 LG. GRABEXXX
1	33	MS 12-141	MARKER STRIP, JONES
2	32	MS 35216-32	* 6-32 X 1/4 LG. PAN HD. SCR. SS
6	31	MS 35216-27	* 6-32 X 1/2 LG. PAN HD. SCR. SS
1	30	13246-99-20C	SCOTCHCAL
1	29	8281	5 & A MEMORY RECTIFIERS
1	28	8279	5 & A MEMORY
8	27	MS 35237-41	* 6 LOCK WASHER SS
59	26	MS 15795-305	* 6 FLAT WASHER SS
7	25	MS 20365-632	* 6 ESNA-NUT
11	24	MS 35216-24	* 6-32 X 1/8 LG. PAN HD. SCR. SS
4	23	MS 35216-20	* 4-40 X 1/4 LG. PAN HD. SCR. SS
20	22	MS 35216-25	* 6-32 X 3/8 LG. PAN HD. SCR. SS
9	21	MS 15795-308	* 10 FLAT WASHER SS
3	20	MS 35216-28	* 6-32 X 3/8 LG. PAN HD. SCR. SS
8	19	MS 5195B-61	* 10-32 X 3/4 LG. PAN HD. SCR. SS
	18		
1	17	4586-1	CLAMP SPRAGUE
2	16	4586-97A	CLAMP SPRAGUE
1	15	36D392G050AC6B	CAPACITOR, SPRAGUE 3900 MFD 50V.
2	14	HKP	FUSE HOLDER BUSS
1	13	P-8130	TRANSFORMER
1	12	747	FAN, ROTRON SENTINEL
1	11	C15284	FILTER ASS'Y
1	10	12-141	TERMINAL BLOCK, JONES
1	9	36D113F075CD6B	CAPACITOR, SPRAGUE 11,000 MFD 75V.
1	8	52964	TRANSFORMER
1	7	52965	TRANSFORMER
3	6	C15284	HEAT SINK
2	5	B15437	BRACKET-TERMINAL STRIP
2	4	B15410	BRACKET-FUSE
1	3	B15430	BRACKET-P.C. BOARD
1	2	C15285	BRACKET-FAN
1	1	D15236	CHASSIS

QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
ASSEMBLY MEMORY POWER SUPPLY			
DR.	E. LARSEN	3-29-67	
CK.	P. K. ...	11/22/67	
ENG.	W. ...	11/22/67	
PROJ.	W. ...	11/22/67	
APP.	MRJ	8-22-67	
USED ON			

NEXT ASS'Y DI5517 SCALE: FULL

NOTES:  
1. TB2 & T1 USED WITH 60 HZ  
CLOCK OPTION.

REV	DESCRIPTION	DATE	APP'D
D	15517		C
A	67-324: REVISED MTL LIST TO CONFORM TO INFO SUPPLIED BY MRS. V. H. LAUCK-9-7-67 J. CRAWLEY	9-8-67	J. C.
B	68-33 - DELETED ITEMS 16, 20, 21 & 22. LAUCK 1-25-68 CRAWLEY	1/29/68	J. C.
C	68-97 - ADDED ITEMS 6, 20, 22 & 28 TO REAR VIEW. ADDED DASH NO CHART & -2 QTY COLUMN TO LOM. ADDED NOTE 1. LAUCK 2-22-68 CRAWLEY	2/23/68	J. C.



DASH NO CHART

DASH NO.	DESCRIPTION
-1	STANDARD
-2	WITH 60 HZ CLOCK

QTY	QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
	4	4	29	*8 FLAT WASHER 1/16
A/R	AR	28	12013-99-102	SCOTCHCAL LABEL
A/R	AR	27	12013-99-101	SCOTCHCAL LABEL
	8	8	26	NYLON SHOULDER WASHER 5/16 ID. X 3/8 O.D.
	13	13	25	*6-32 ESNA
	3	3	24	*6-32 X 3/16 LG PAN HD SCR. SS
	26	26	23	*6 FLAT WASHER SS 5/16
	2	2	22	*6-32 X 1 PAN HD PHIL HD SCR. SS
			21	
	1		20	P-8130 TRANSFORMER 12VAC
			19	
	4	4	18	*8-32 X 3/8 LG. PAN HD. SCR. SS
	2	2	17	*6-32 X 1 1/2 LG. PAN HD. SCR. SS
			16	
	4	4	15	*6-32 X 7/16 LG PAN HD SCR. SS
			12	5355 LINE FILTER SPACE MAGNET
	1	1	11	*60-6701 RECEPTICAL, RED (ELCO)
	1	1	10	*60-6701 RECEPTICAL, NATURAL (ELCO)
	1	1	9	201037-1 104 PIN AMP CONNECTOR
	2	2	8	200277-2 50 PIN AMP CONNECTOR
	2	2	7	5294 CONVENIENCE OUTLET (HUBBLE)
	2	1	6	8-141 JONES STRIP
	1	1	5	7327 TWIST LOCK CONNECTOR (HUBBLE)
	1	1	4	D15515 ASSY. - MEMORY P/S
	1	1	3	D15514 ASSY. -(3.6 & 5.0V.) P/S
	1	1	2	D15513 ASSY. -(3.6V.) P/S
	1	1	1	D15233 PANEL
-2	-1			

DR.	DATE	REV
E. LARSEN	4-4-67	
P. Helton	13/11/67	
ENG. J. C. CRAWLEY	8/22/67	
PROJ. MGR. J. C. CRAWLEY	8/22/67	
APP. J. C. CRAWLEY	8/22/67	
USED ON 3126		

SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA

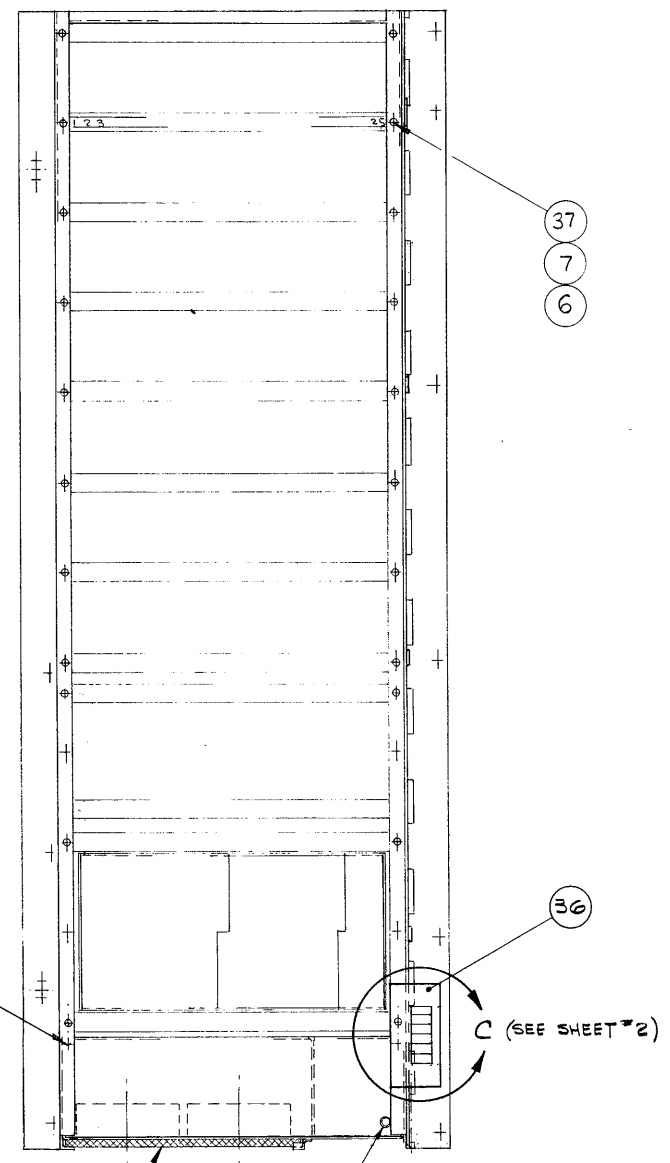
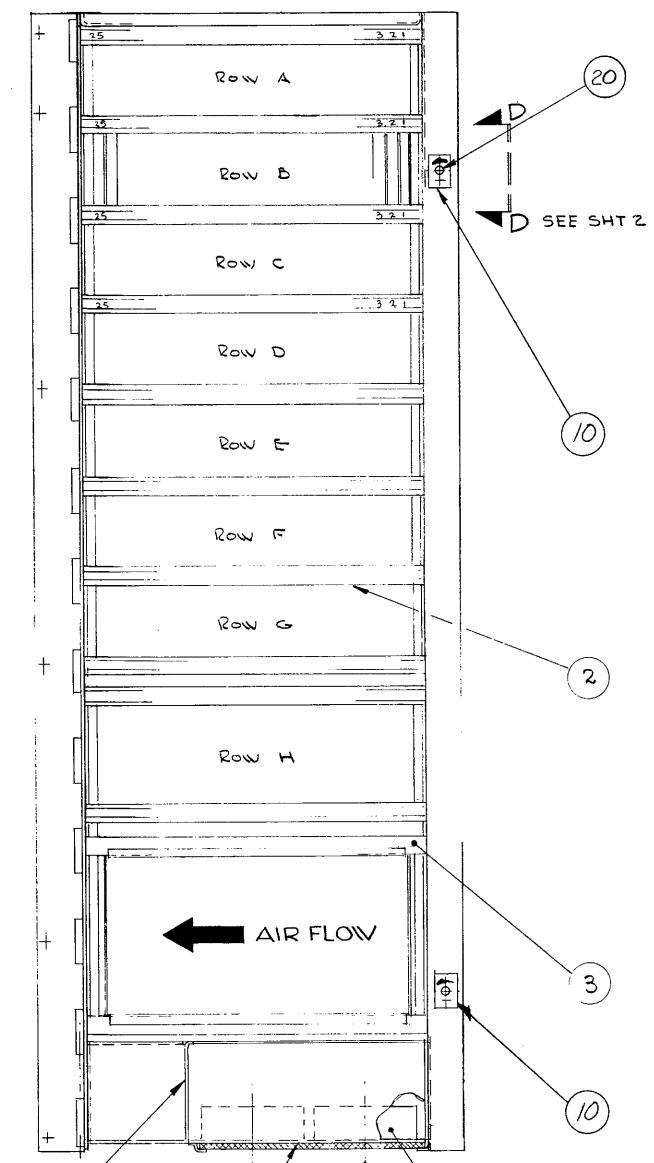
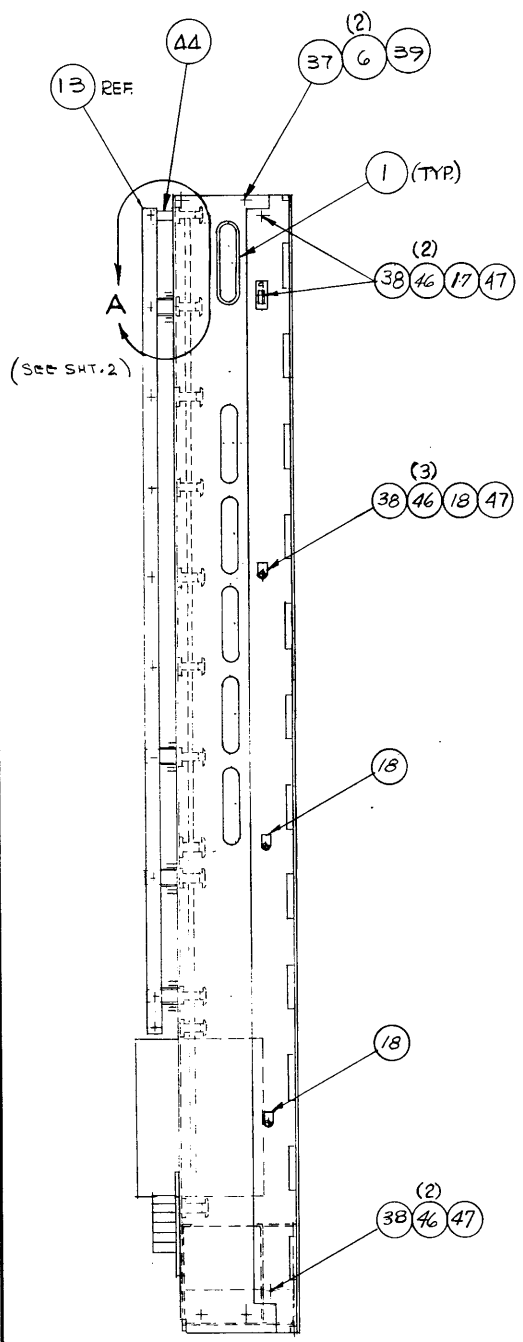
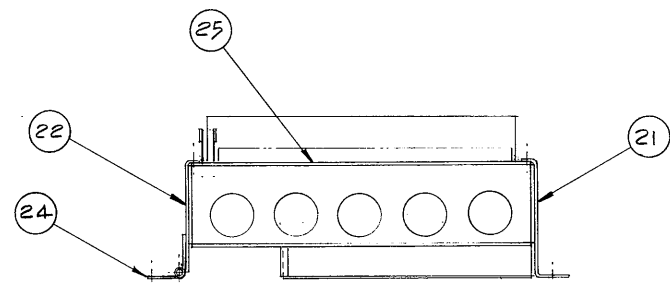
ASSEMBLY, POWER SUPPLY PANEL, AC-DC DISTRIBUTION

SIZE	REV
D	C
15517	

NEXT ASS'Y D15600 SCALE: 1/2" = 1"

NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	15595		D
A	ADDED ITEM 10 N.M.K. 8-16-67 / R.M. 6-8-17-67		
B	67-324: REVISED MTL LIST IN ACCORDANCE WITH INFO SUPPLIED BY MFG H.R.L. 9-7-67 / H.R.C. 9-7-67	7/18/67	R
C	67-429 REVISED DETAIL "C" IN ACCORDANCE WITH INFO. SUPPLIED BY ENG. E.C.O. H.R.C. 10-16-67 / MET 10-18-67	10/19/67	R
D	67-443 REVISED DETAIL "A" ADDED ITEM #5. BRAWLEY 10-25-67 / M.E.I. 10/25	10/16/67	R



6	47		*10 ESNA NUT
36	46		*10 FLAT WASHER
1	44	B15496	BUS EXTENSION RETAINER
9	43		1/2 DIA. X 1/8 LG "R.V.C."
4	42		*4 ESNA NUT
8	41		*4 FLAT WASHER L/P
4	40		*4-40 X 3/8 SS SCREW P/H PHILLIPS
12	39		*8-ESNA NUT
3	38		#10-32 X 1/2 SS SCREW P/H PHILLIPS
46	37		*8-32 X 1/6 SS SCREW P/H PHILLIPS
1	36	B15652	6501 "ELCO" CONN. RETAINER
6	35	*60-6501-3218-00174	LOCKING INSERT-YELLOW (ELCO)
1	34	*60-6501-3218-00172	PLUG-BLUE (ELCO)
1	33	*60-6501-3218-00130	PLUG-BLACK (ELCO)
1	32	*60-6501-3218-00169	PLUG-RED (ELCO)
3	31	*60-6501-3218	PLUG-WHITE (ELCO)
1	30	*60-6501-3218-00178	RECEPTICAL-BLUE (ELCO)
1	29	*60-6501-3218-00150	RECEPTICAL-BLACK (ELCO)
1	28	*60-6501-3218-00169	RECEPTICAL-RED (ELCO)
3	27	*60-6501-3218	RECEPTICAL-WHITE (ELCO)
1	26	D15255	CHASSIS-FAN
1	25	D15206	TOP-CHANNEL CHASSIS
1	24	D15181	HINGE
1	23	*12019-99	SCOTCHCAL ARTWORK
1	22	D15254	SIDE CHASSIS (HINGE SIDE)
1	21	D14857	SIDE CHASSIS (LATCH SIDE)
2	20	*43-1-3-0	LATCH-SOUTHCO (R.H.)
1	19	C15260	FILTER
3	18		ANCHOR-SMALL STAYSTRAP
1	17		ANCHOR-LARGE STAYSTRAP
9	16		*6-32 X 1/8 PAN HD MS SS
16	15		*6 NYLON MACH SCR INSULATOR
10	14		MOLDED NYLON WASHER .191 I.D. - .500 O.D. X .125 THK.
2	13	D15417-101	BUS BAR EXTENSION
1	12	SB 500	HEYCO-SNAP BUSHING
17	11		*6 ESNA-NUT
2	10	C15936	LABEL-LATCH RELEASE
18	9		*6 FLAT WASHER
8	8		*6-32 X 1 3/4 MACHINE SCREW F/H
22	7		*8 LOCK WASHER
42	6		*8 FLAT WASHER
2	5		MOLDED NYLON WASHER .187 I.D. X .337 O.D. X .062 THK.
2	4	*747	ROTRON-SENTINEL FAN
1	3	D15598	MEMORY MODULE ASSY.
1	2	D15597-101	PRIMARY MODULE ASSY.
A/R	1	*65-3	GROMMET STRIP ELECTROVERT

QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA			
DR.	W. GLENN	3-15-67	PRIMARY PLANE ASSEMBLY
CE.	P. K. K. K.	12/21/67	
ENG.	W. G. G.	8/22/67	
PROJ. MGR.	M. G. G.	8-22-67	
APP'D.			
USED ON	5126		

SIDE VIEW

CARD SIDE

PIN SIDE

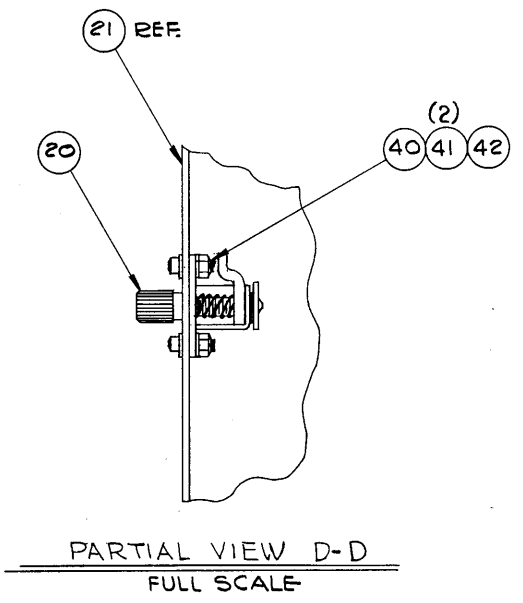
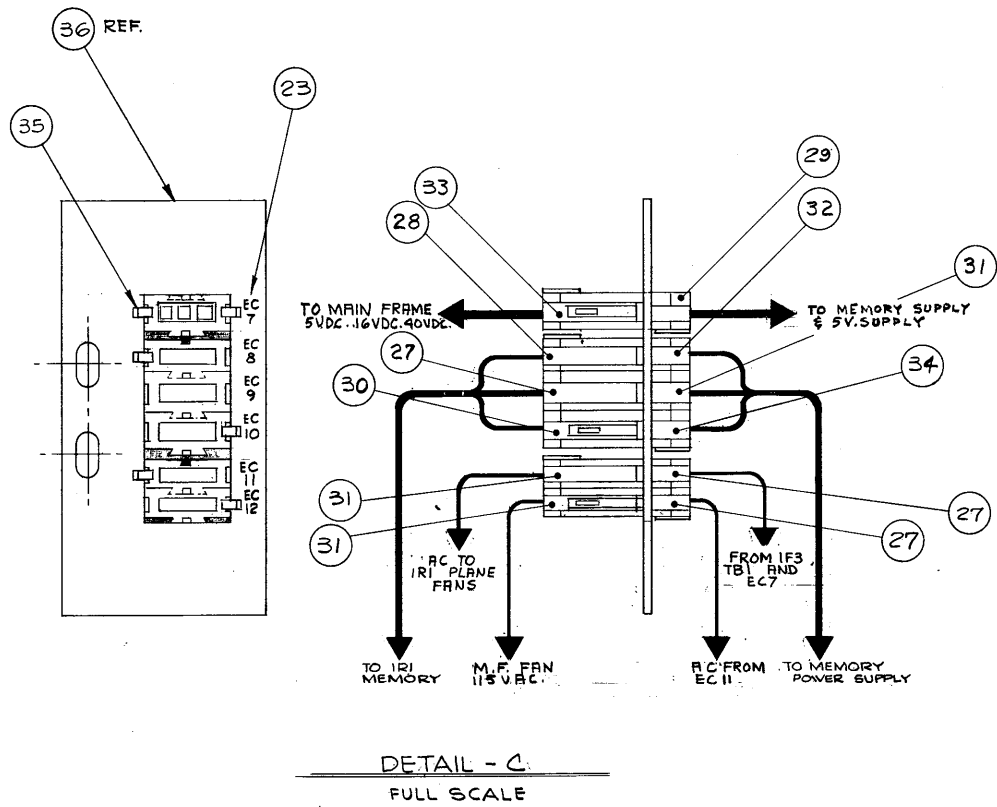
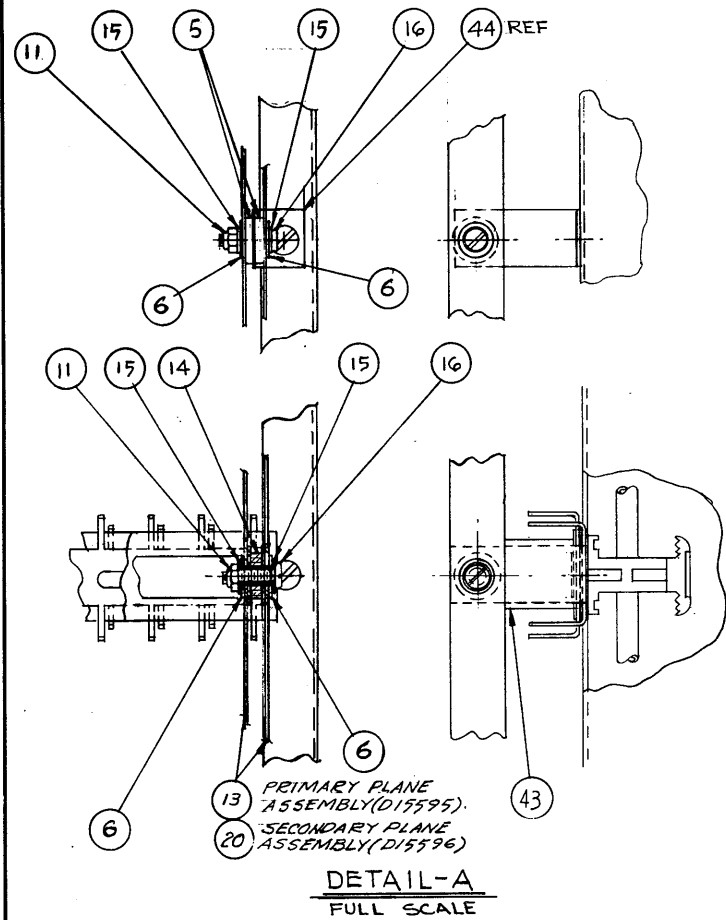
NEXT ASS'Y D15600

SCALE: 1/4" = 1"

REV	DESCRIPTION	DATE	APP'D
D	15595		D

NOTES:  
1.

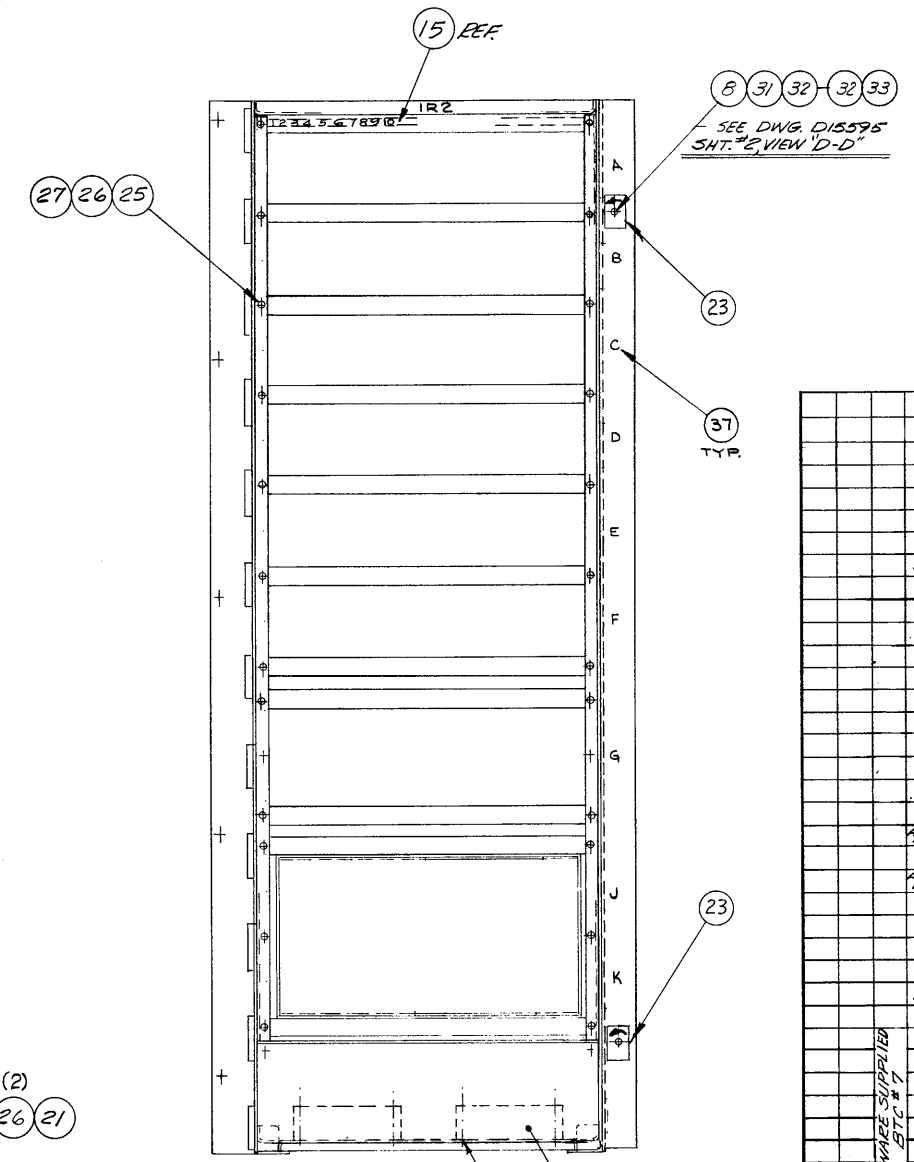
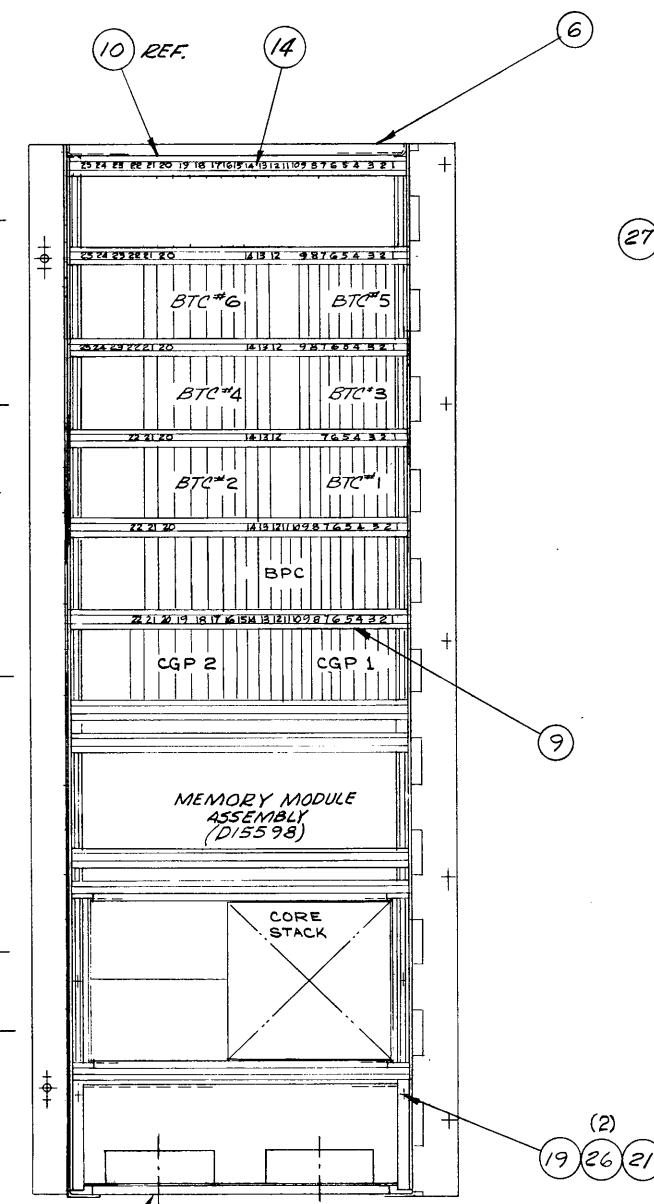
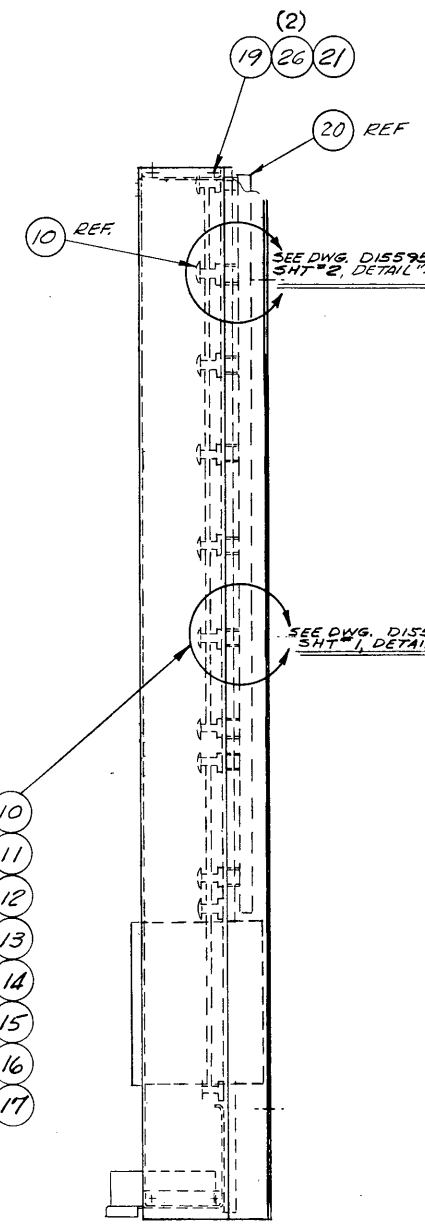
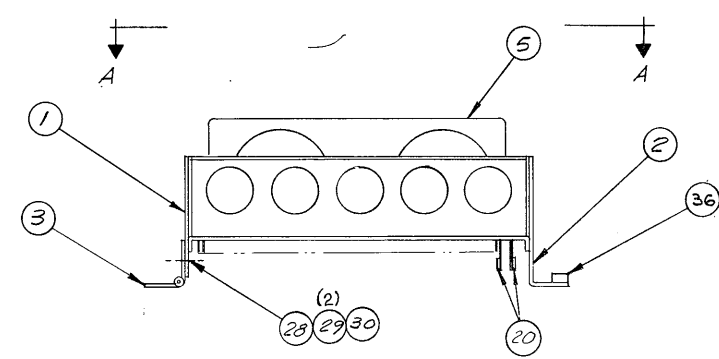
SIZE D	15595	REV D
REV	DESCRIPTION	DATE APP'D
SEE SHEET #1 FOR REV.		



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR.	1610 HEART	4-13-67
CK.	<i>[Signature]</i>	12/11/67
ENG.	<i>[Signature]</i>	8/23/67
PROJ. APP.	<i>[Signature]</i>	8/23/67
APP.	<i>[Signature]</i>	8-23-67
USED ON	9120	
SIZE D	15595	REV D

NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	15596		
A	ADDED ITEM 23 N.M.K. 8-16-67	8/16/67	
B	67-324: REVISED MTL LIST IN ACCORDANCE WITH INFO SUPPLIED BY MFG. H.R.L. 9-5-67	9/18/67	
C	67-515 ITEM 11, DESCR WAS, STRIP (CONNECTOR LOCATING). ADDED ITEMS 31 & 35; & OPTIONS FOR 810A TO TITLE BLK. LAUCK 11-17-67	11/17/67	
D	68-314: REVISED MODULE LOCATIONS, ADDED ITEMS 36-37. R.J.S. 6-7-68	6/3/68	



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION			
A/R 37	C16046		LABEL (BRADY MARKER)			
A/R 36	ST 401		SPRING TAPE RHPAC			
A/R 35	7001-29		ELCO CONNECTOR			
A/R 34	D12716-101		STRIP, CONNECTOR LOC.			
4	33		#4 ESNA-NUT			
8	32		#4 FLAT WASHER SS L/P			
4	31		#4-40 X 7/8 SCREW SS P/H PHILLIPS			
5	30		#10 ESNA-NUT, SS			
10	29		#10 FLAT WASHER			
5	28		#10-32 X 1/8 SCREW SS P/H PHILLIPS			
3	14	27	#3 LOCK WASHER, SPLIT			
3	34	26	#3 FLAT WASHER L/P			
3	14	25	#3-32 X 7/16 SCREW SS P/H PHILLIPS			
8	8	24	#6 ESNA-NUT			
2	23	C15936	LABEL-LATCH RELEASE			
8	22		#6-32 X 1 3/4 MACHINE SCREW P/H			
10	21		#8 ESNA NUT			
2	20	D15417-102	BUSS BAR EXTENSION			
10	19		#8-32 X 1/8 SCREW SS P/H PHILLIPS			
A/R 18	B15496		BUSS EXTENSION RETAINER			
5	4	3	RVC, 1/2 DIA. X 7/8 LG.			
A/R 16			SCOTCH BRAND ELEC. TAPE #2 (1/2 W)			
6	5	4	3	15	D13246-99-1	TEE CAP (SCOTCHCAL) NO. STRIP
6	5	4	3	14	D13246-99-1A	TEE CAP (SCOTCHCAL) NO. STRIP
6	5	4	3	13	D15416-101	BUSS BAR
6	5	4	3	12	D15416-102	BUSS BAR
10	8	6	4	11	D12105-101	TEE BAR
6	5	4	3	10	D12108-101	TEE CAP (MODULE ASS'Y)
1	9	D15597-102	SECONDARY MODULE ASS'Y			
2	8	43-1-3-0	LATCH - SOUTH CO (EH)			
2	7	747	ROTRON - SENTINEL FAN			
1	6	D15206	TOP-CHANNEL CHASSIS			
1	5	D15261	FILTER			
1	4	D15256	CHASSIS-FAN			
1	3	D15182	HINGE			
1	2	D15166	SIDE CHASSIS (LATCH SIDE)			
1	1	D15165	SIDE CHASSIS (HINGE SIDE)			

QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
A/R 1	BAC, BTC #1 - BTC #8		HARDWARE SUPPLIED WITH BTC #7
A/R 1	BAC, BTC #1 - BTC #7		HARDWARE SUPPLIED WITH BTC #7
A/R 1	BAC, BTC #1 - BTC #6		HARDWARE SUPPLIED WITH BTC #5
A/R 1	BAC, BTC #1 - BTC #5		HARDWARE SUPPLIED WITH BTC #5
A/R 1	BAC, BTC #1 - BTC #4		HARDWARE SUPPLIED WITH BTC #3
A/R 1	BAC, BTC #1 - BTC #3		HARDWARE SUPPLIED WITH BTC #3
A/R 1	BAC, BTC #1 - BTC #2		HARDWARE SUPPLIED WITH BTC #1
A/R 1	BAC & BTC #1		HARDWARE SUPPLIED WITH BTC #1
1	9	D15597-102	SECONDARY MODULE ASS'Y
2	8	43-1-3-0	LATCH - SOUTH CO (EH)
2	7	747	ROTRON - SENTINEL FAN
1	6	D15206	TOP-CHANNEL CHASSIS
1	5	D15261	FILTER
1	4	D15256	CHASSIS-FAN
1	3	D15182	HINGE
1	2	D15166	SIDE CHASSIS (LATCH SIDE)
1	1	D15165	SIDE CHASSIS (HINGE SIDE)

SIDE VIEW

VIEW A-A  
CARD VIEW

PIN SIDE

NEXT ASS'Y D15600

SCALE: 1/4"=1"

OPTIONS

**SEL** SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
FORT LAUDERDALE, FLORIDA

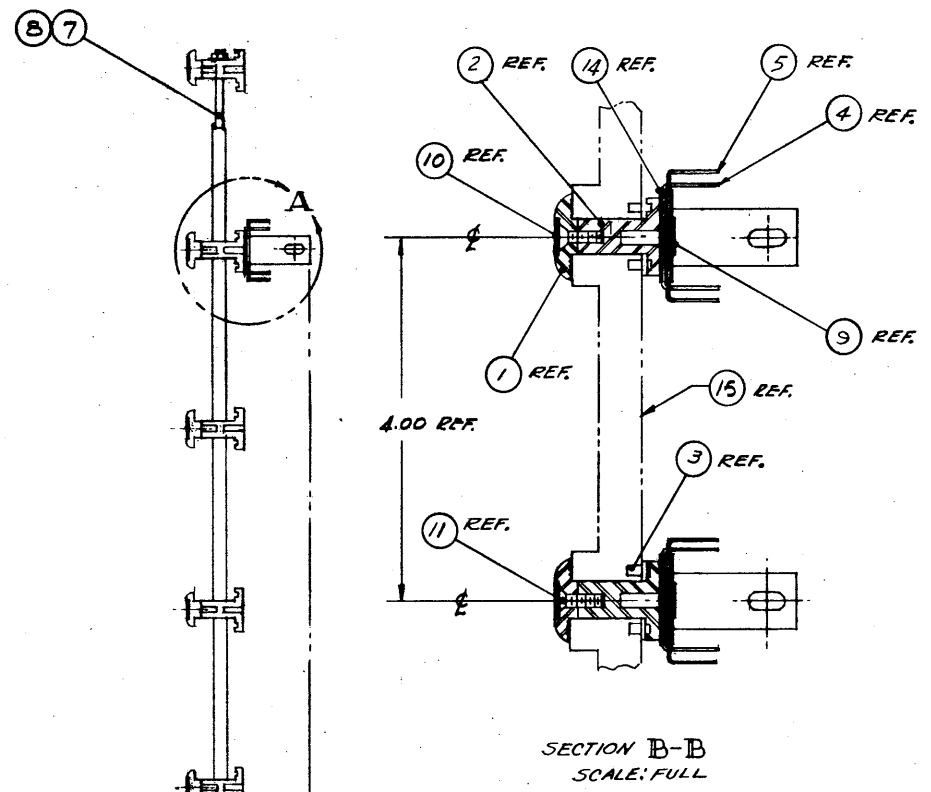
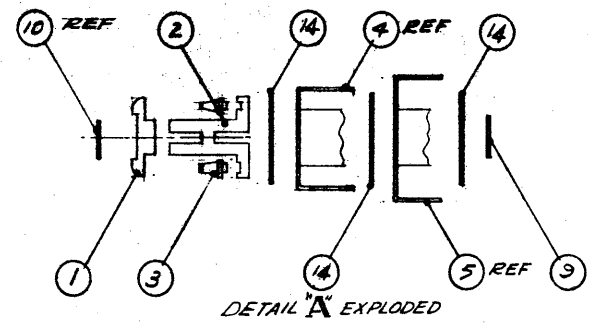
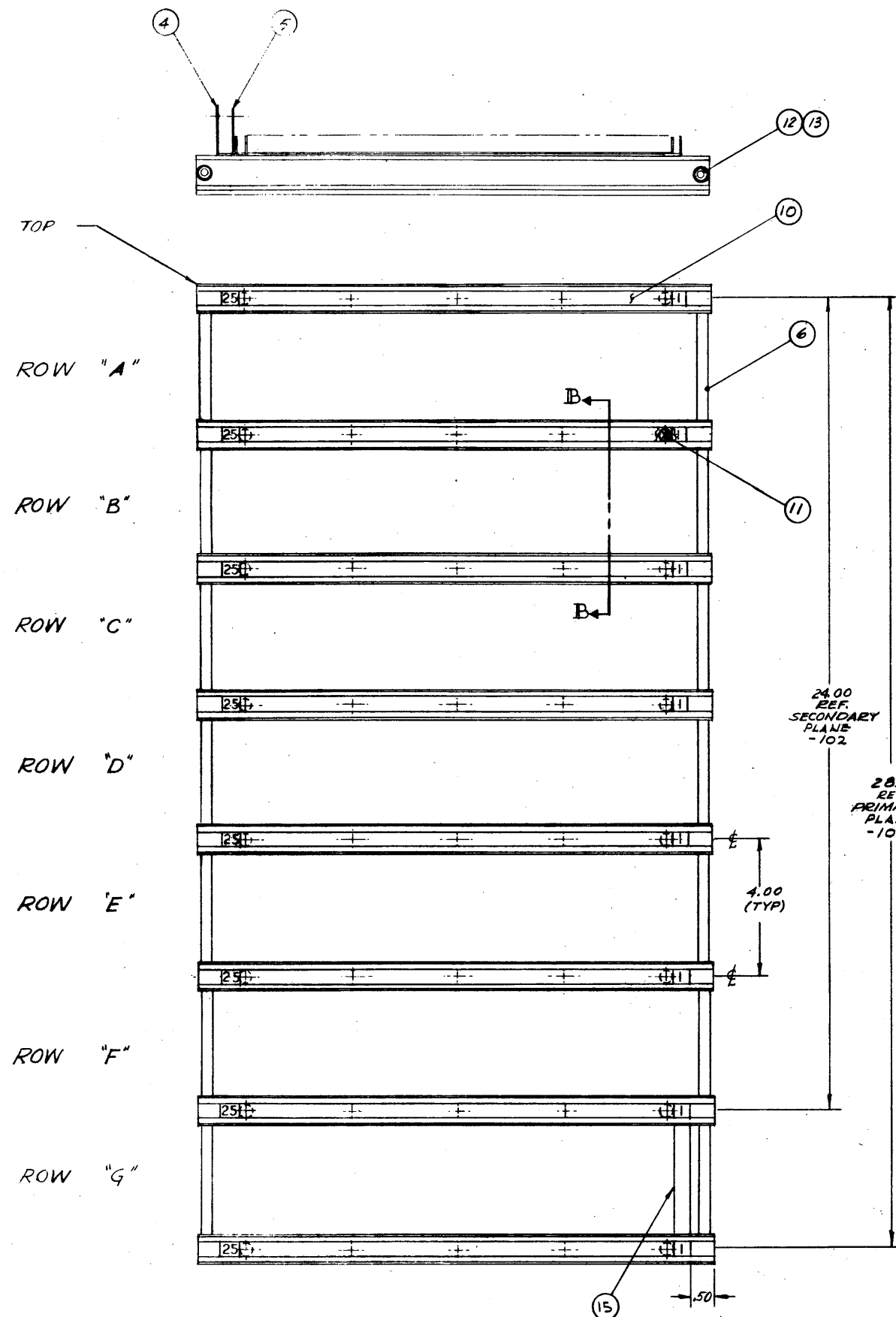
DR. IGLHEART 3-16-67  
ENCL. P. KATHON 8/10/67  
ENG. W. L. ... 8/12/67  
APP. 12/2/67  
APP. 1/1/68 3-22-67

USED ON 9126

SECONDARY PLATE ASSEMBLY OPTIONS FOR 810A

SIZE	D 15596	REV	D
------	---------	-----	---

NOTES:  
 1. CARD LOCATION DWG. # D  
 2.  
 3. DO NOT SCALE THIS DWG. USE DIMENSIONS ONLY.



SEC. QTY	SEC. DWG. OR PART NO.	DESCRIPTION
	15	7001-29 CONNECTOR - "ELCO"
A/R	A/R	14 SCOTCHBAND ELEC. TAPE No. 21 (1/2")
4	4	13 #10 FLATWASHER L.P. 35
4	4	12 #10 ESNA NUT
	40	11 #8-32 X 1/2 FN PHILLIPS, 55
A/R	8	10 D13246-99-1A TEE CAP (SCOTCHCAL) NO. STRIP
A/R	8	9 D13246-99-1 TEE CAP (SCOTCHCAL) NO. STRIP
2	8	D12104-108 THREADED ROD
	2	7 D12104-109 THREADED ROD
12	14	6 D12103 SPACER
A/R	7	5 D15416-101 BUSS BAR (WIDE)
A/R	7	4 D15416-102 BUSS BAR (NARROW)
A/R	14	3 C12716 STRIP (CONNECTOR LOCATING)
7	8	2 D12105-101 TEE BAR
A/R	8	1 D12108-101 TEE CAP

NEXT ASSEMBLY:  
 PRIMARY PLANE D15595  
 SECONDARY PLANE D15596

SCALE: 1/2"=1"

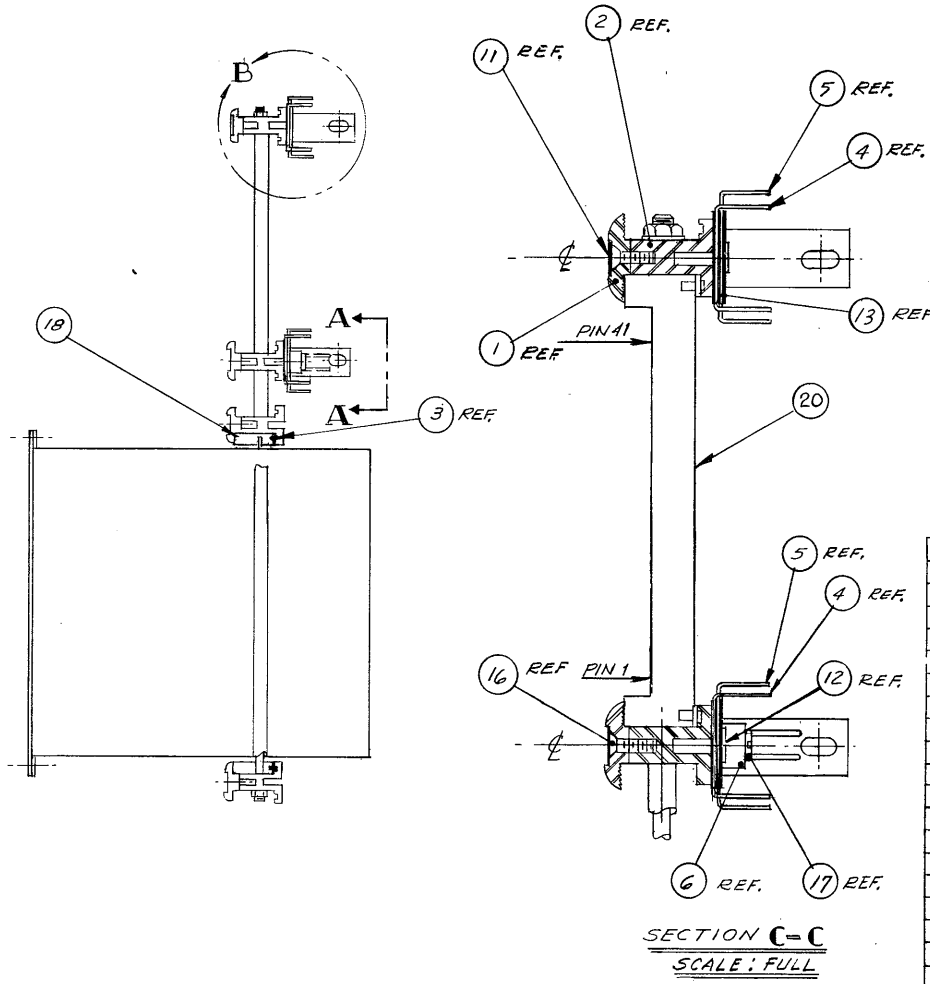
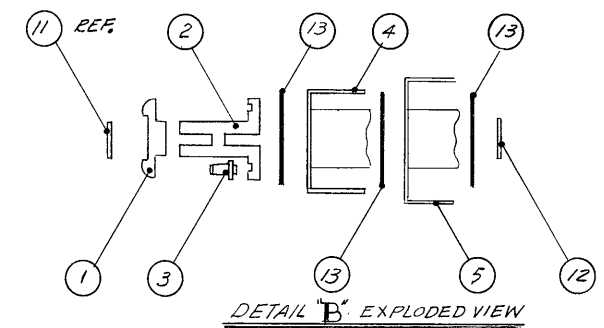
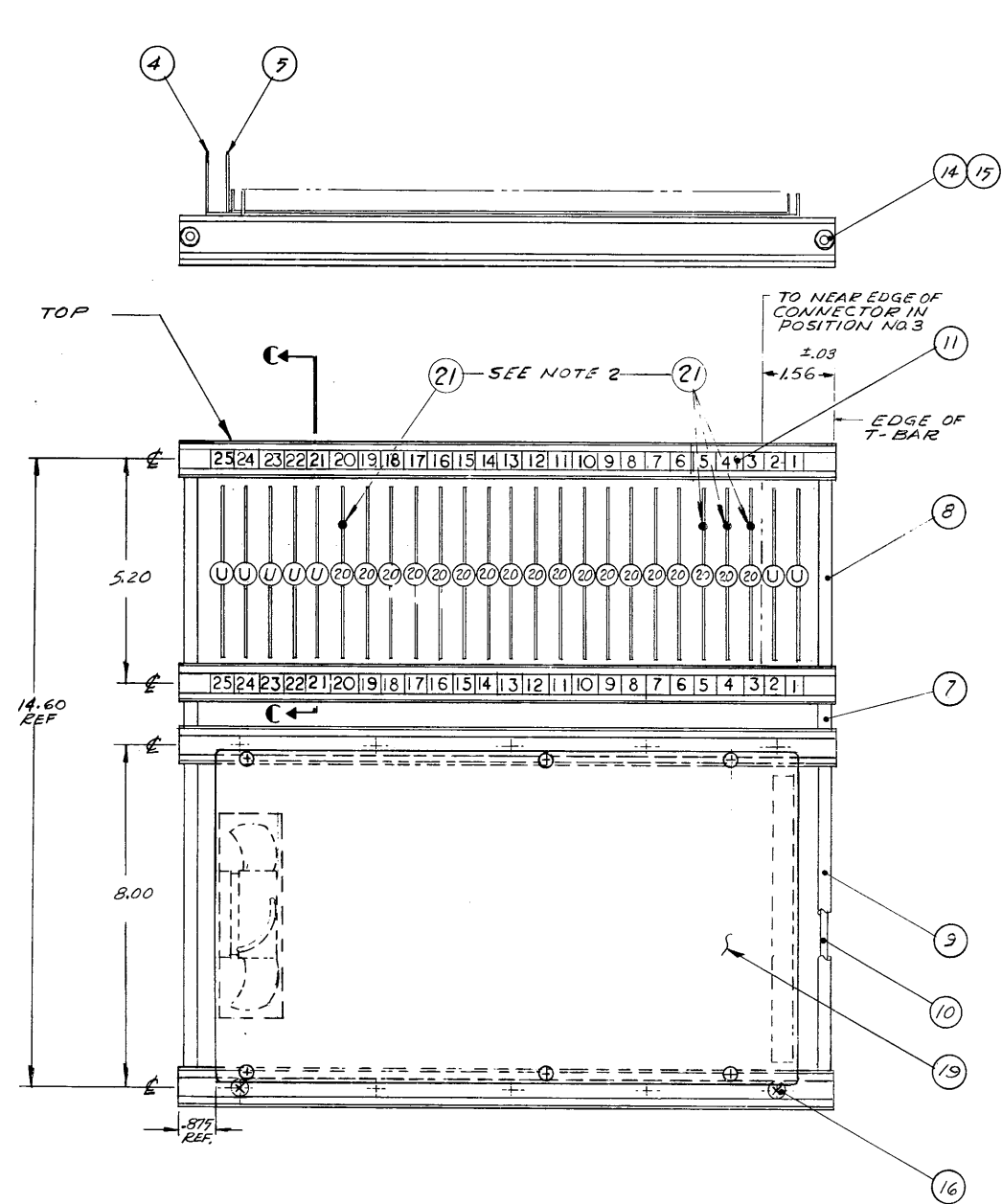
OPTION PLANE	SEC. QTY	SEC. DWG. OR PART NO.	DESCRIPTION
OPTION PLANE			
SECONDARY PLANE			
PRIMARY PLANE			

DATE	3-14-67	DESCRIPTION	PRIMARY & SECONDARY MODULE ASSEMBLY
DWG. BY	W. H. H.	DATE	3-14-67
CHKD. BY	W. H. H.	DATE	3-14-67
APP. BY	W. H. H.	DATE	3-14-67
USED ON	82267	REV	D 15597

NOTES:  
 1. DO NOT SCALE THIS DWG. USE DIMENSIONS ONLY.  
 2. CEMENT (USING ITEM 22) PIN (ITEM 21) IN HOLE NO 31 OF CONNECTORS (ITEM NO. 20) IN POSITION 3, 4, 5 & 20

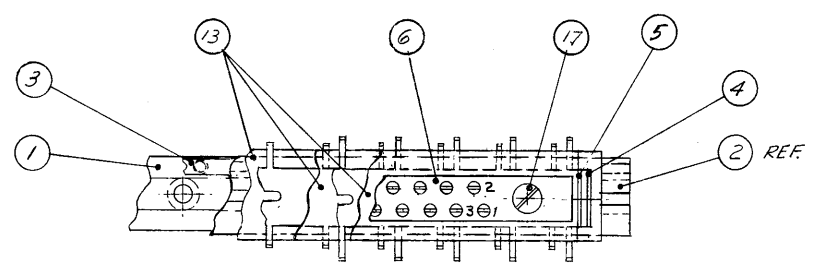
REV	DESCRIPTION	DATE	APP'D
D	15598		B
A	67-398: MOVED ITEM #21 (41 PIN CON) FROM SLOTS 20, 21, 22 TO SLOTS 3, 4, 5. DATA SAVER FROM SLOT 23 TO SLOT #20. ADDED ITEM #26 TO L.O.P. B. LAUCK 9-12-67 CRAWLEY	9/13/67	CR
B	68-276: DELETED ITEM 20 THRU 28, 29, 26 FROM USED ON BOX. ITEM 15 WAS MEMORY ASSY. (8KX18). TITLE WAS MEMORY MODULE ASSY (8KX18). ADDED ITEMS 20 & 21, 22, 23 & 24. ADDED NOTE NO. 2 LAUCK 5/22/68 CRAWLEY	5/22/68	CR



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
	28		
	27		
	26		
	25		
REF	24	53111	LOGIC DIAGRAM
REF	23	53103	LOGIC DIAGRAM
A/R	22	2101	CEMENT TREA-BOND TREA-CON
4	21	60-7001-4012	PIN, POLARIZING ELCO
18	20	7001-41	CONNECTOR ELCO
1	19	D15459	MEMORY CHASSIS ASSY
2	18	L12888-106	RETAINER (12" LG)
2	17	#8-32 X 1/2 SCREW B/H SLOTTED (MOLDED) NYLON	
20	16	#8-32 X 1/2 SCREW F/H PHILLIPS SS	
4	15	#10 FLATWASHER LP 55	
4	14	#10 ESNA-NUT	
A/R	13	SCOTCH BRAND ELEC TAPE NO. 21 (1" WIDE)	
2	12	D13246-99-1	TEE CAP (SCOTCHCAL) NO. STRIP
2	11	D13246-99-1A	TEE CAP (SCOTCHCAL) NO. STRIP
2	10	D12104-107	THREADED ROD
2	9	B15446-103	SPACER
2	8	B15446-102	SPACER
2	7	B15446-101	SPACER
1	6	B14872	GROUND BLOCK
2	5	D15416-101	BUSS BAR
2	4	D15416-102	BUSS BAR
4	3	C12716	STRIP (CONN. LOCATING)
4	2	D12105-101	TEE BAR (MODULE ASSY)
4	1	D12108-101	TEE CAP (MODULE ASSY)

**LEGEND**

- (C/10) CONNECTOR - 104 PIN "AMP" CONNECTOR OCCUPYING CARD POSITION
- (C/5) CONNECTOR - 50 PIN "AMP" CONNECTOR OCCUPYING CARD POSITION
- (H/C) NO CARD - "ELCO" CONNECTOR PRESENT AS SPARE FOR FUTURE CARD EXPANSION
- (U) UN-OCCUPIED, NO CARD OR "ELCO" CONNECTOR PRESENT
- (S) SETBACK - CARD & CONNECTOR REMOVED FOR CLEARANCE OF FRONT PANEL COMPONENTS



PARTIAL VIEW A-A  
SCALE: FULL

NEXT ASS'Y  
D15595 & D15596

SCALE: 1/2=1

SEI SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR. E.W. PUGH 3-16-67  
 CK. J. KATHAN 12/10/67  
 ENG. G. CARROLL 8/20/67  
 PROJ. M. CARROLL 8/20/67  
 APP. M. CARROLL 8/22/67

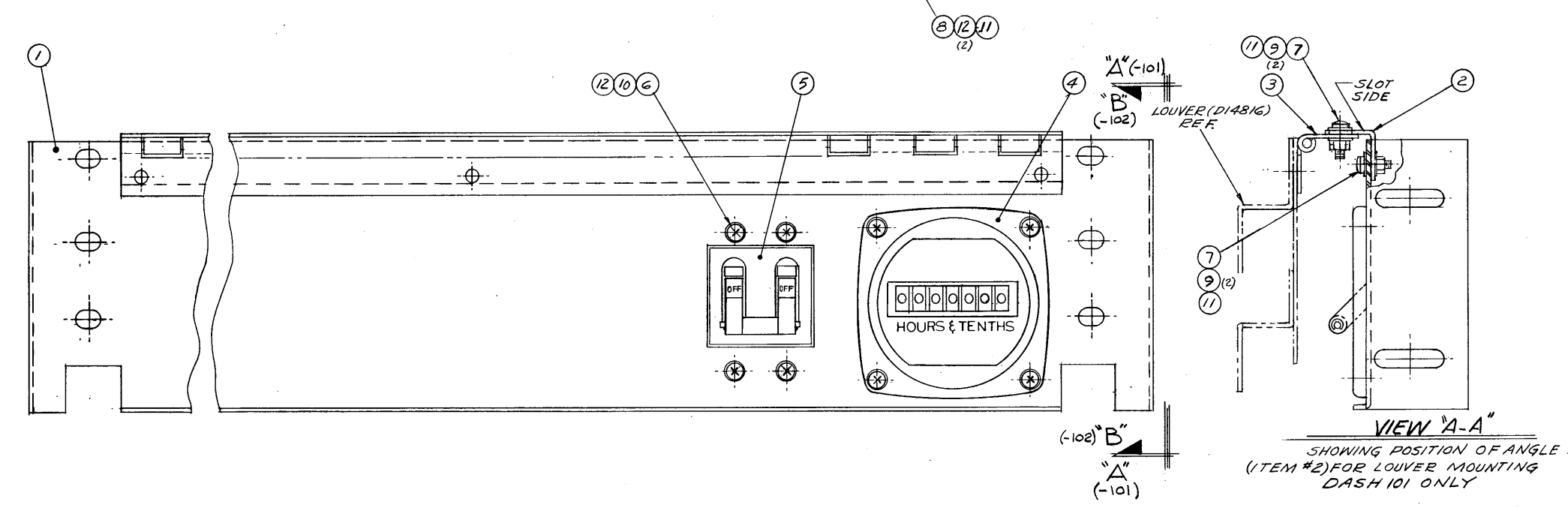
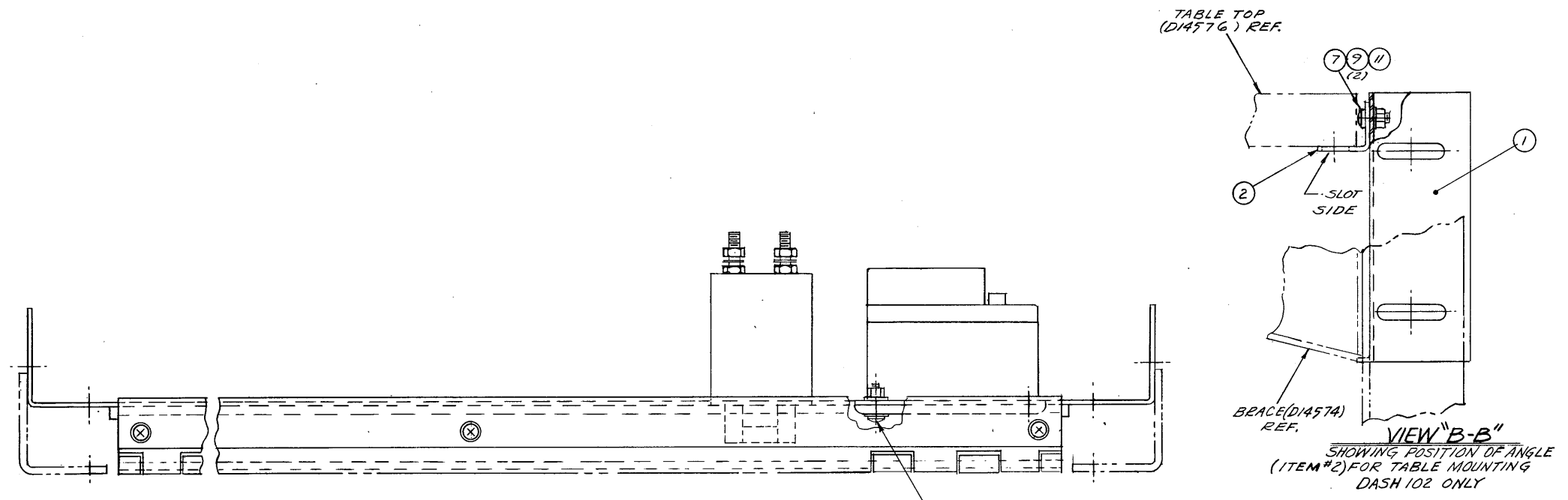
MEMORY MODULE ASSEMBLY (4KX18a) & (8KX18a)

SIZE D 15598 REV B



NOTES:  
1.

REV	DESCRIPTION	DATE	APP'D
D	15599		
A	67-324: ADDED PT. NOS TO DRAWING ITEM 12, ITEM 9 WAS 3 (14) FOR -101 (U) FOR -102 EWP 9/5/67 HRC 9-7-67	9/18/67	HRC
B	68-29: PART NO. ITEM 12 WAS M15795-805, IT WAS 22NM 107-62, 10 WAS AN985-C6, 9 WAS AN960-C6 LAUCK 1-24-68 CRAWLEY	1/29/68	CRAWLEY
C	68-91 RELEASED TO PRODUCTION RBS 2-20-68 CRAWLEY	2/20/68	CRAWLEY



QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
12	12	NRS 620-6L	#6 S/P FLAT WASHER
7	10	MS 21044-N06	#6-32 NUT - SELF LOCK
4	A	MS 35338-136	#6 SPLIT LOCK WASHER
6	12	MS 15795-805	#6 4/P FLAT WASHER
4	A	MS 35216-27	#6-32X1/2 P/H SCREW PHILLIPS
3	6	MS 35216-26	#6-32X1/4 P/H SCREW PHILLIPS
4	A	MS 35216-24	#6-32X3/16 P/H SCREW PHILLIPS
1	1	AM33M96	CIRCUIT BREAKER, HEINEMANN
1	1	K42203-P4	METER, HAYDON
1	1	C15193	HINGE, LOUVER
1	1	C15192	ANGLE, HINGED LOUVER
1	1	D15191	PANEL, METER & CIR. BREAKER

DR.	DATE	REV
EWP	3-23-67	
CR.	P. HARTON	12/20/67
ENG.	W. H. ...	9/12/67
APV.	HRC	8/22/67
USED ON	D 15599	C

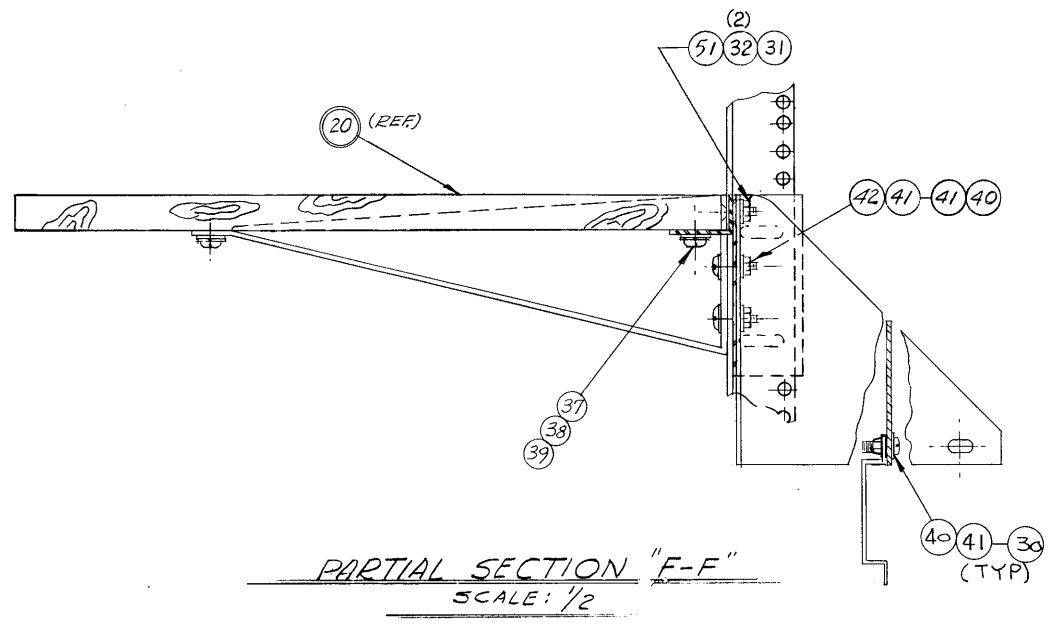
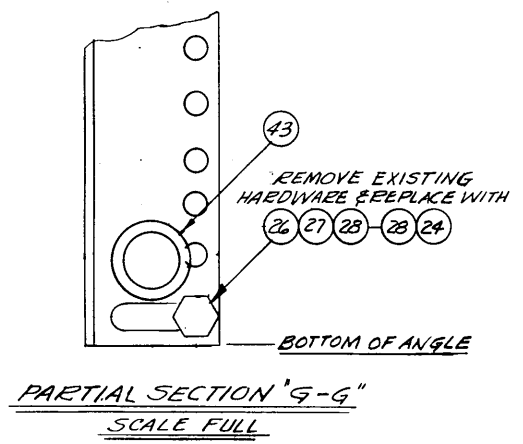
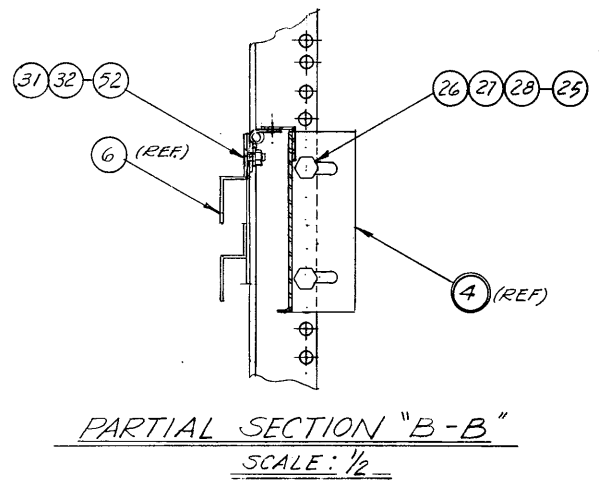
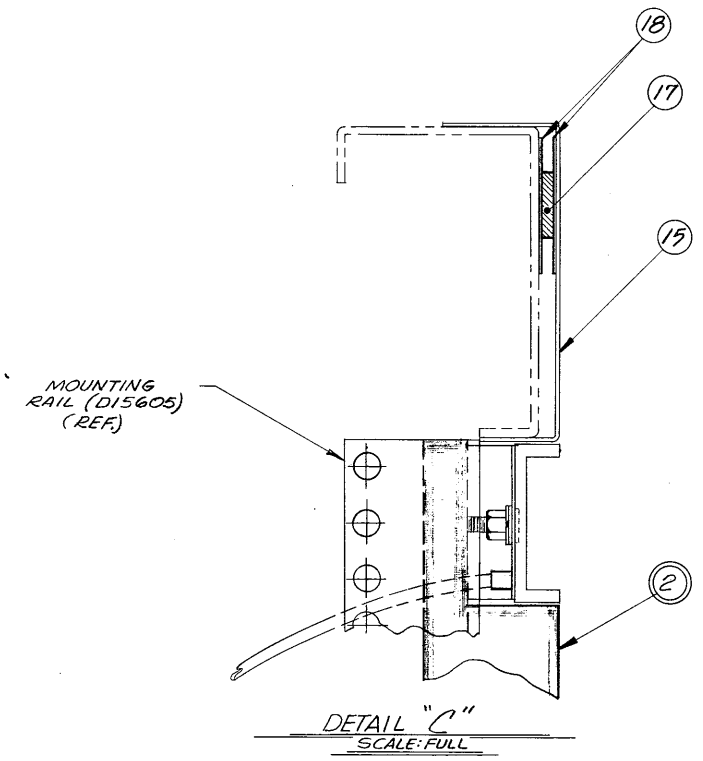
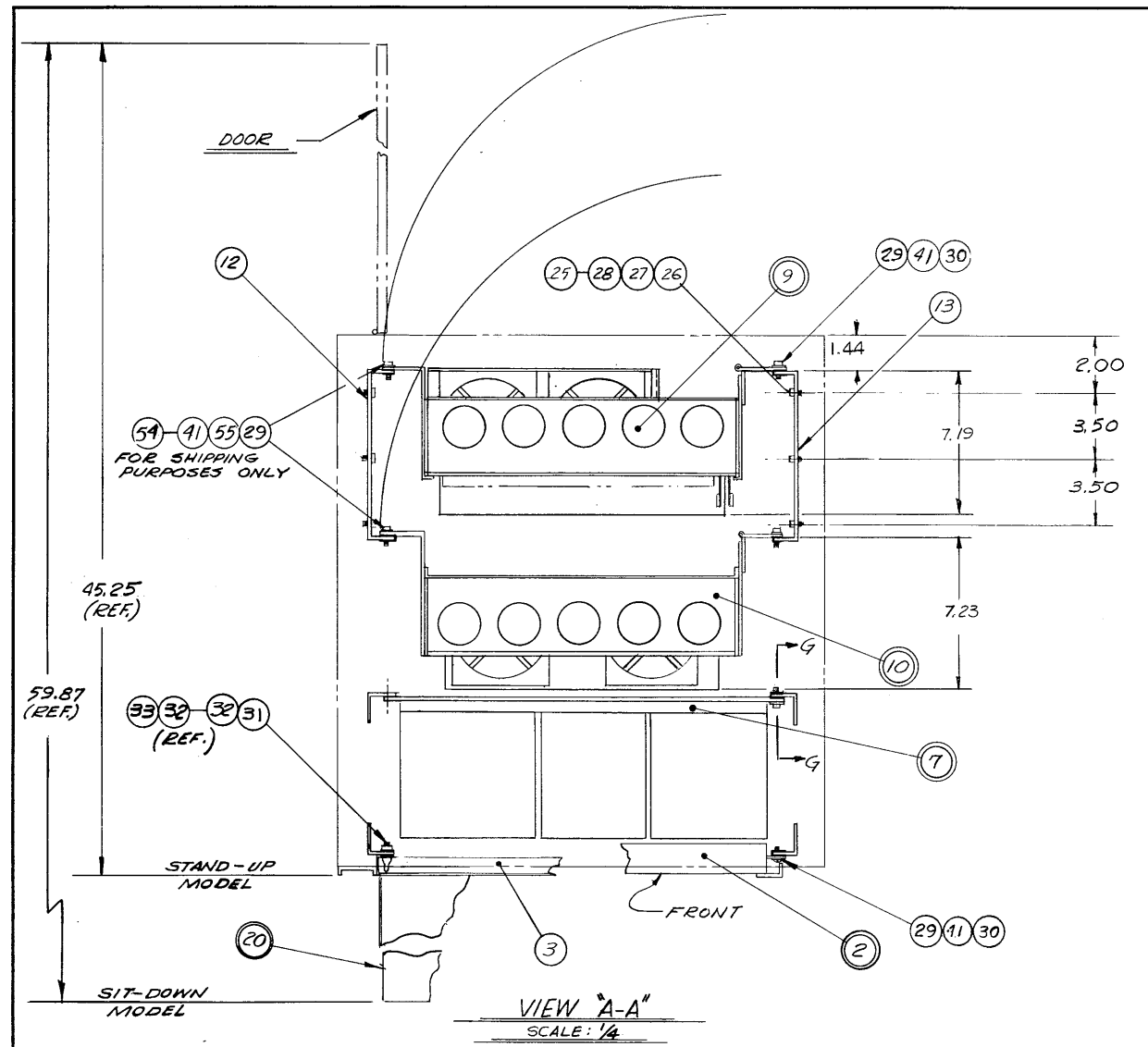
NEXT ASS'Y D15600 SCALE: FULL





NOTES:  
1. ALL DIMENSIONS SHOWN ARE FOR REFERENCE PURPOSES ONLY.

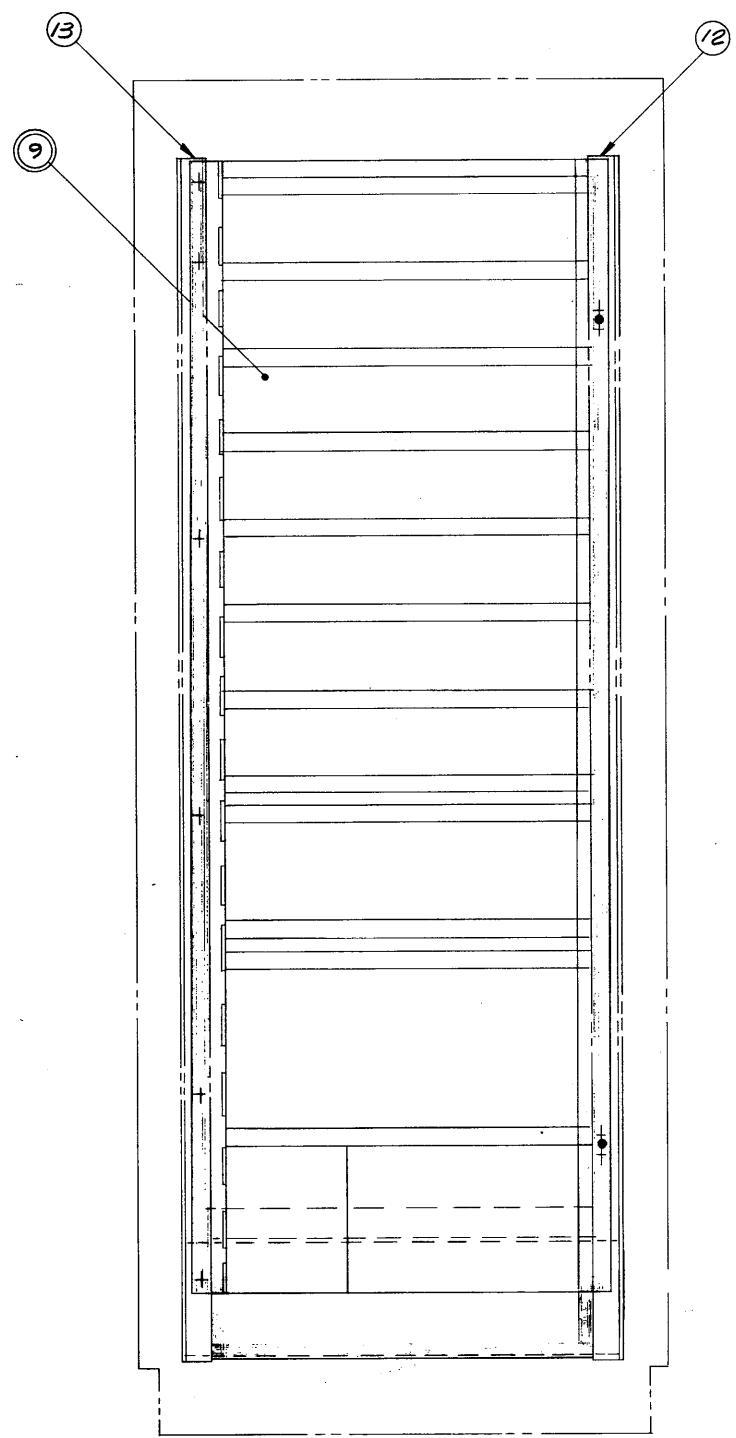
REV	D	15600	DATE	APP'D
REV		DESCRIPTION		
		FOR REV. SEE SH#1		



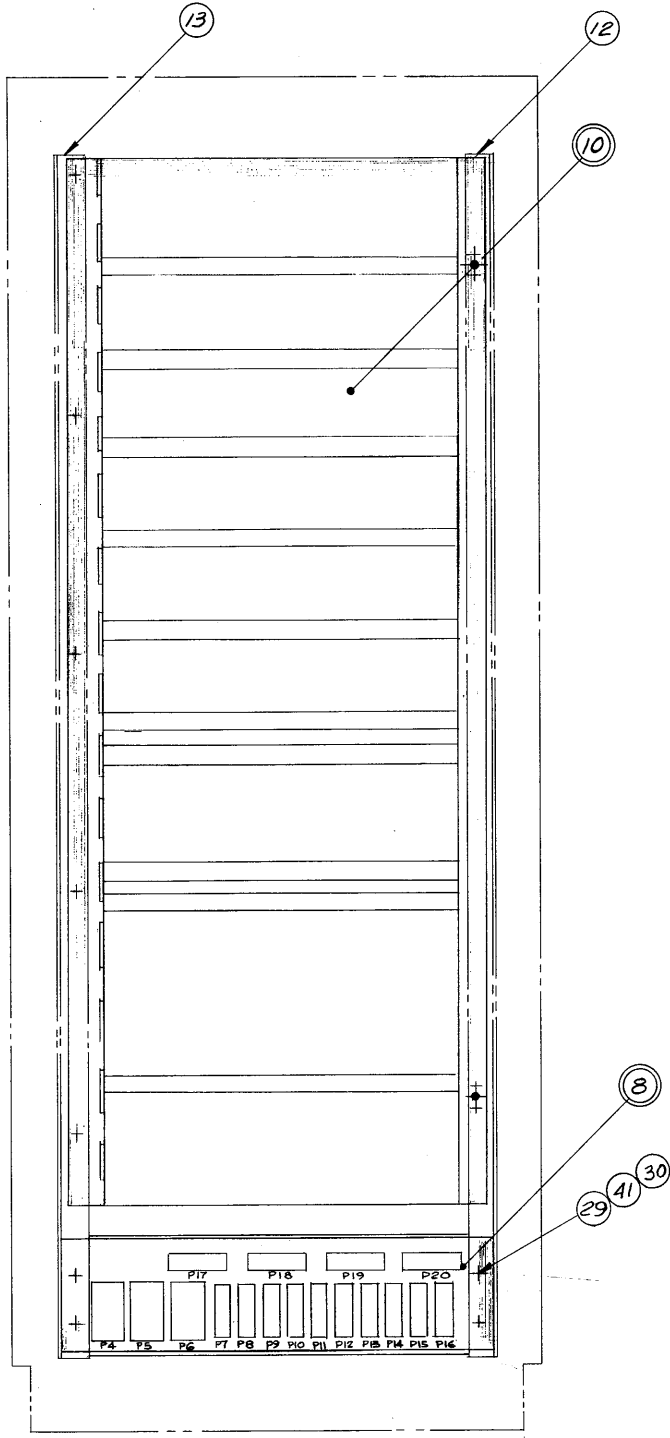
ITEM	DWG. OR PART NO.	DESCRIPTION		
<b>SEL</b>				
SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA				
DR. CHUMLEY	5-23-67	FINAL ASSEMBLY 810 & COMPUTER (STAND-UP & SIT-DOWN) MODELS		
CL. P. Patton	12 JUN 67			
ENG. [Signature]	8/22/67			
PROJ. APP. [Signature]	8/22/67			
APP. [Signature]	8-22-67			
USED ON	9/26			
REV	D	15600	REV	F

NOTES:  
1.

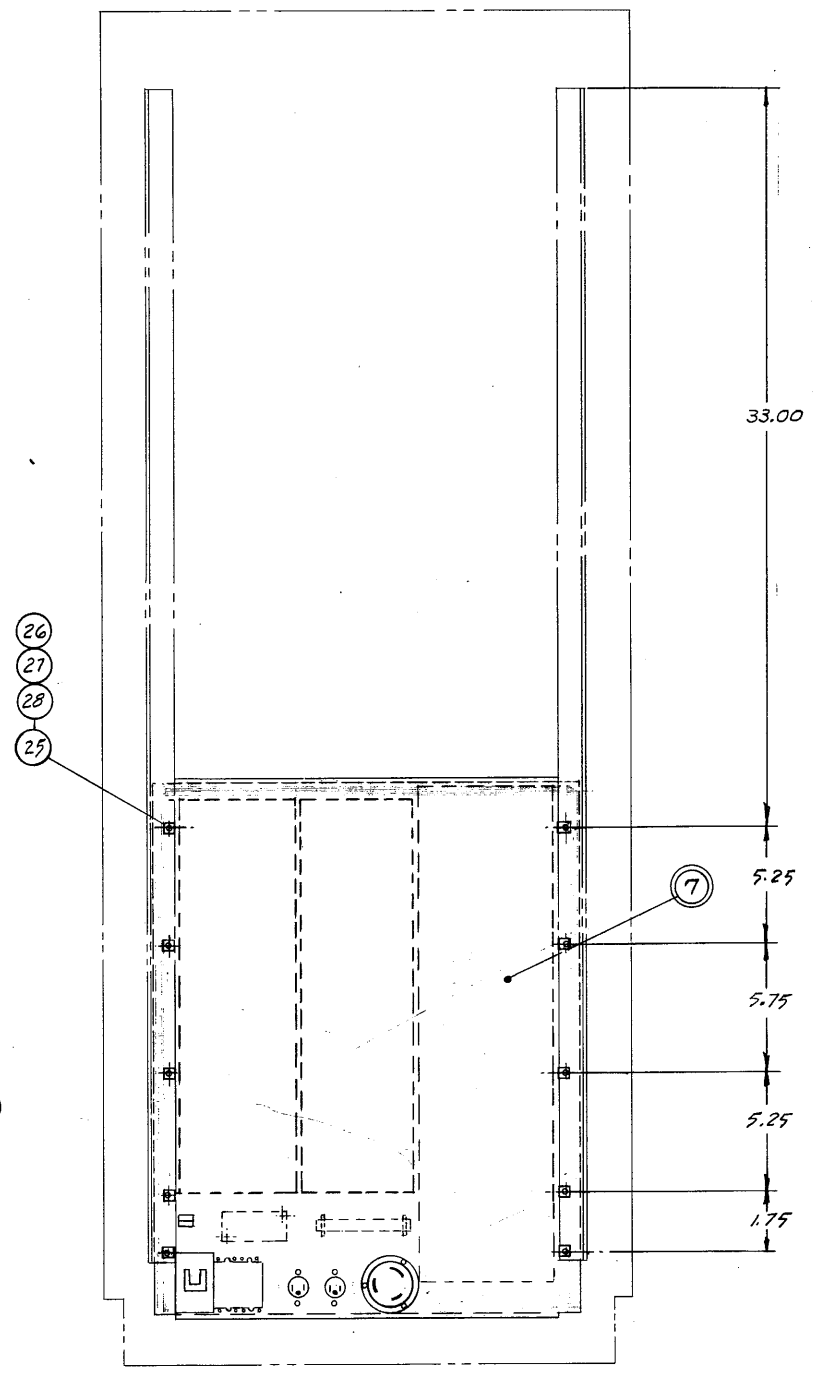
REV	D	15600	REV	F
DESCRIPTION			DATE	APP'D
FOR REV SEE SHT #1				



REAR VIEW  
SCALE: 1/4"



SECTION "D-D"  
SCALE: 1/4"



SECTION "E-E"  
SCALE: 1/4"

33.00

5.25

5.75

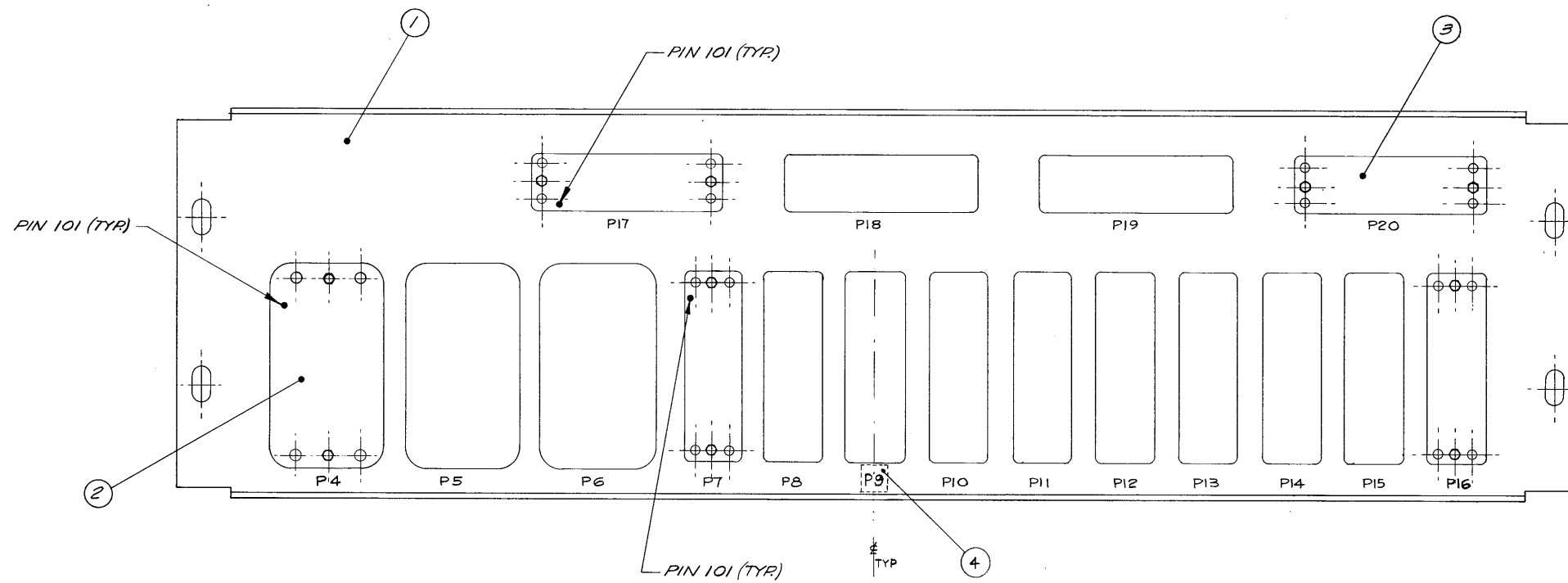
5.25

1.75

ITEM	DWG. OR PART NO.	DESCRIPTION
<b>SEL</b> SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA		
DR. CHUMLEY	5-23-67	FINAL ASSEMBLY 810 & COMPUTER (STAND-UP & SIT-DOWN) MODEL
CL. P. Kelton	12/24/67	
ENG. DeCenzo	8/21/67	
PROJ. EXP. Smith	8/21/67	
APP. M.B.	8-22-67	
USED ON	9126	SIZE D 15600

NOTES:  
1.

SIZE	D 15601		REV	A
REV	DESCRIPTION	DATE	APP'D	
A	GT. 32A; ITEM 4 WAS D14566-102 EWP 9-5-67	JCRULLY 9-8-67	[Signature]	



QTY.	ITEM	DWG. OR PART NO.	DESCRIPTION
1	4	C16046	LABEL
14	3	200277-2	50 PIN CONNECTOR (FEMALE) AMP
3	2	201037-1	104 PIN CONNECTOR (FEMALE) AMP
1	1	D14566	PANEL - I/O CONNECTOR

**SEL** SYSTEMS ENGINEERING LABORATORIES INCORPORATED  
 FORT LAUDERDALE, FLORIDA

DR	J. CHUMLEY	5-22-67
CC	R. Hutton	12/10/67
ENG.	W. Lander	8/22/67
PROJ. APP.	W. Lander	8/22/67
APP.	MRB	8-22-67
USED ON	9126	

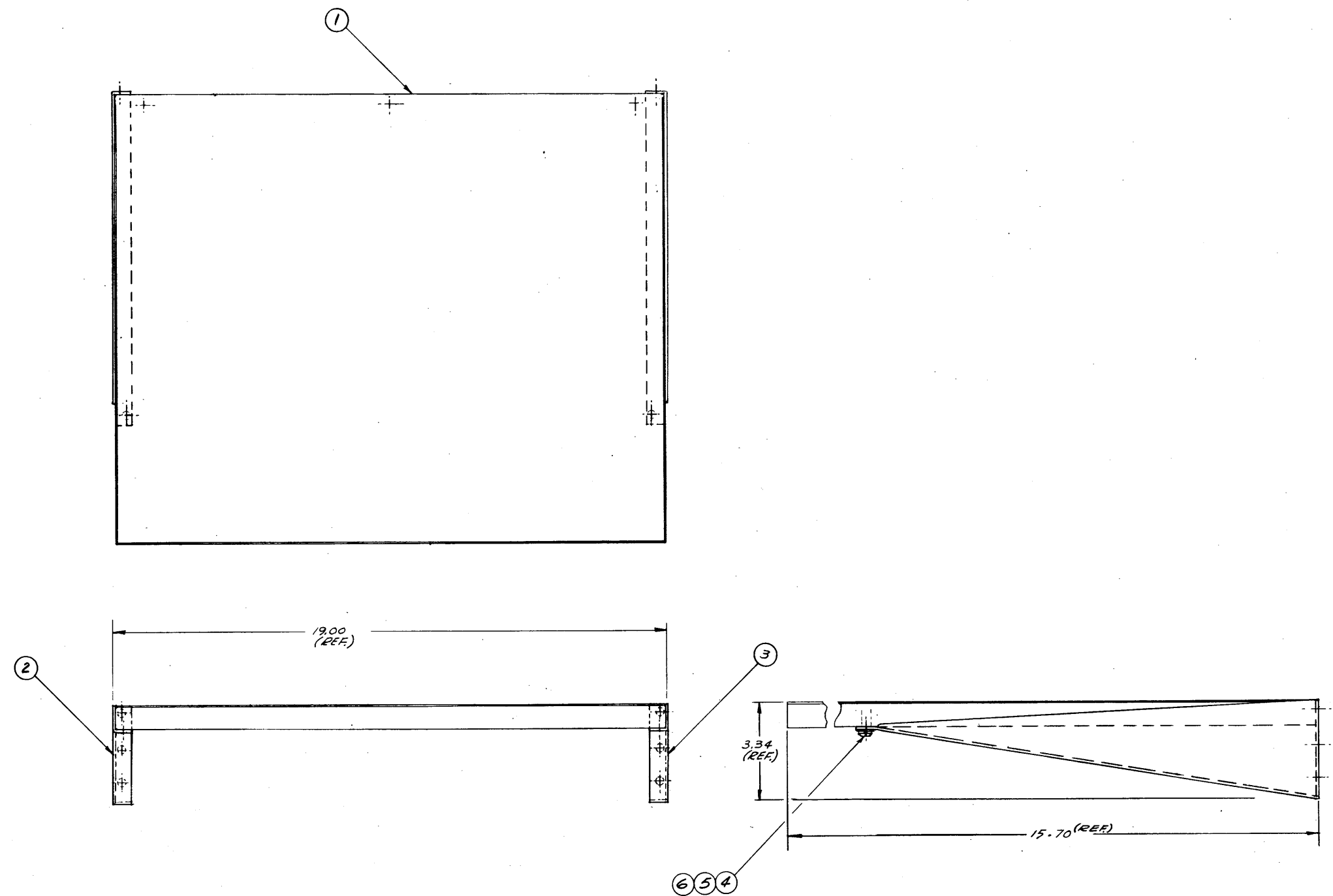
ASSEMBLY  
 I/O CONNECTOR  
 PANEL

SIZE	D	15601	REV	A
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NEXT ASSY D15600 SCALE: FULL

NOTES:  
1.

REV	D	15602	DATE	APP'D
-----	---	-------	------	-------



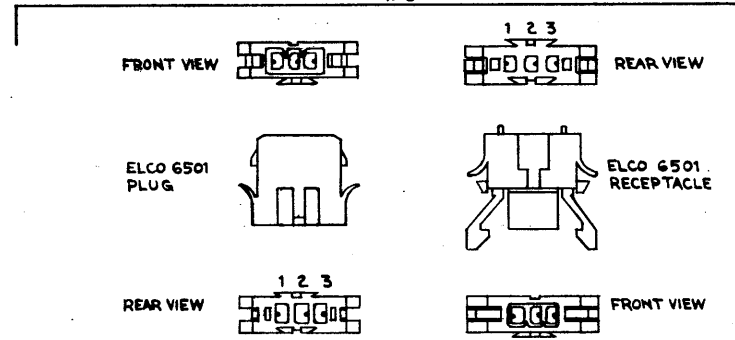
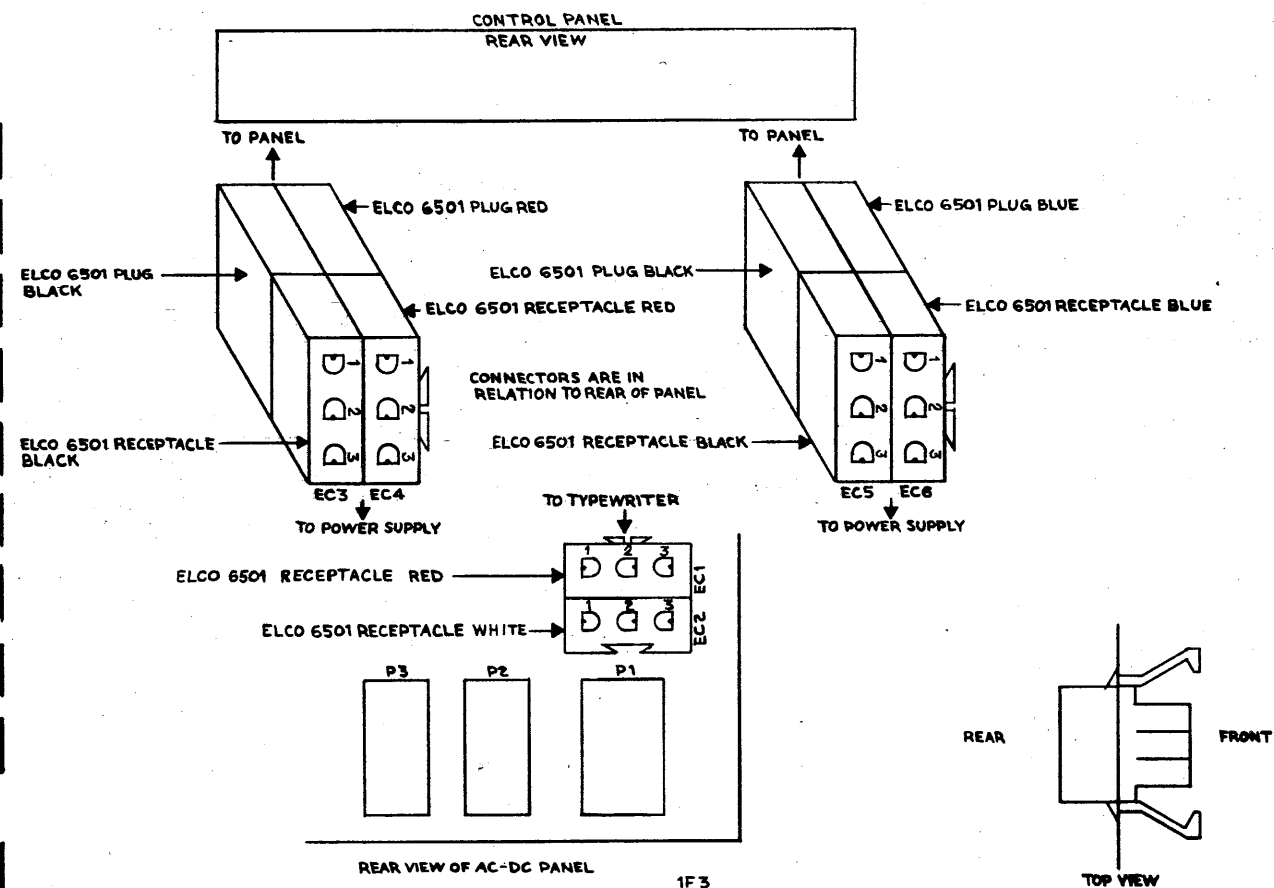
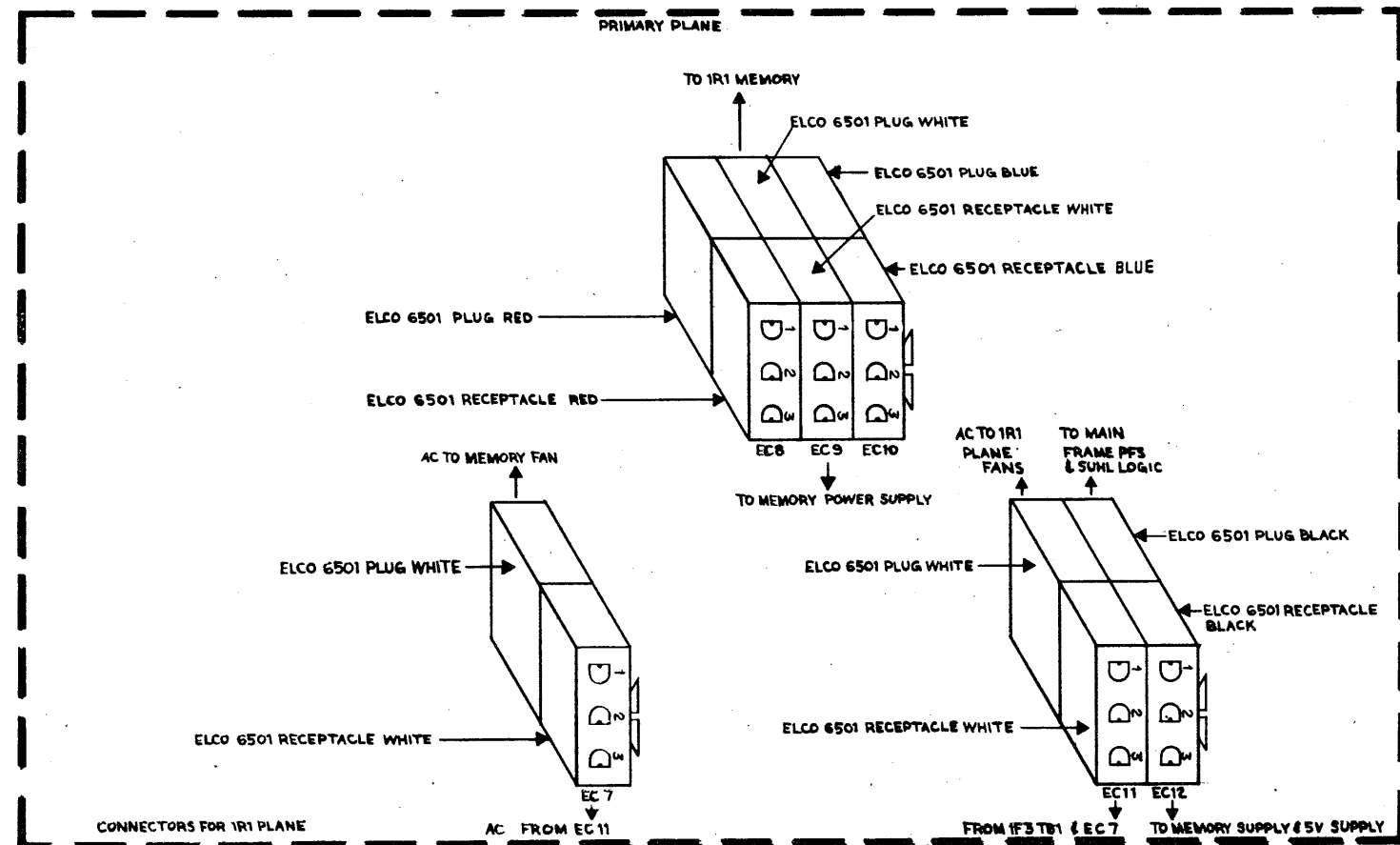
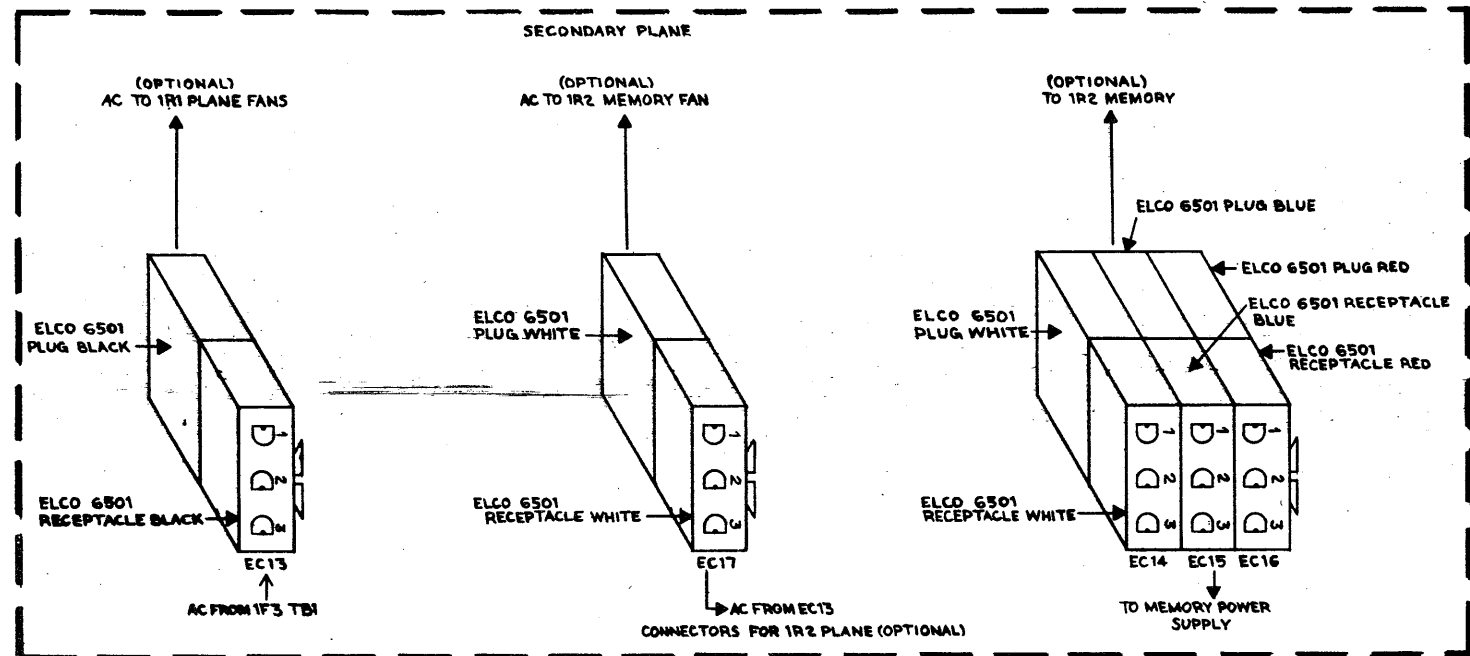
QTY	ITEM	DWG. OR PART NO.	DESCRIPTION
2	6		#8 FLATWASHER
2	5		#8 LOCKWASHER
2	4		#8-32 X 1/2 SCREW SS P/H PHILLIPS
1	3	D14574-102	BRACE-TABLE TOP
1	2	D14574-101	BRACE-TABLE TOP
1	1	D14576	TABLE TOP

<b>SEL</b>		SYSTEMS ENGINEERING LABORATORIES INCORPORATED FORT LAUDERDALE, FLORIDA	
DR.	<i>C. W. [unclear]</i>	4-14-67	<b>TABLE TOP ASSEMBLY</b>
CL.	<i>L. [unclear]</i>	8/14/67	
CHK.	<i>[unclear]</i>	8/14/67	
APP.	<i>[unclear]</i>	8-22-67	
REV	D	15602	

NEXT ASS'Y D15600 SCALE: 1/2" = 1"

NOTES  
 1. ALL 6501 RECEPTACLES MUST AT LEAST USE 2 LOCKING INSERTS.

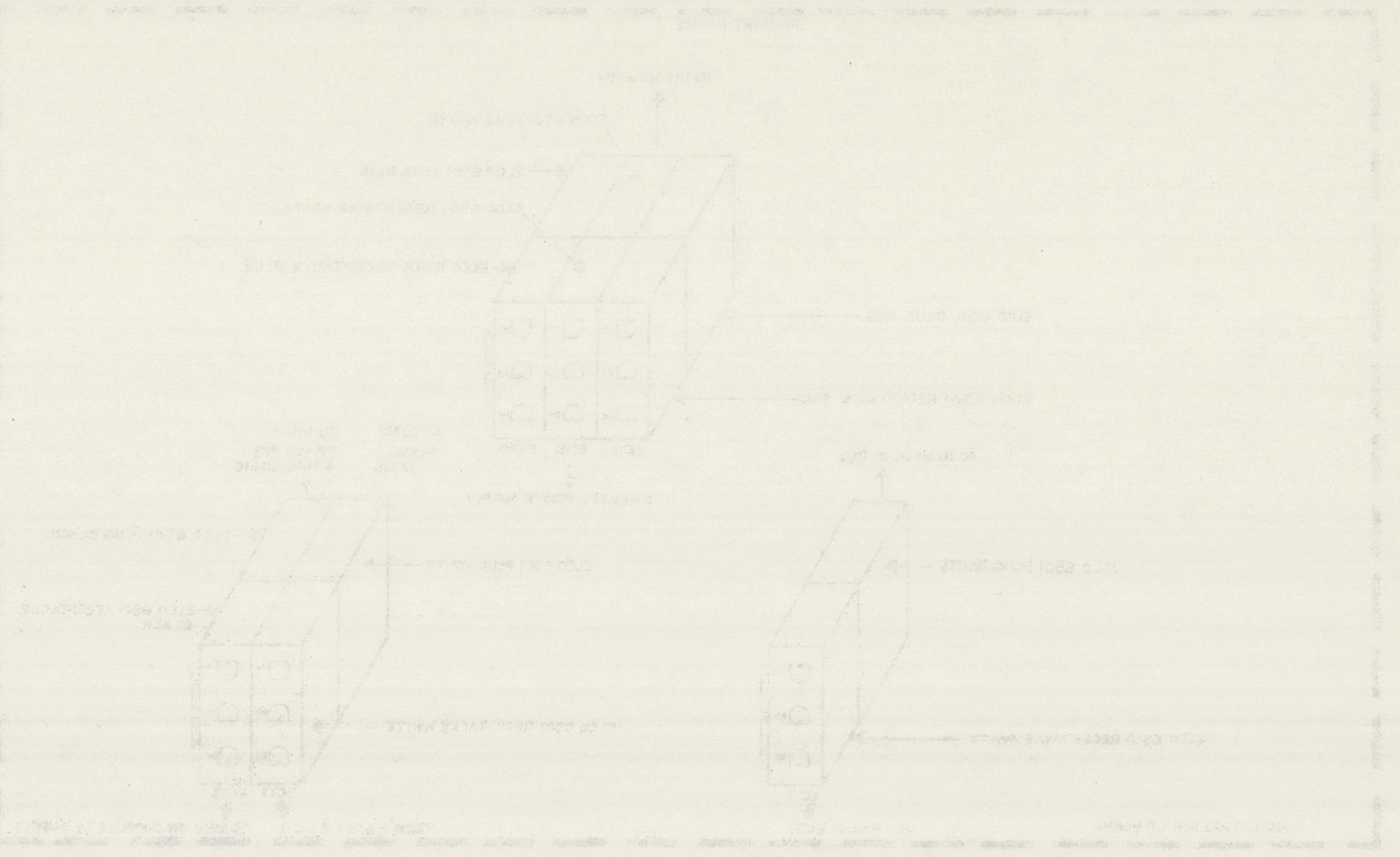
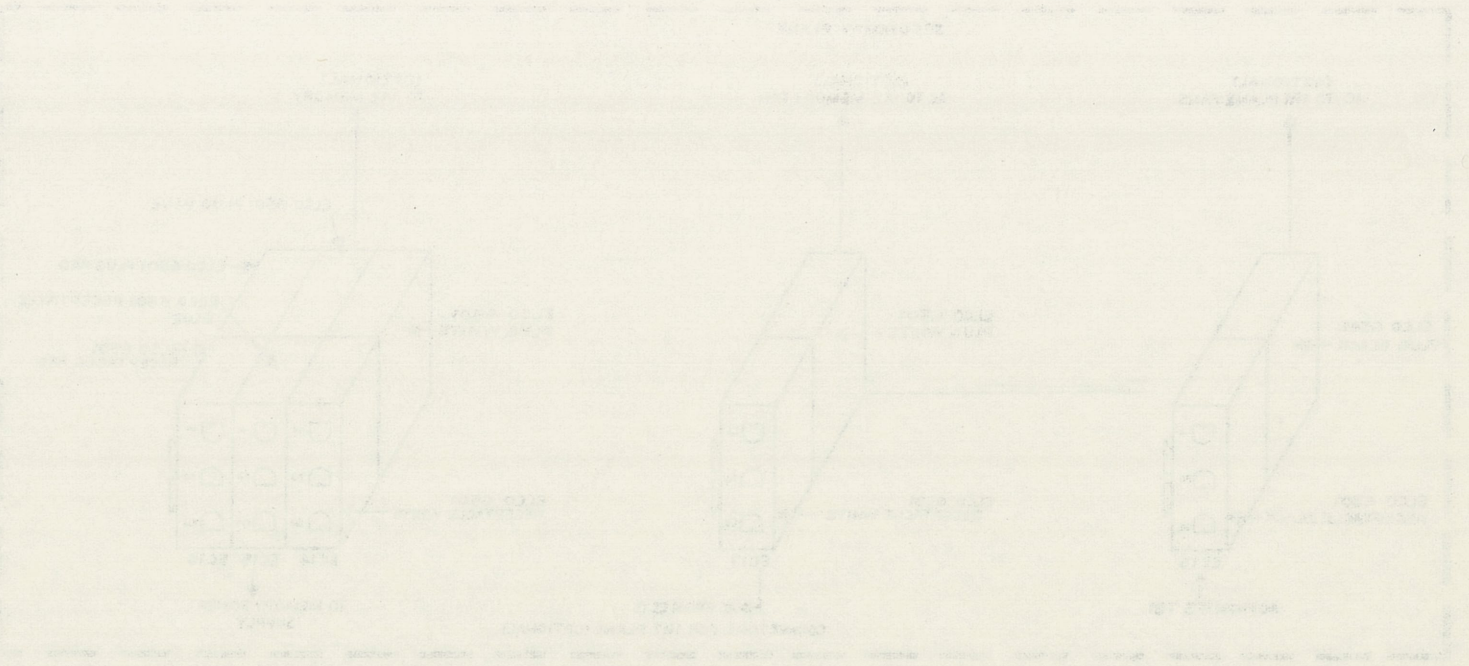
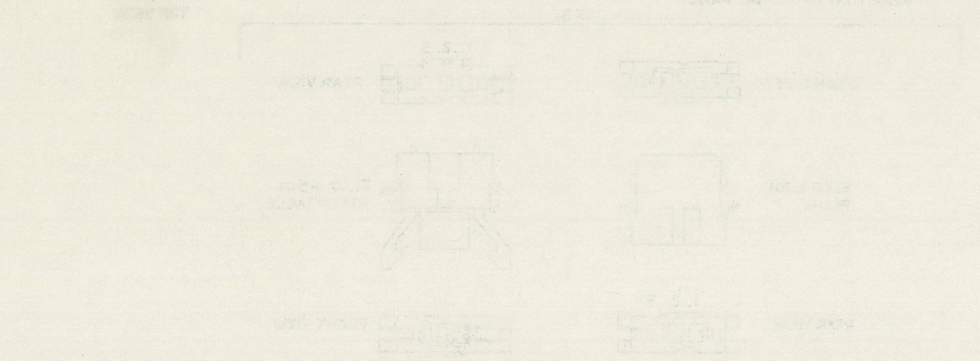
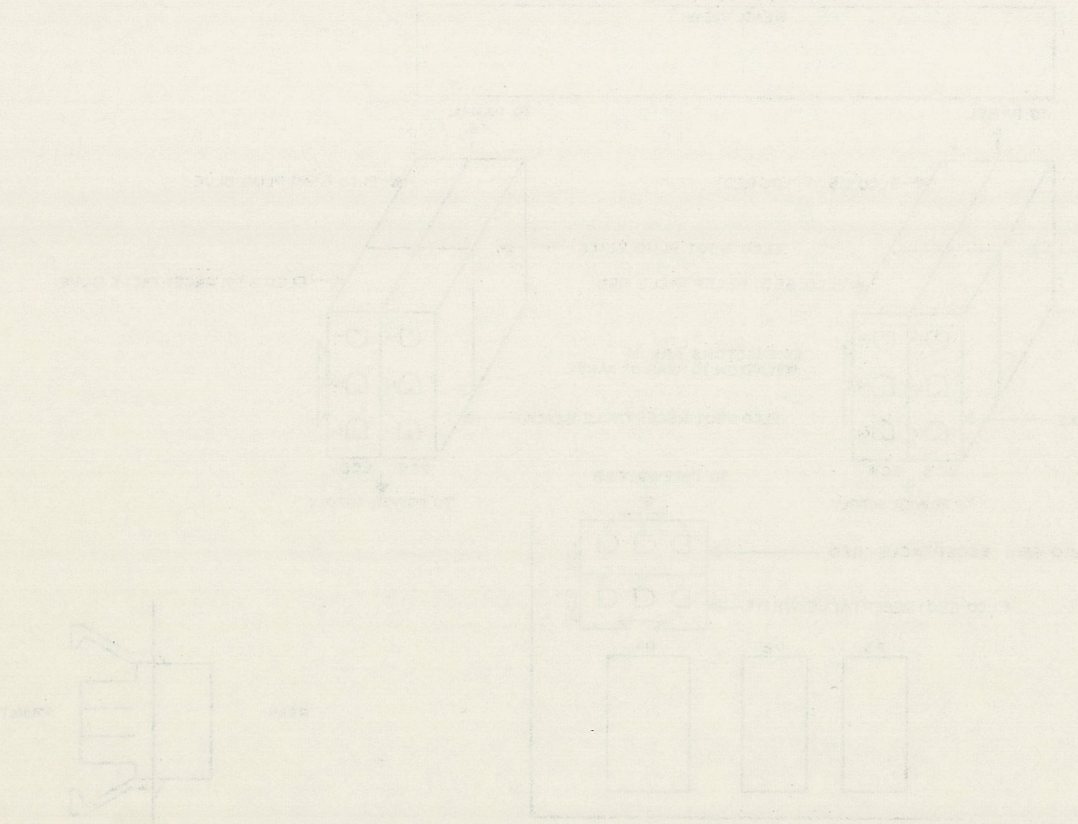
SIZE	D	53065	REV.	
REV.		DESCRIPTION	DATE	APPD



ITEM	DWG. OR PART NO.	DESCRIPTION
<b>Systems Engineering Laboratories</b>		
6901 West Sunrise Blvd., Fort Lauderdale, Florida 33310		
DR D. LLOYD	5-25-67	ELCO 6501 ASSEMBLY CONNECTORS
CHK		
ENGR <i>J. H. Manning</i>	6-27-67	
PROJ <i>J. Manning</i>	6/22/67	
APPD		
NEXT ASSY		
CODE IDENT NO.	SIZE	REV.
20886	D 53065	



NOTE:  
 ALL DIMENSIONS ARE IN INCHES  
 UNLESS OTHERWISE SPECIFIED



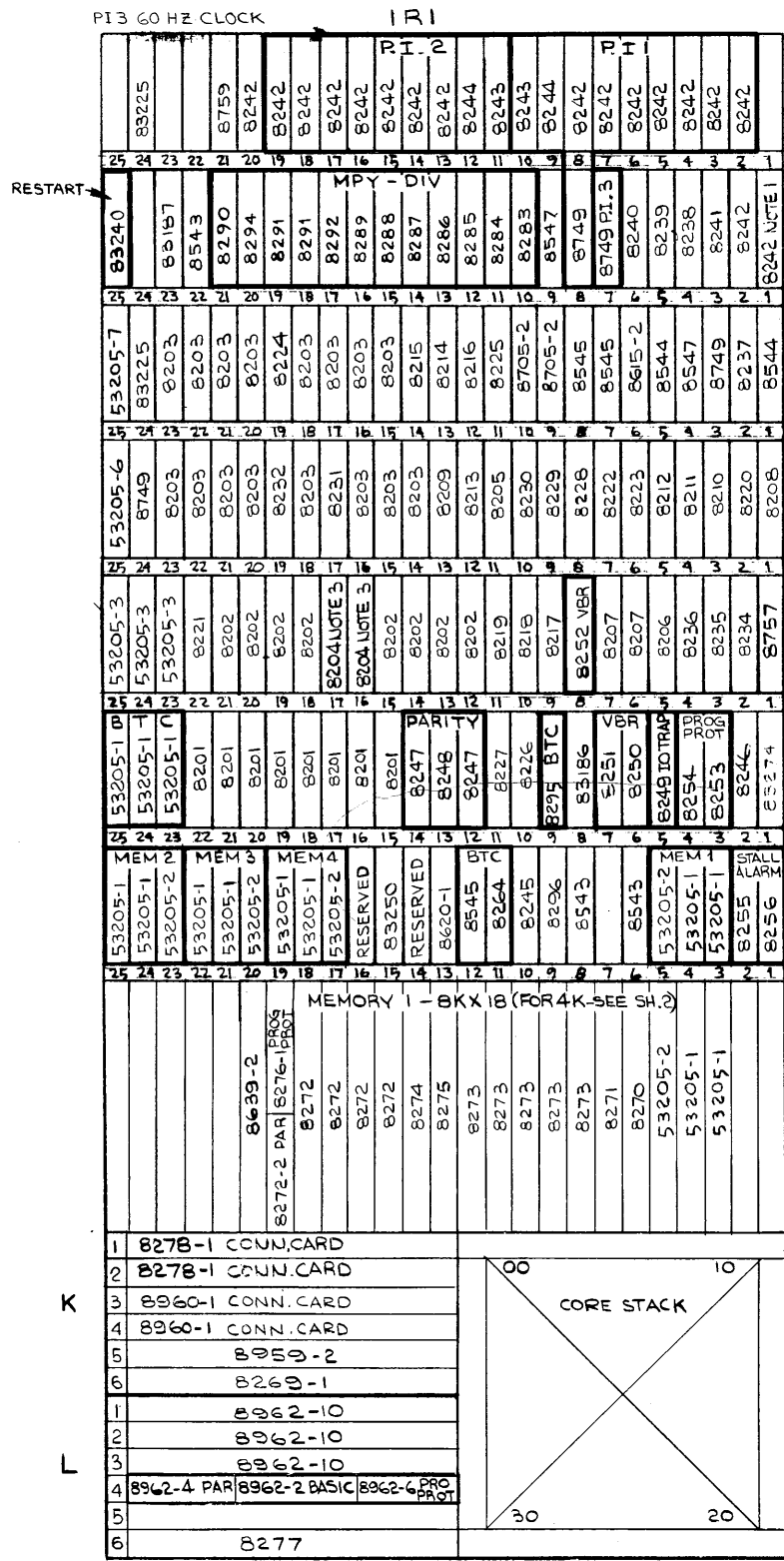
D-22063 D-22063 D-22063	D-22063 D-22063 D-22063	D-22063 D-22063 D-22063	D-22063 D-22063 D-22063
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VBR Variable Base Register

NOTES:  
 1.- REMOVE 1B WHEN P.I. ADDED.  
 2.- ADD FOR 5TH BTC.  
 3.- REPLACE 16E & (17E)(8297) WITH 8204 - WHEN MPY-DIV INSTALLED.

MEMORY #1  
 4.- BASIC ONLY  
 5.- P.P. ONLY  
 6.- PARITY ONLY

REV	DESCRIPTION	DATE	APPD
D	52992		C
C	68-199; UPDATED TO LATEST CHANGES	4/19/68	RKM



A  
B  
C  
D  
E  
F  
G  
H  
I  
K  
L

NOTE 3

NOTE 1

NOTE 3

ITEM	NO.	DESCRIPTION	LOCATION
1	83187	MISC. BUFFER	23B
1	83186	AUGMENTED CONTROL	8F
1	53205-2	RIBBON CABLE CONN.	5G
2	53205-1	RIBBON CABLE CONN.	3,4G
1	83225	IR CLEAR GATE	24C
1	83274	CLOCK CONTROL #4	1F
8	8201	RTL MEMORY INTERFACE	15-22F
8	8202	RTL-T & E INS REGISTER BIT SLICE	12-15E
16	8203	RTL-A & B ACCUMULATOR BIT SLICE	14,15,16E,17E
2	8204	RTL-EIGHT BIT FULL ADDER	16E,17E
1	8205	RTL-OPERATION DECODER	11D
1	8206	RTL-AUGMENTED OPERATION DEC.#1	5E
2	8207	RTL-AUGMENTED OPERATION DEC.#2	7E,6E
1	8208	RTL-CONTROL CYCLE GENERATOR	1D
1	8209	RTL-SHIFT COUNTER	13D
1	8210	RTL-T OUTPUT GATE CONTROL	3D
1	8211	RTL-B OUTPUT & COMP OUTPUT GATE CONTROL	4D
1	8212	RTL-A OUTPUT GATE CONTROL	5D
1	8213	RTL-B & T REGISTER STROBE	12D
1	8214	RTL-A REGISTER STROBE	13C
1	8215	RTL-CARRY LOGIC	14C
1	8216	RTL-INPUT/OUTPUT INSTRUCTION DECODE	12C
1	8217	RTL-PROGRAM REGISTER BITS 1-5	9E
1	8218	RTL-PROGRAM REGISTER BITS 6-11	10E
1	8219	RTL-PROGRAM REGISTER BITS 12-15	11E
1	8220	RTL-SHIFT CONTROL	2D
1	8221	RTL-SENSE SWITCH DECODE	22E
1	8222	RTL-OVERFLOW & A SIGN STROBE	7D
1	8223	RTL-INDIRECT-2	6D
1	8224	RTL-"B" FULL CODE DETECTOR	19C
1	8225	RTL-INPUT/OUTPUT INST. TIMING	11C
1	8226	RTL-MEMORY DATA REGISTER LOAD	10F
1	8227	RTL-ADDER TO MEM CONT. & ADD REG. STROBE	11F
1	8228	RTL-PROGRAM REGISTER ADVANCE I	8D
1	8229	RTL-PROGRAM REGISTER ADVANCE II	9D
1	8230	RTL-PROGRAM REGISTER ADVANCE III	10D
1	8231	RTL-ADDER ZERO DETECTOR	17D
1	8232	RTL-"A" ZERO DETECTOR	19D
1	8234	RTL- CLOCK CONTROL I	2E
1	8235	RTL- CLOCK CONTROL II	3E
1	8236	RTL- CLOCK CONTROL III	4E
1	8237	RTL-LOAD/DISP MEM STEP CONTROL	2C
1	8238	RTL-PRIORITY INTERRUPT LATCH	4B
1	8239	RTL-PRIORITY INT. TO I & DISABLE	5B
1	8240	RTL-PRIORITY INT. GROUP DECODE MATRIX	6B
1	8241	RTL-PRIORITY INT. ADDRESS AND GATES	3B
2	8242	RTL- DUAL PRIORITY INTERRUPT	2B,1B
1	8246	MEMORY MODULE SELECT	2F
1	8245	RTL-POWER FAILURE CONTROL	10G
1	8296	POWER FAIL SAFE	9G
2	8297	TI BIT FULL ADDER	16E-17E
1	8298	SPB MAP STORE GATES	7G
1	8282	CONTROL PANEL	
1	83250	ICB VOLTAGE REGULATOR	15G
3	8543-1	2UOR	6G,8G,22B
2	8544-1	3NOR	5C,1C
2	8545-1	INVERTER	7C,8C
2	8547-1	4NOR	9B,4C
1	8615-2	CABLE TERMINATOR	6C
1	8620-1	OSCILLATOR 10MC	13G
2	8705-2	GATED CABLE DRIVER	9C,10C
2	8749-1	12 CIRCUIT DIGITAL BUFFER	3C,24D
1	8757-1	CLOCK (SHUL)	1E

ITEM	NO.	DESCRIPTION	LOCATION
1	8295	MEMORY ACCESS CONTROL	9F
1	8264	CLOCK BUFFERS	11G
1	8545	INVERTER	12G
3	53205-1	RIBBON CABLE CONNECTOR	23,24,25F
1	8962-2	MA SENSE AMP	4L
1	8962-4	MA SENSE AMP	4L
1	8962-6	MA SENSE AMP	4L
2	8960-1	CONNECTOR CARD	3K,4K
1	8272-2	QUAD DATA REG & INHIBIT DR.	19H
1	8283	MPY DIV CONTROL #1	10B
1	8284	" " " " #2	11B
1	8285	" " " " #3 (SHUL)	12B
1	8286	" " " " #4	13B
1	8287	" " " " #5	14B
1	8288	" " " " #6 (SHUL)	15B
1	8289	" " " " #7	16B
1	8290	T x 2 GATES	21B
2	8291	SHIFTED ADDER GATES	18B,19B
1	8292	MPY DIV CONTROL #8	17B
1	8294	EXTENDED ADDER (SHUL)	20B
2	8247	PARITY GENERATOR - CHECKER	12F,14F
1	8248	PARITY CONTROL	13F
1	8250	VBR CONTROL	6F
1	8251	VBR REGISTER	7F
1	8252	VBR DISPLAY GATES	8E
1	8249	INSTRUCTION TRAP	5F
6	8242	DUAL P.I.	2-8A
1	8243	UNITARY-BINARY-MSB'S	10A
1	8244	UNITARY-BINARY-LSB'S	9A
1	8749	12 CIRCUIT DIGITAL BUFFER	8B
1	8255	STALL ALARM CONTROL	2G
1	8256	STALL ALARM COUNTER	1G
1	8543	RTL-2 NOR	1F
1	8253	PP LOGIC 1	3F
1	8254	PP LOGIC 2	4F
1	8759	SCHMITT TRIGGER #2	21A
1	8269-1	LINE DR. CURRENT DR. & INHIBIT DR.	6K
1	8270-1	RTL- MEMORY TIMING #1	6H
1	8271-1	RTL- MEMORY TIMING #2	7H
4	8272-1	RTL- QUAD DATA REG. & INHIBIT DR.	15-18H
5	8273-1	RTL-READ/WRITE MATRIX & LINE DR. SW.	8-12H
1	8274-1	RTL- 8 BIT MEMORY ADDRESS REG.	14H
1	8275-1	RTL- 5 BIT MEM. ADDRESS REG. & BK CONTROL	13H
1	8276-1	RTL-MEM PAR. & PROTECT BIT DA. REG. & INH. DR.	19H
1	8277-1	+12V & THRESHOLD REGULATOR	6L
2	8278-1	CONNECTOR & RESISTOR CARD	1K, 2K
1	8639-2	DATA SAVER	20H
1	8959-2	DUAL CURRENT DRIVER	5K
3	8962-10	4A SENSE AMPLIFIER NO. 3	1,2,3L
1	83240	RESTART RELAY	25B

ITEM DWG. OR PART NO. DESCRIPTION

SEI SYSTEMS ENGINEERING LABORATORIES, INCORPORATED FORT LAUDERDALE, FLORIDA

DR. J. PINEDO  
 CC. Williams 10-31-67  
 ENG. [Signature] 9/10/67  
 APP. [Signature] 9/10/67  
 USED ON [Signature] 10-31

810a CARD LAYOUT PLANE IRI (BASIC M.F.)

D 52992 C

