

AA11-D
D/A subsystem
engineering drawings

1st Printing August 1971

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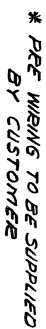
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ENGINEERING DRAWINGS

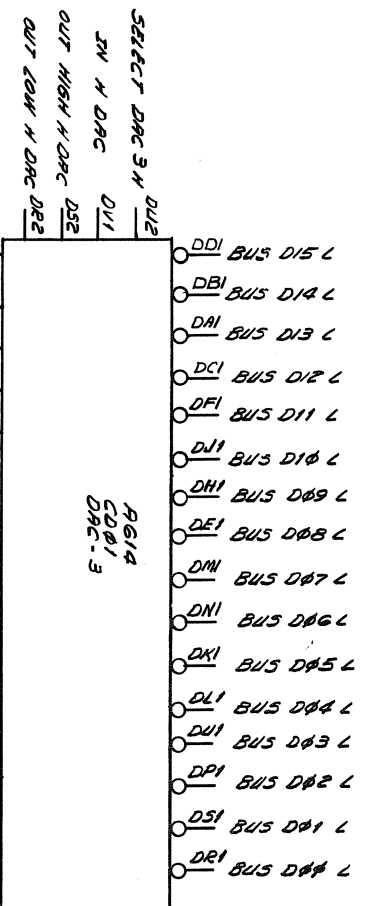
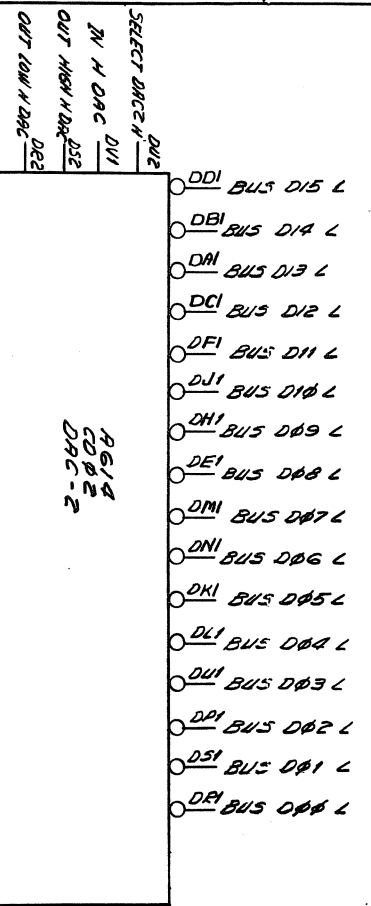
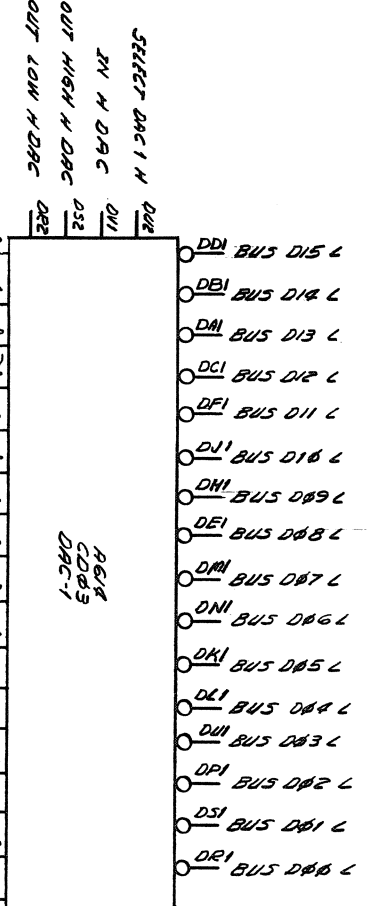
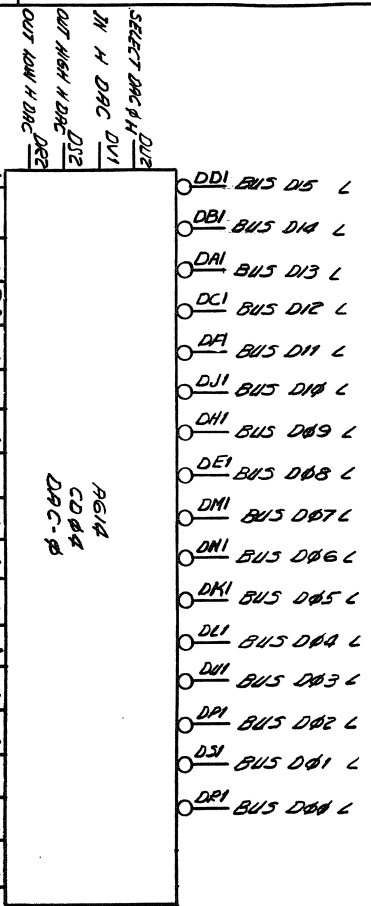
Drawing Number	Title
D-IC-AA11-D-02	Option Cables
D-BS-AA11-D-03	D-A Converters
D-BS-AA11-D-04	Interface
D-IC-AA11-D-05	AA11-D Bus & Power Connections
D-CS-M799-0-01	Scope Control (2 sheets)
D-MU-AA11-0-MU	Module Utilization
D-UA-AA11-D-0	Digital to Analog Control Assy.
D-CS-A614-0-1	12 Bit DAC with Buffer Register
D-UA-H704-C-0	H704-C Power Supply
K-WL-AA11-D-WL	Wire List

2	SIZE CODE D1C	NUMBER AA11-D-02	REV B
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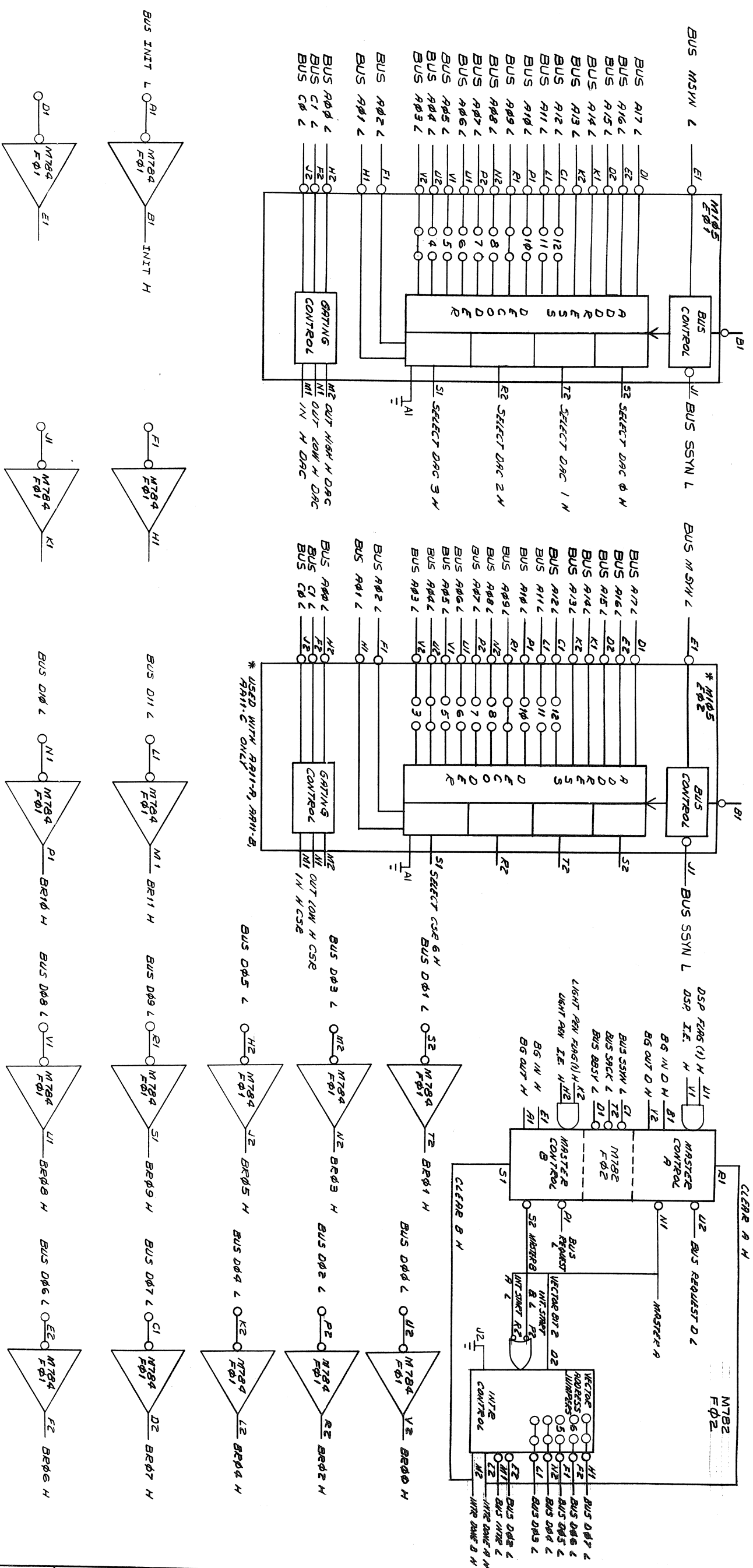
SIZE D	CODE IC	NUMBER AA11-D-02	REV. B
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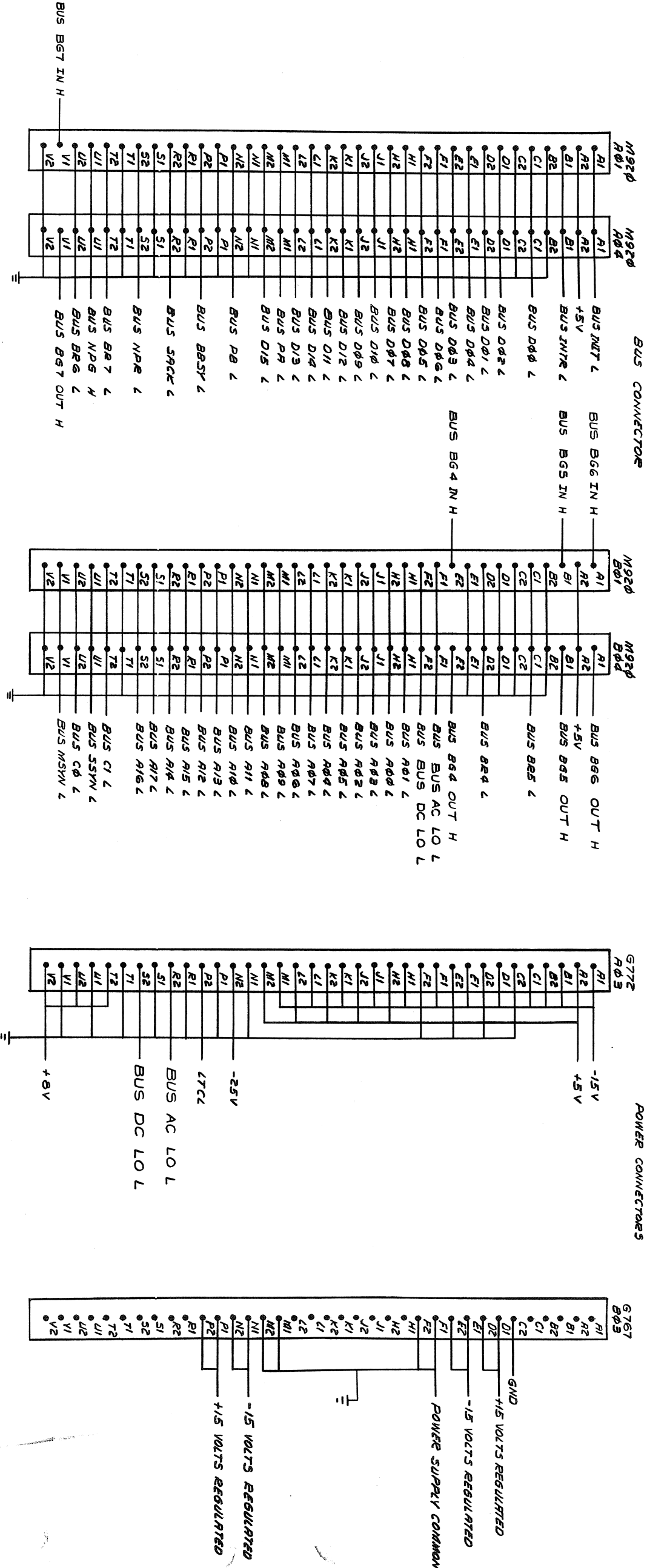


REVISIONS		
CHK	CHANGE NO.	REV.

FIRST USED ON OPTION/MOD. QTY		DESCRIPTION		PART NO.		ITEM NO.	
AA11-D		PARTS LIST					
UNLESS OTHERWISE SPECIFIED		DATE		DATE		DATE	
DIMENSION IN INCHES		6-22-70		7-1-70		7-1-70	
TOLERANCES							
DECIMALS FRACTIONS ANGLES							
= .005 = 1/16 = 0°30'							
REMOVE BURRS AND BREAK SHARP CORNERS							
MATERIAL		NEXT HIGHER ASSY		DATE		DATE	
FINISH		H-MC-AP11-D		SCALE		1 OF 1	
SIZE CODE		NUMBER		REV.			
D BS		AA11-D-03					
TITLE		D-A					
		CONVERTERS					

[illegible]

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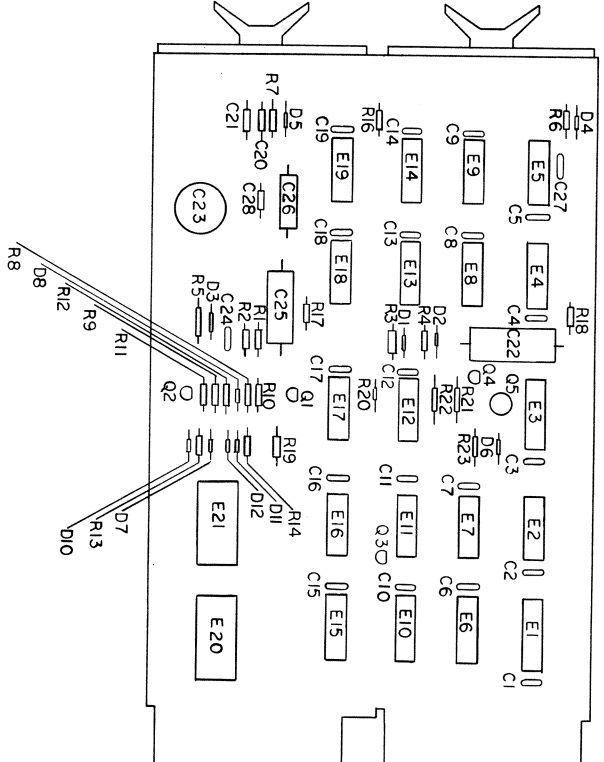


REVISIONS		
CHK	CHANGE NO.	REV
AAI	000002	A
GAGNE		
1-26-71		

FIRST USED ON OPTION MOD QTY.		DESCRIPTION		PARTS LIST		PART NO.		ITEM NO.	
AAI-D									
UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED	
DIMENSIONS IN INCHES		DIMENSIONS IN INCHES		DIMENSIONS IN INCHES		DIMENSIONS IN INCHES		DIMENSIONS IN INCHES	
TOLERANCES		TOLERANCES		TOLERANCES		TOLERANCES		TOLERANCES	
DECIMALS FRACTIONS ANGLES		DECIMALS FRACTIONS ANGLES		DECIMALS FRACTIONS ANGLES		DECIMALS FRACTIONS ANGLES		DECIMALS FRACTIONS ANGLES	
± .005 ± .005 ± .005		± .005 ± .005 ± .005		± .005 ± .005 ± .005		± .005 ± .005 ± .005		± .005 ± .005 ± .005	
REMOVE BURRS AND BREAK SHARP CORNERS		REMOVE BURRS AND BREAK SHARP CORNERS		REMOVE BURRS AND BREAK SHARP CORNERS		REMOVE BURRS AND BREAK SHARP CORNERS		REMOVE BURRS AND BREAK SHARP CORNERS	
MATERIAL		MATERIAL		MATERIAL		MATERIAL		MATERIAL	
NEXT HIGHER ASSY		NEXT HIGHER ASSY		NEXT HIGHER ASSY		NEXT HIGHER ASSY		NEXT HIGHER ASSY	
FINISH		FINISH		FINISH		FINISH		FINISH	
SCALE		SCALE		SCALE		SCALE		SCALE	
SHEET		SHEET		SHEET		SHEET		SHEET	
DATE		DATE		DATE		DATE		DATE	
6-23-70		6-23-70		6-23-70		6-23-70		6-23-70	
BY		BY		BY		BY		BY	
J. J. GAGNE		J. J. GAGNE		J. J. GAGNE		J. J. GAGNE		J. J. GAGNE	
TITLE		TITLE		TITLE		TITLE		TITLE	
AAI-D BUS & POWER CONNECTIONS		AAI-D BUS & POWER CONNECTIONS		AAI-D BUS & POWER CONNECTIONS		AAI-D BUS & POWER CONNECTIONS		AAI-D BUS & POWER CONNECTIONS	
SIZE CODE		SIZE CODE		SIZE CODE		SIZE CODE		SIZE CODE	
DTC		DTC		DTC		DTC		DTC	
NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
AAI-D-05		AAI-D-05		AAI-D-05		AAI-D-05		AAI-D-05	
REV.		REV.		REV.		REV.		REV.	
A		A		A		A		A	

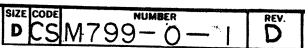
COMPLAINT

1. PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KAI PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
2. ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED:
MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPARATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
3. PROCESSOR SIGNAL SOURCE NOTATION (KIO-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. IF ON A PRINT, THE FIRST NUMBER OF THE K PREFIXES CONCLUDE FOR A SIGNAL NAME AND THE PRINT (SEE TITLE BLOCK). THE SIGNAL IS GENERATED ON THE MODULE. A DIFFERENCE IN THE FIRST NUMBER OF THE K PREFIXES INDICATES "A SIGNAL GENERATED OFF THE MODULE. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
4. DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM. CAPACITORS WITHOUT NOTED VALUES ARE .01 MFD.
5. GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY.



NUMBER	REV
9-0-1	D

[illegible]

[illegible]

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8

7

6

5

4

3

REV

NUM-0-114V

2

1

1		2		3		4	
M920		G772		M920		M920	
CABLE		CABLE		CABLE		CABLE	
INIT	+5V	INIT	+5V	INIT	+5V	INIT	+5V
INTR	D01	INTR	D01	INTR	D01	INTR	D01
D00	D03	D00	D03	D00	D03	D00	D03
D02	D05	D02	D05	D02	D05	D02	D05
D04	D07	D04	D07	D04	D07	D04	D07
D06	D09	D06	D09	D06	D09	D06	D09
D08	D11	D08	D11	D08	D11	D08	D11
D10	D13	D10	D13	D10	D13	D10	D13
D12	D15	D12	D15	D12	D15	D12	D15
D14	PB	D14	PB	D14	PB	D14	PB
PA	B BSY	PA	B BSY	PA	B BSY	PA	B BSY
NPG	SACK	NPG	SACK	NPG	SACK	NPG	SACK
B67	NPR	B67	NPR	B67	NPR	B67	NPR
B66	BR7	B66	BR7	B66	BR7	B66	BR7
B65	BR6	B65	BR6	B65	BR6	B65	BR6
BR5	+5V	BR5	+5V	BR5	+5V	BR5	+5V
BUS ACLO	BR4	BUS ACLO	BR4	BUS ACLO	BR4	BUS ACLO	BR4
A01	BG4	A01	BG4	A01	BG4	A01	BG4
A03	BUS DCLO	A03	BUS DCLO	A03	BUS DCLO	A03	BUS DCLO
A05	A09	A05	A09	A05	A09	A05	A09
A07	A02	A07	A02	A07	A02	A07	A02
A09	A04	A09	A04	A09	A04	A09	A04
A11	A06	A11	A06	A11	A06	A11	A06
A13	A08	A13	A08	A13	A08	A13	A08
A15	A10	A15	A10	A15	A10	A15	A10
A17	A12	A17	A12	A17	A12	A17	A12
SSYN	A14	SSYN	A14	SSYN	A14	SSYN	A14
MSYN	A16	MSYN	A16	MSYN	A16	MSYN	A16
	C1		C1		C1		C1
	C0		C0		C0		C0
A614*		A614*		A614*		A614*	
DAC 3		DAC 2		DAC 1		DAC 0	
				(Y AXIS)		(X AXIS)	
M105		M105*		G767*		M799*	
CABLE		CABLE		CABLE		CABLE	
GND BUS	OUT HIGH	GND BUS	OUT HIGH		VIEW H		SCOPE CONTROL
SSYN L	H DAC	SSYN I	H CSR				(SEE NOTE #1)
IN H DAC	SELECT DAC 2 H	IN H CSR	OUT LOW H CSR		ERASE		
OUT HIGH H DAC	SELECT DAC 0 H	OUT LOW H CSR	SEL CSR 6H				
SELECT DAC 3 H	SELECT DAC 1 H						
M784		M782*					
INIT H	BR07 H	BUS D05 L	BUS D02 L				
		BUS D07 L	BUS D06 L				
		BUS D03 L	GND				
BR11 H	THRU	INTR L	INTR DONE A H				
		MASTER A	INTR DONE B H				
THRU	BR10 H	BUS REQUEST L	BUS REQUEST D L				

- -IF END OF BUS REPLACE M920 WITH M930
● -IF LAST UNIT IN BASIC BOX, REPLACE M920 WITH
BC11-A CABLE END WHEN EXPANDING TO PERIPHERAL BOX
▲ -IF FIRST UNIT IN EXPANDER BOX, REPLACE M920
WITH BC11-A CABLE END.
*BLOCKS WITH * INDICATE LOCATIONS RESERVED FOR
AA11-A OR AA11-B OR AA11-C AND AB14 OPTIONS.
- NOTE:
1. IF M799 NOT USED PLACE A G772 IN SLOT F04

REVISIONS		
CHK	CHANGE NO.	REV
AA11-D	00004	A
GAGNE		
KAG 4-20-71		
AA11-D	00002	B
GAGNE		
KAG 7-5-71		

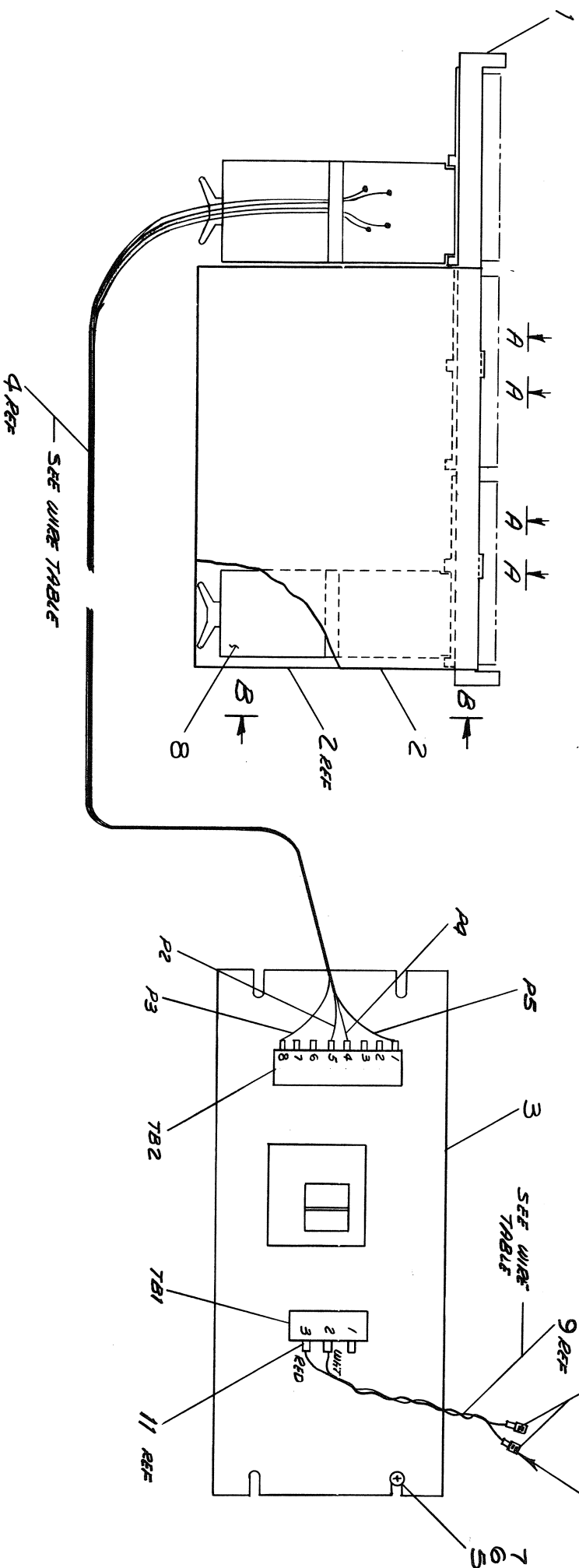
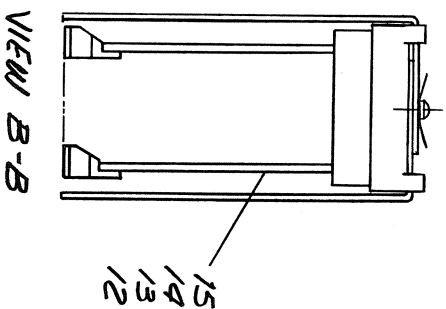
FIRST USED ON OPTION/NO		QTY	DESCRIPTION	PART NO.	ITEM NO.
AA11-D					
UNLESS OTHERWISE SPECIFIED		DATE	DATE	DATE	DATE
TOLERANCES		1/16"	1/32"	1/64"	1/128"
MATERIAL		1/16"	1/32"	1/64"	1/128"
FINISH		1/16"	1/32"	1/64"	1/128"
SCALE		1/16"	1/32"	1/64"	1/128"
SHEET		1	OF	1	
NEXT HIGHER ASSY		1/16"	1/32"	1/64"	1/128"
MODULE UTILIZATION		1/16"	1/32"	1/64"	1/128"
SIZE CODE		1/16"	1/32"	1/64"	1/128"
REV		1/16"	1/32"	1/64"	1/128"

SIZE CODE
AA11-0-MU

REV
B

WIRE TABLE							
ITEM NO	DESCRIPTION		FROM		TO		
	AWG	COLOR	CONNECTION	WITH	CONNECTION	WITH	
4	#14	RED	P5 RCE	—	7B2-1	—	
	7WIP	BLU	P4 RCE	—	7B2-4	—	
	#14	BLU	P3 RCE	—	7B2-8	—	
9	7WIP	BLU	P2 RCE	—	7B2 5	—	
	#14	RED	7B1-3	—	—	—	
	7WIP	WHT	7B1-2	ITEM 11	45V/250V PNC	ITEM 10	

-
- VIEW A-A
(2 PLACES)
- 2 REF
- SEE NOTE #4
- 1 REF



FIRST USED ON OPTION/MOD		PART NO.		TECH NO.	
A411 - D		DESCRIPTION			
UNLESS OTHERWISE SPECIFIED		PARTS LIST		EQUIPMENT	
UNLESS OTHERWISE SPECIFIED		digital		CORPORATION	
DIMENSION IN INCHES		TITLE		MANUFACTURED BY	
TOLERANCES		DIGITAL TO ANALOG		CONTROL ASSY	
ANGLES		(A411-D)			
FINAL SURFACE QUALITY					
REMOVE BURRS AND BREAK SHARP					
CORNERS					
MATERIAL		SIZE CODE		NUMBER	
H		DUA		- REV	
FINISH		SCALE		SHEET	
H		H		OF	
		DATE		DATE	
		11/1/70		11/1/70	
		PROJ. ENG.		DATE	
		11/1/70		11/1/70	
		NEXT HIGHER ASSY			

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