

HBR-3000

RECORDER/REPRODUCER

WITH

SERIAL DATA CONVERTER BAY

CUSTOM MANUAL SUPPLEMENT

**NOTICE**

This manual supplement contains descriptions of special features/accessories  
for an:

**HBR-3000 RECORDER/REPRODUCER  
WITH  
SERIAL DATA CONVERTER BAY**

Read this manual supplement before referring to any parts of the standard manual.  
The information contained in this supplement supersedes any conflicting information in the  
standard manuals.

This manual supplement pertains to equipment sold by Ampex Corporation under  
Customer Purchase Order No. 511976, and Ampex Sales Order No. 9429-511976-02, Int'l,  
Indiz.

## INTRODUCTION TO THIS MANUAL SUPPLEMENT

This manual supplement contains information on the HBR Serial Data Converter Bay and update material on the FR-3000 Recorder/Reproducer system. Each section of material is introduced by a title page; the serial data converter bay is presented first, and the update material for the FR-3000 is presented last.

## APPENDIX B

### HBR SERIAL DATA CONVERTER BAY

#### B-1. GENERAL

The high-bit-rate (HBR) serial data converter bay is a rack-mounted card tray with slides which houses the 100 Mb/s serial-to-parallel converter printed wiring assembly (PWA) and the parallel-to-serial converter PWA. It is 3-1/2 inches high and has self-contained power and fan cooling. Interface is via pairs of BNC connectors mounted on the rear panel of the bay. All high-rate data, clock and test channels are differential ECL (a true and complemented pair). The bay is available in 14-track and 28-track versions, and is configured as follows:

- a. 14-Track Version:
  - 1. One serial data input at 50 Mb/s or less
  - 2. Two serial data inputs at 25 Mb/s or less, synchronous
- b. 28-Track Version:
  - 1. One serial data input at 100 Mb/s or less
  - 2. Two serial data inputs at 50 Mb/s or less, synchronous
  - 3. Four serial data inputs at 25 Mb/s or less, synchronous

Signal input and output is as follows:

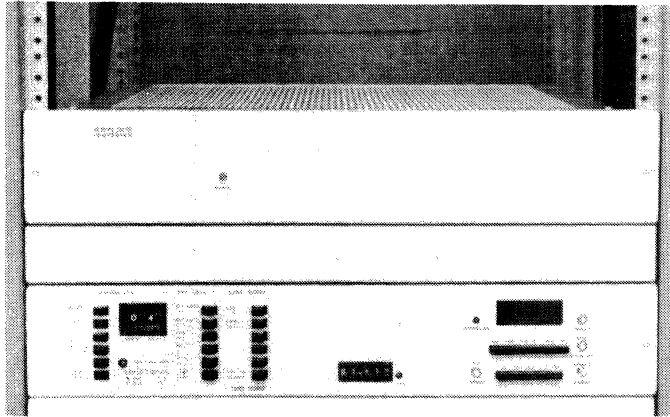
Input	Output
Data 1, 2, 3, 4 Clock	Data 1, 2, 3, 4 Clock
Test Data Test Clock	Test Data Test Clock
Xtal Clock	— — — —

Power range is 85 to 132 VAC, or 170 to 264 VAC, at 47 to 440 Hz.

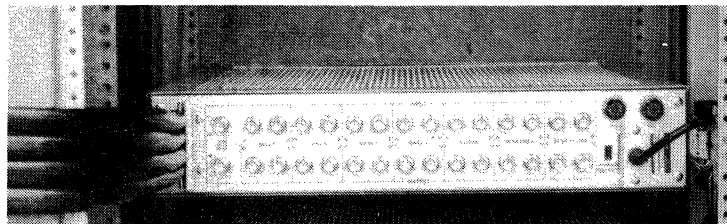
#### B-2. INSTALLATION AND CABLING

Refer to the applicable cabling diagram (Ampex 1269018-01, 28-track, or Ampex 1269036-01, 14-track) for details of the cabling for the bay. Refer to figure B-1 for a view of the bay in a rack cabinet. The user interface (ECL) connectors are pairs of BNC's on the rear panel, and the system interface (TTL) connectors are captive coaxial cables with BNC connectors. Cabling connections are made at the rear of the bay.

**FRONT VIEW**



**REAR VIEW**



**Figure B-1. Serial Data Converter Bay**

### **B-3. OPERATION**

#### **B-4. ÷N Conversion**

High-bit-rate serial data (ECL) is converted to up to 26 parallel data lines (13 for 14-track system) at 4 Mb/s each (TTL). The conversion factor ( $\div N$ ) refers to each serial data input to be converted. For example:

- a. One serial input,  $\div N$  can be 2 through 26 (2 through 13)
- b. Two serial inputs,  $\div N$  can be 2 through 13 (2 through 6)
- c. Four serial inputs,  $\div N$  can be 2 through 6

The number of serial inputs and  $\div N$  are dip-switch selected on the serial-to-parallel converter PWA by the programming of SW1 and SW2. The programming of SW1 and SW2 is shown in figure B-2 and B-3, and is illustrated in the following example:

- a. It is determined that two serial inputs will be used with  $\div N$  equal to eight.
- b. From figure B-2, two serial inputs require that SW2-1 be closed and SW2-2 be open.
- c. From figure B-3,  $\div 8$  requires that SW2-4 and SW2-5 be closed; SW2-6, SW2-7, and SW2-8 be open; SW1-1 be closed; SW1-2 be open; and SW1-3 and SW1-4 be closed.

#### **B-5. Test Mode Operation**

Test on/off and the serial data channel to be tested are selected via a pushbutton-type BCD switch located at the left front edge of the serial-to-parallel converter PWA. In the zero position, the test inputs and outputs are turned off. In switch positions 1 through 4 (28-track systems) or 1 and 2 (14-track), internal gating causes all of the programmed serial data inputs to be connected in parallel to the test data input, and the appropriate serial data output to be routed to the test data output.

The READY indicator is a green LED located adjacent to the test selector. When the LED is on, it indicates that the converter is in the system mode (i.e., test off), and that the power supplies are operating.

### **B-6. FUNCTIONAL DESCRIPTION**

#### **B-7. Serial-to-Parallel Converter 1261103**

Refer to schematic diagram 1261100 for the following discussion. Serial data input enters the PWA through receiver U28, and passes to gates U21, U22, and U23, which, in conjunction with U30, U31, and U32, select the appropriate data inputs and/or shift register outputs for the number of inputs programmed by SW2-1 and SW2-2. The data passes from U21, U22, and U23 to the inputs of four 7-bit serial-in/parallel-out shift registers formed by dual-D flip-flops U13 and U18, and hex-D flip-flops U12, U14, U17, and U19. The output of the shift registers is loaded into output latches U1-11, U15, U16, and U20 at the end of each  $n$ -bit conversion cycle. IC's U1-11, U5, U16, and U20 also contain the circuitry necessary to convert the ECL level output of the shift register to a TTL compatible signal capable of driving into  $50\Omega$  terminated cables.

Clock inputs for the system enters through receiver U40 and passes to U39 which selects the appropriate clock for the mode of operation. The output of U39 is applied to the input of a variable delay circuit formed by U37, U38, and SW3. From the output of the delay circuit, the clock is then distributed through U24 and U33 to the shift registers and divide-by- $N$  counter, and through driver U42 to the parallel-to-serial converter PWA.

NUMBER OF SERIAL INPUTS	SW2-1 C2	SW2-2 C1
1	0	0
2	0	1
4	1	1

Note: 1 = open switch; 0 = closed switch.

**Figure B-2. Serial Input Programming**

NUMBER OF PARALLEL OUTPUTS	÷N					SYMMETRY			
	SW2-4 N5	SW5 N4	SW6 N3	SW7 N2	SW8 N1	SW1-1 S4	SW1-2 S3	SW1-3 S2	SW1-4 S1
2	0	0	0	0	1	0	0	0	1
3	0	0	0	1	0	0	0	1	0
4	0	0	0	1	1	0	0	1	0
5	0	0	1	0	0	0	0	1	1
6	0	0	1	0	1	0	0	1	1
7	0	0	1	1	0	0	1	0	0
8	0	0	1	1	1	0	1	0	0
9	0	1	0	0	0	0	1	0	1
10	0	1	0	0	1	0	1	0	1
11	0	1	0	1	0	0	1	1	0
12	0	1	0	1	1	0	1	1	0
13	0	1	1	0	0	0	1	1	1
14	0	1	1	0	1	0	1	1	1
15	0	1	1	1	0	1	0	0	0
16	0	1	1	1	1	1	0	0	0
17	1	0	0	0	0	1	0	0	1
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21	1	0	1	0	0	1	0	1	1
22	1	0	1	0	1	1	0	1	1
23	1	0	1	1	0	1	1	0	0
24	1	0	1	1	1	1	1	0	0
25	1	1	0	0	0	1	1	0	1
26	1	1	0	0	1	1	1	0	1
27	1	1	0	1	0	1	1	1	0
28	1	1	0	1	1	1	1	1	0

Note: 1 = open switch; 0 = closed switch.

**Figure B-3. ÷N Programming**

The ÷N circuit, formed by U25, U26, U34, and U35, is a pulse-gobbling counter that is programmed (via SW2-4 through SW2-8) for the number of outputs required, and by SW1 to produce the parallel output clock with 50% duty cycle.

### **B-8. Parallel-to-Serial Converter 1259663**

Refer to schematic diagram 1259660 for the following discussion. Parallel data and the parallel clock enter the PWA via TTL-to-ECL translators U2, U3, U4, U7, U9, and U10. Data signals are passed to input latches U11, U12, U15, U16, and U17. From the input latches the data is passed to four multiplexers, one for each of the serial data outputs. The multiplexer for data 1 is a 28 x 1 that is formed by interconnecting half of four dual 8 x 1 multiplexers U18, U19, U20, and 21, and a 4 x 1 (1/3 of U32). Data 2's multiplexer is a 16 x 1 formed by two 8 x 1 (the second half of U19 and U21), and two inputs of a 4 x 1 (part of U32). Data 3 and 4 use 8 x 1 multiplexers U18 and U20. Intermediate latches U23, U24, and U27 are used at the output of each multiplexer stage to keep the data in phase with the serial clock. The output of the four data multiplexers is then applied to the inputs of dual line drivers U28 and U29, and to test selector U31. The line drivers for data 2, 3, and 4 are turned on or off by U1 in accordance with the input select programming on the serial-to-parallel converter PWA.

The serial rate clock for the parallel-to-serial converter enters the PWA on J15 and is applied to a variable delay circuit formed by U36, U37, and SW1. From the delay circuit, the clock is distributed to the input latches, sink latches, and countercircuit through buffer/drivers U26 and U14.

The countercircuit formed by U13, U25, and parts of U24 and U27 generates a pulse, synchronized by the falling edge of the parallel clock, that loads the input latches and resets the counter for the number of parallel channels programmed on the serial-to-parallel PWA. Since the outputs of the counter are tied to the address lines of the multiplexers, this causes the highest parallel channel to be the output through the multiplexer. The count is then decremented and the next channel is output. This process continues until the remainder of channels are output. A new load pulse is then generated and the whole process is repeated.

### **B-9. ECL Detail**

Each differential ECL channel is comprised of two ECL connections, one true level and one complemented level. ECL logic levels are -0.9 V (logic 1) and -1.8 V (logic 0). User circuits driving 100 Mb/s bay inputs should be biased to -2 V through 75 $\Omega$  impedance as shown in figure B-4. The recommended line driver is MC1660 or equivalent. Recommended cabling is 75 $\Omega$  characteristic impedance. User receivers should be terminated with 150 $\Omega$  impedance line-to-line as shown in figure B-4. The recommended line receiver is MC10115 or equivalent. Test generators and receivers with single-ended ECL or TTL can be used provided that their inputs/outputs are converted to meet the above requirements. The recommended TTL/ECL converter is MC10125.

### **B-10. Power Requirements**

Power can be either 85 to 132 VAC or 170 to 264 VAC, 47 Hz through 440 Hz. The voltage select switch is mounted on the rear panel adjacent the power input. The tray power requirement is 120 watts. The tray has current and thermal overload protection.

### **B-11. PERFORMANCE CHECKS**

- a. Connect the bit error rate test equipment (Tau Tron 325C or equivalent) and the clock source to the converter bay test inputs and outputs as shown in figure B-4.
- b. Adjust the clock source for the desired data rates.
- c. Set the mode select bay for normal, parallel, and E-E or Tape (as desired).
- d. Remove the front panel of the converter bay for access to test selector switch.



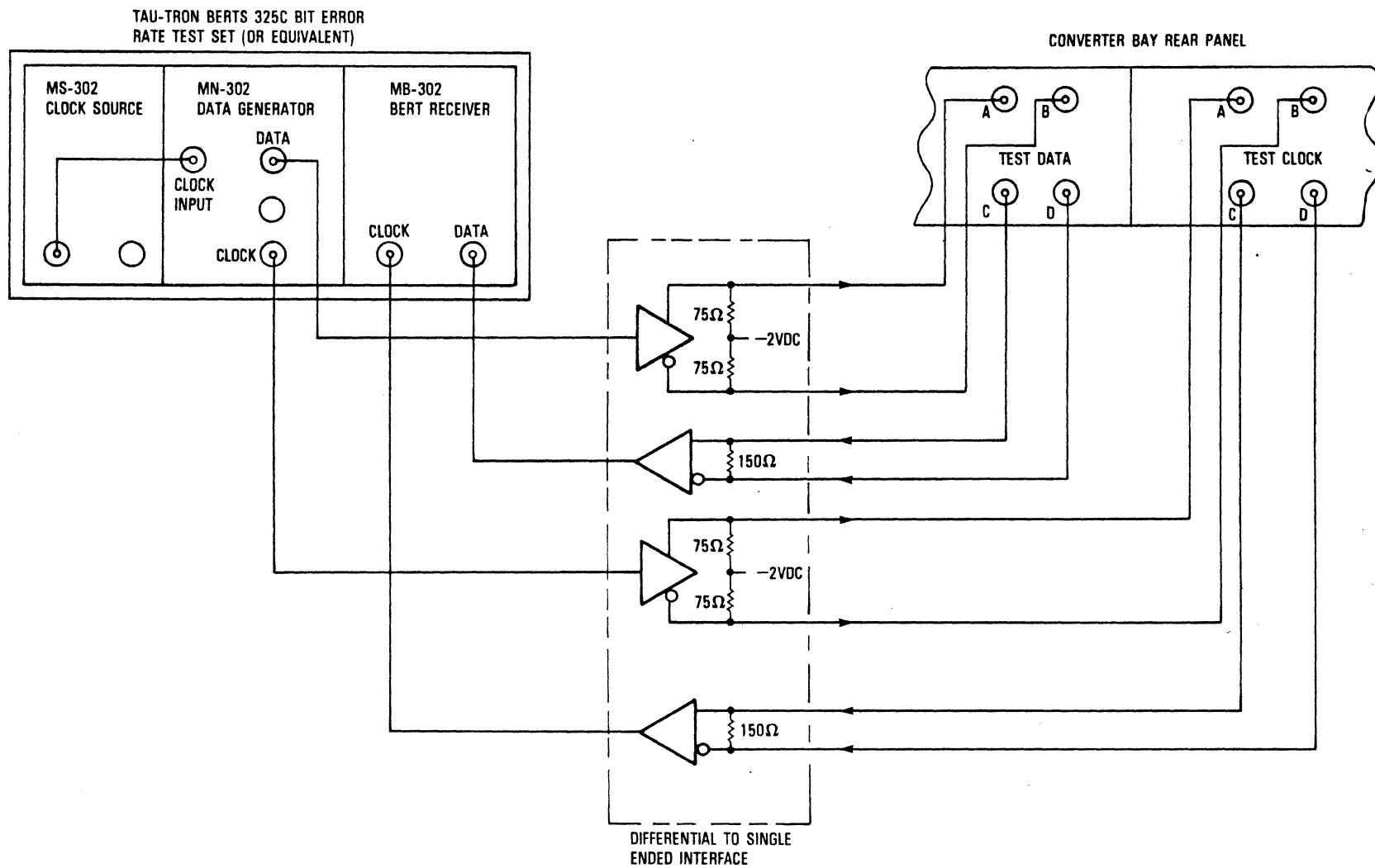


Figure B-4. Test Data and Clock Cabling

- e. Set the test selector to position 1.
- f. Verify that the ready light is off and that zero errors are detected.
- g. Introduce an error, or errors, at the data source and verify that the error(s) is detected.
- h. If the serial-to-parallel converter is programmed for more than one serial input, repeat steps 6 and 7 with the selector set for each input.
- i. Return the selector to the zero (test off) position. Verify that the ready light is on.

## **B-12. ADJUSTMENT PROCEDURES**

- a. Serial-to-Parallel Converter
  1. Connect source of test data and clock as described in the performance check with the clock set for the highest data rate to be used.
  2. Place the serial-to-parallel converter on its appropriate extender card.
  3. Connect oscilloscope probes to monitor the clock at R23 and data input of the first shift register at R25.
  4. Set the clock delay using SW3 so that the rising edge of the clock is in the middle of the bit cell.

### **NOTE**

*When SW3 is in position zero, the clock is turned off and the system will not function.*

- b. Parallel-to-Serial Converter
  1. Connect a source of test data and clock as described in test procedure with the clock set for the highest data rate.
  2. Place the parallel-to-serial converter on its appropriate extender card.
  3. Connect oscilloscope probes to monitor the parallel clock at R-186 and the serial clock at R-184.
  4. Set the clock delay using SW1 so that the rising edge of the parallel clock is between 1 and 3 ns before the rising edge of the serial clock.

### **NOTE**

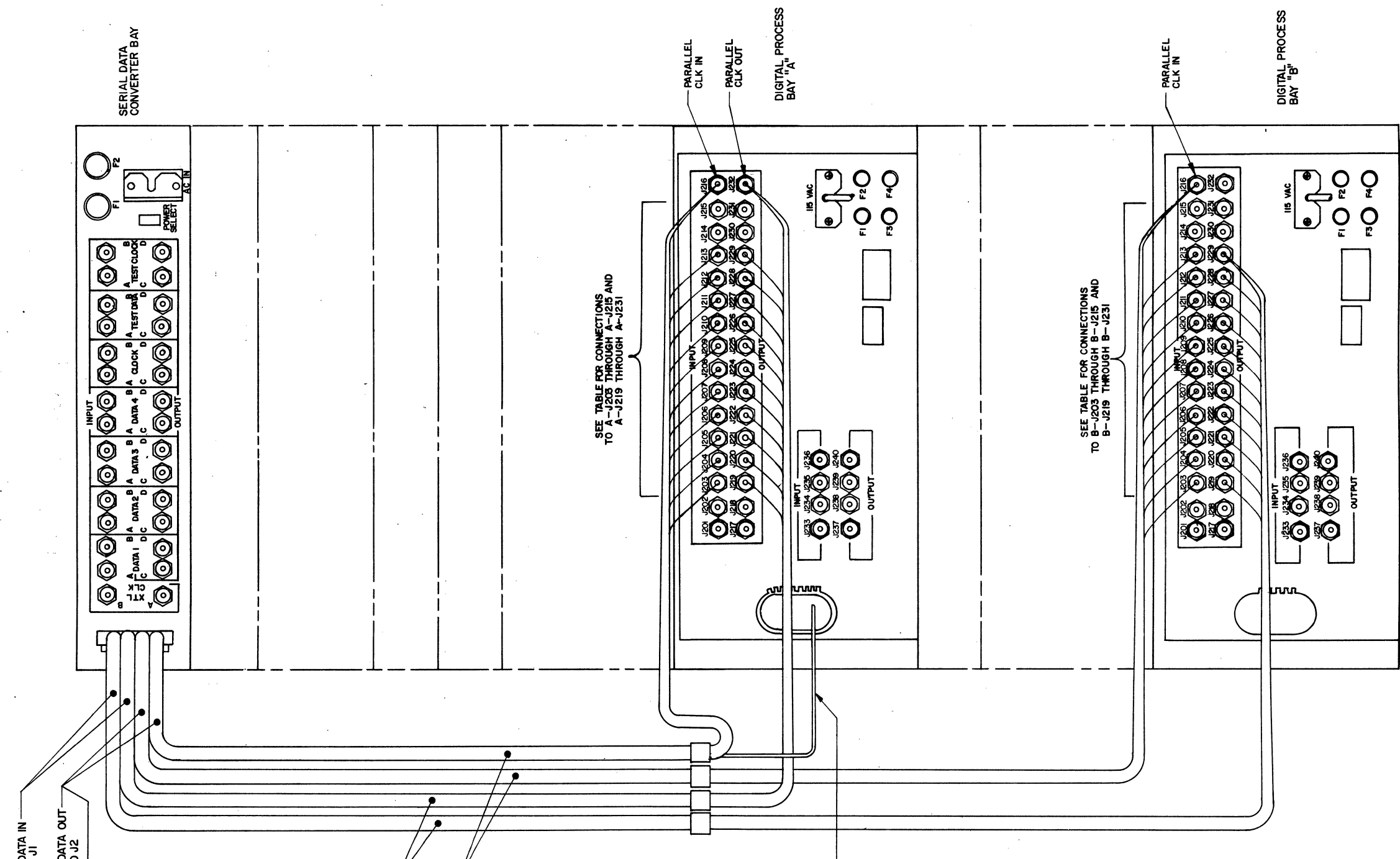
*It may be necessary to invert the serial clock to achieve the above timing. This is accomplished by moving the serial clock from J18 to J17 on the serial-to-parallel PWA.*

### **NOTE**

*When SW1 is in position zero, the clock is turned off and the system will not function.*

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE-PRODUCTION RELEASE		WKS	

D  
C  
B  
A



PARALLEL TO SERIAL DATA IN  
60 POS CONNECTOR TO J1

SERIAL TO PARALLEL DATA OUT  
60 POS CONNECTOR TO J2

RECORD COMMAND  
2-1 POS CONNECTORS  
TO J5 PIN 6 (CNTR)  
PIN 11 (SHLD)

1268116-01

1268118-01

RECORD COMMAND  
2-1 POS CONNECTORS TO  
J42 PIN 19 (CNTR), PIN 11 (SHLD)

SEE TABLE FOR CONNECTIONS  
TO A--J203 THROUGH A--J215 AND  
A--J219 THROUGH A--J231

SEE TABLE FOR CONNECTIONS  
TO B--J203 THROUGH B--J215 AND  
B--J219 THROUGH B--J231

CAT.		HBR		NEXT ASSY		USED ON		APPLICATION	
<p>NOTICE</p> <p>THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.</p>									
<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.</p>				<p>QUANTITY PER VERSION</p>		<p>ITEM NO.</p>		<p>PART NUMBER</p>	
<p>TOL ± 2 PLC 3 PLC ANG</p> <p>REMOVE BURRS AND SHARP EDGES</p> <p>DO NOT SCALE THIS PRINT</p>				<p>SIGNATURE</p>		<p>DATE</p>		<p>DESCRIPTION</p>	
<p>MATERIAL:</p> <p>FINISH:</p>				<p>AMPEX</p>		<p>HEADQUARTERS</p> <p>Redwood City, California 94063</p>		<p>SYSTEM CABLE DIAGRAM</p> <p>28 CHANNEL</p> <p>SERIAL DATA CONVERTER BAY</p>	
<p>SIZE</p> <p>D 92739</p>				<p>CODE IDENT NO.</p> <p>1269018-01</p>		<p>SCALE</p>		<p>SHEET 1 OF 3</p>	





DISTR CODE:

<b>PARTS LIST</b>	<b>AMPEX</b>	<b>DATA SYSTEMS DIVISION</b>	401 BROADWAY REDWOOD CITY, CALIF. 94063	CODE IDENT <b>92739</b>	ASSY DWG. SIZE D	PL 1 2 6 7 9 5 5 - X X	REV 1
REVISIONS						SHEET 1 OF 4	

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL HBR-3000 AHBR-1700	NEXT ASSEMBLY CAT
1	PRE-PROD RELEASE			DRAWN <i>Sweet</i>	3/15/82			
				CHECKED		DRAWING TITLE HBR SERIAL DATA CONVERTER BAY		
				ENGRG <i>J.Barker</i>	4-21-82			
				ENGRG				
				MANAGER				

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1	C	1251522	01	PLATE, IDENT		1	1							
2	C	1259963	01	PWA, PARALLEL TO SERIAL, 28 CH		1	-							
3	C	1261923	01	PWA, PARALLEL TO SERIAL, 14 CH		-	1							
4	C	1261103	01	PWA, SERIAL TO PARALLEL, 28 CH		1	-							
5	C	1261933	01	PWA, SERIAL TO PARALLEL, 14 CH		-	1							
6	C	1261503	01	PWA, INTERCONNECT		1	1							
7	C	1262646	01	CABLE RETAINER		1	1							
8	D	1263557	01	COVER		1	1							
9	C	1267219	04	CLAMP, CABLE		1	1							
10	C	1267305	01	CLAMPING STRIP	4	4	4							
11	D	1267956	01	CHASSIS		1	1							
12	D	1267957	01	REAR PANEL		1	1							
13	D	1267965	01	CARD CAGE		1	1							
14	D	1267966	01	DIVIDER/SHIELD		2	2							
15														
16	D	1267968	01	PLATE, CARD CAGE		1	1							
17	C	1267969	01	BRACKET, PANEL & COVER MTG		1	1							
18	C	1267969	02	BRACKET, PANEL & COVER MTG		1	1							
19	D	1267975	01	PLENUM, DUAL FAN MTG		1	1							
20	D	1267976	01	PLENUM, AIR EXHAUST		1	1							

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1 2 6 7 9 5 5 - X X

SHEET 2 OF 4

REV

1

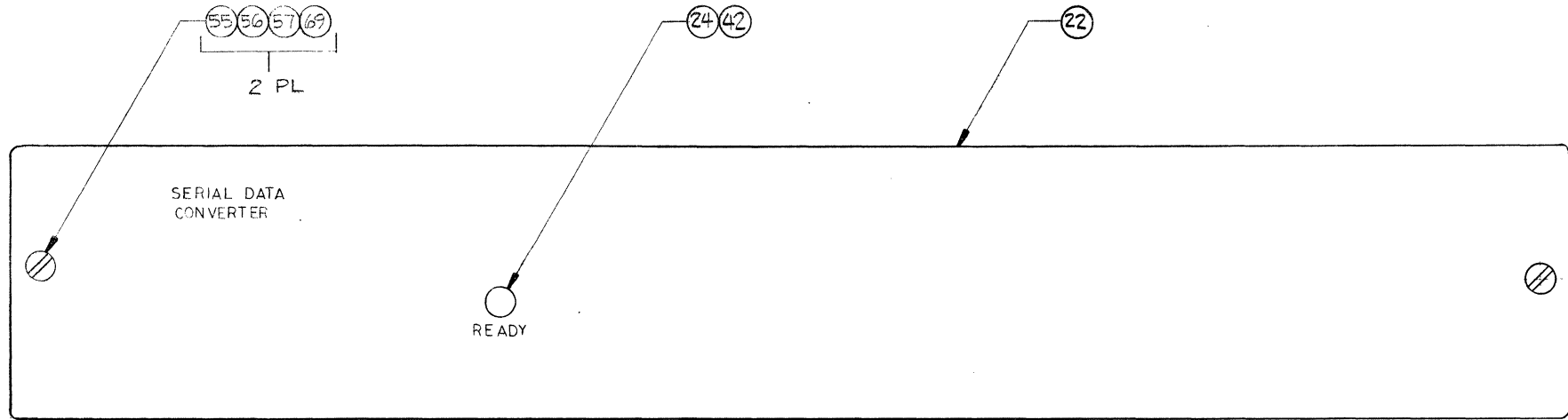
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21	D	1267977	01	POWER SUPPLY ASSY		1	1							
22	D	1267986	01	FRONT PANEL		1	1							
23	C	1267988	01	BRACKET, CABLE CLAMP		1	1							
24	B	1267989	01	LENS		1	1							
25	D	1268106	01	CABLE ASSY, 28 CH OUT		1	-							
26	D	1268107	01	CABLE ASSY, 28 CH IN		1	-							
27	D	1268108	01	CABLE ASSY, 14 CH OUT		-	1							
28	D	1268109	01	CABLE ASSY, 14 CH IN		-	1							
29		1268115	01	CABLE ASSY, INTERCONNECT		1	1							
30	D	1268116	01	CABLE ASSY, DPB TO P/S PWA		1	-							
31	D	1268117	01	CABLE ASSY, DPB TO P/S PWA		-	1							
32	D	1268118	01	CABLE ASSY, S/P TO DPU PWA		1	-							
33	D	1268119	01	CABLE ASSY, S/P TO DPU PWA		-	1							
34	D	1268369	01	FAN ASSY		1	1							
35	D	1268369	02	FAN ASSY		1	1							
36	C	1268375	01	GUTTER, CABLE		1	1							
37	C	1268376	01	PARTITION, CABLE		1	1							
38	C	1268377	01	CLAMP, CABLE		1	1							
39	D	1268259	01	SCHEMATIC, POWER		REF	REF							
40	C	1268759	01	INSULATOR, DIVIDER/SHIELD		2	2							
41														
42		018-378		ADHESIVE, LOCTITE 404		AR	AR							
43														
44		070-994		FUSE, 1.25A, FB	F2	1	1							
45		070-006		FUSE, 0.25A, FB	F1	1	1							

PARTS LIST		AMPEX		DATA SYSTEMS DIVISION		CODE IDENT 92739		PL 1 2 6 7 9 5 5 - X X SHEET 3 OF 4								REV 1
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46		084-051		POWER CABLE		1	1									
47																
48		225-484		TAPE, ADH, TRANSFER, DOUBLE SIDE		AR	AR									
49		260-052		GROMMET, NYLON CATERPILLAR		0.5'	0.5'									
50		280-135		SPACER, 4-40 x .88		2	2									
51		280-993		SPACER, 6-32 x .62		6	6									
52																
53		302-077		CLAMP, CABLE, .50 DIA		4	4									
54																
55		310-063		SPRING, COMP, TURNLOCK		2	2									
56		310-853		WSHR, WEAR, TURNLOCK		2	2									
57		310-899		RETAINER, PUSHON, TURNLOCK		2	2									
58																
59		470-019		SCR, 6-32 x .44 SCH		8	8									
60		470-035		SCR, 10-32 x .31 SCH	4	12	12									
61		471-068		SCR, 6-32 x .31 PNH		4	4									
62		471-069		SCR, 6-32 x .38 PNH		12	12									
63		471-078		SCR, 8-32 x .38 PNH		12	12									
64		471-334		SCR, 6-32 x .25 FLH		12	12									
65		471-335		SCR, 6-32 x .31 FLH		8	8									
66		471-336		SCR, 6-32 x .38 FLH		8	8									
67		471-606		SCR, 6-32 x .25 TRH, SST		27	27									
68		474-541		SCR, 6-32 x .38 TRH, SST		2	2									
69		474-098		STUD, 1/4 TURN		2	2									
70		474-540		SCR, 4-40 x .38 TRH		2	2									

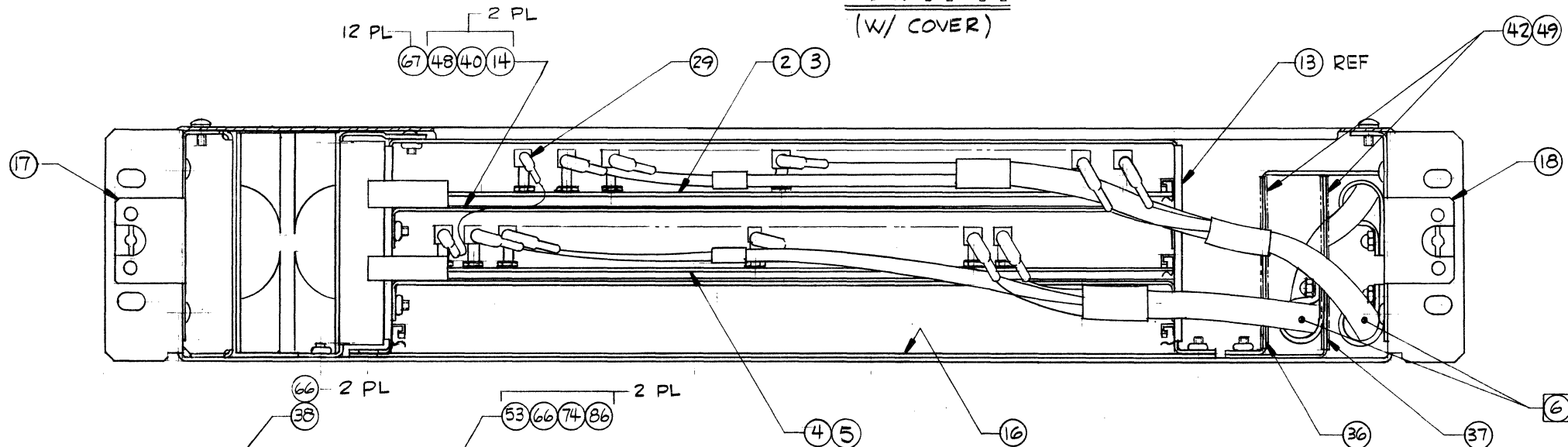




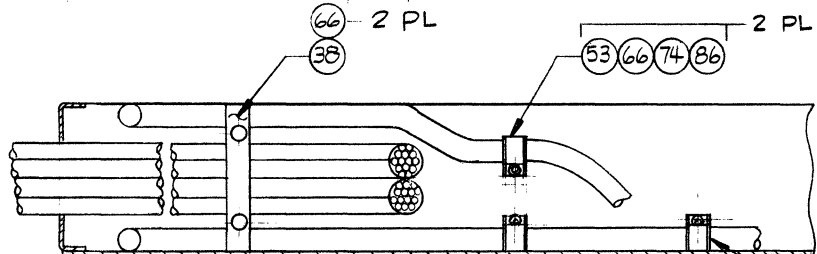
REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	PRE PROD RELEASE	<i>[Signature]</i>	3/82



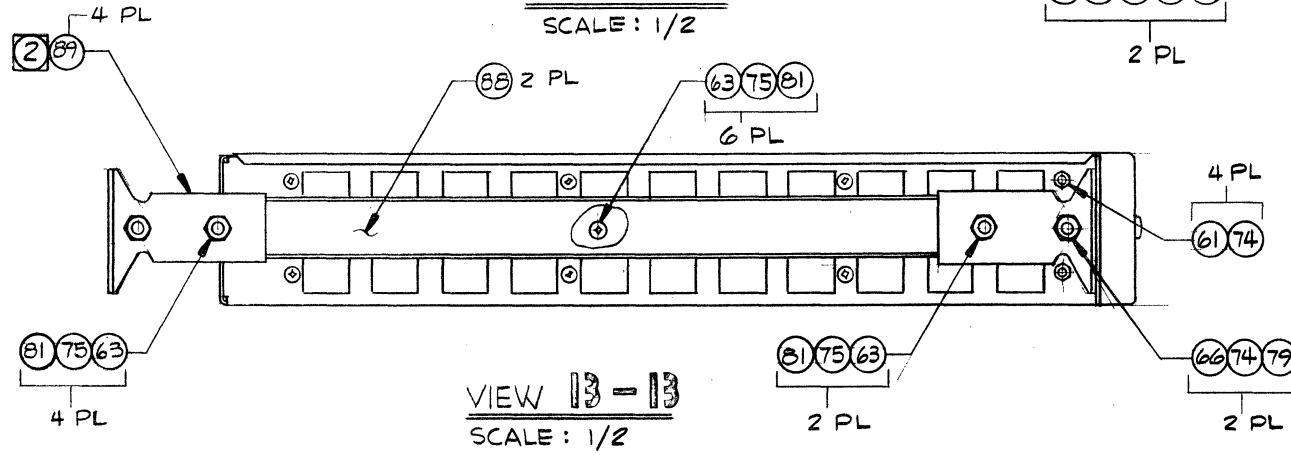
VIEW A-A  
(W/ COVER)



VIEW A-A  
(WITHOUT COVER)



VIEW C-C  
SCALE: 1/2



VIEW B-B  
SCALE: 1/2

NOTES:

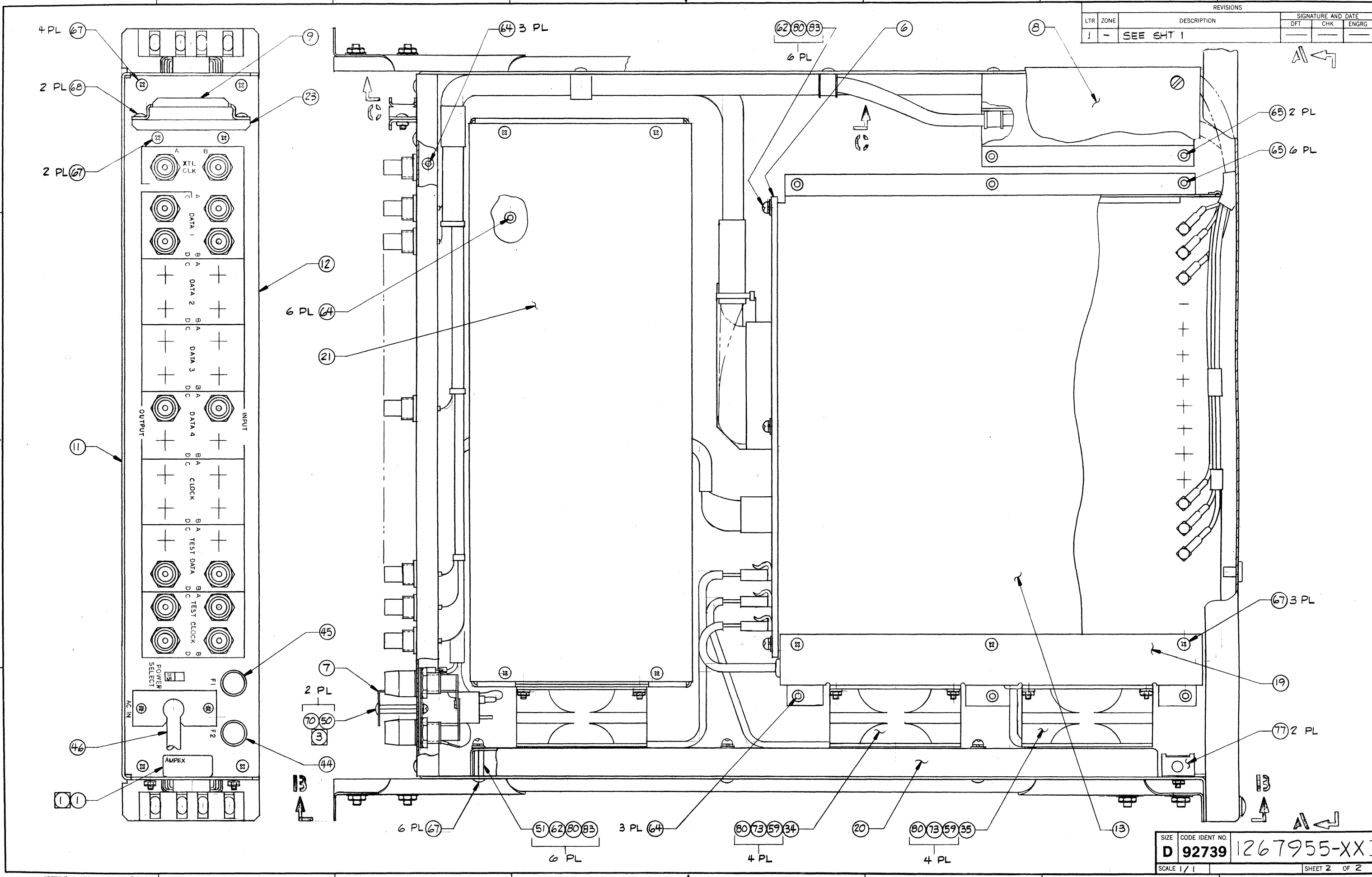
- 1 MARK ITEM 1 WITH ASSY NUMBER & REV AND MOUNT WHERE SHOWN.
- 2 DISCARD HARDWARE SUPPLIED WITH ITEM 89.
- 3 DISCARD TEMPORARY ASSY NUTS SUPPLIED AT J1/FL1 MOUNTING AND INSTALL THREADED SPACER, ITEM 50, TO SECURE POWER PANEL TO REAR PANEL.
- 4 PACKAGE ITEMS NOTED ON PL AND SECURE TO THIS ASSY FOR INSTALLATION OF SLIDES TO CABINET.
- 5. POWER SCHEMATIC REFERENCE DIAGRAM 1268259-01.
- 6 TUCK CABLE SERVICE LOOPS INTO INDIVIDUAL COMPARTMENTS. EXTEND CABLE WHEN PWA IS MOUNTED ON EXTENDER BOARD ASSY 1267073-01.

☑ PARTS LIST

QUANTITY PER VERSION	ITEM NO.	PART NUMBER	SIGNATURE		DATE	DESCRIPTION
			DRAWN BY	CHK BY		
			<i>[Signature]</i>		3/82	<b>AMPEX</b>
				<i>[Signature]</i>	3/82	HEADQUARTERS Redwood City, California 94063
<p>NOTICE THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF A PROPRIETARY NATURE TO AMPEX CORPORATION. REPRODUCTION, TRANSMISSION OR USE FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF AMPEX CORPORATION IS PROHIBITED. PROVIDED HOWEVER, THAT IF THIS DOCUMENT IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DOCUMENT AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.</p>						<p>HBR SERIAL DATA CONVERTER BAY</p>
<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.</p> <p>TOL + 2 PLC 3 PLC ANG - - - - -</p> <p>REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>DO NOT SCALE THIS PRINT</p> <p>MATERIAL: _____ FINISH: _____</p>						
<p>CAT HBR 3000 NEXT ASSY AHBR 1700 USED ON _____ APPLICATION _____</p>						<p>SIZE CODE IDENT NO. <b>D 92739</b> 1267955-XX</p>
<p>SCALE 1/1 W/T = 43 LBS SHEET 1 OF 2</p>						

1267955-XX

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	SEE SHT 1			



SIZE CODE IDENT NO. **D 92739** 1267955-XX  
 SCALE 1/1 SHEET 2 OF 2

4

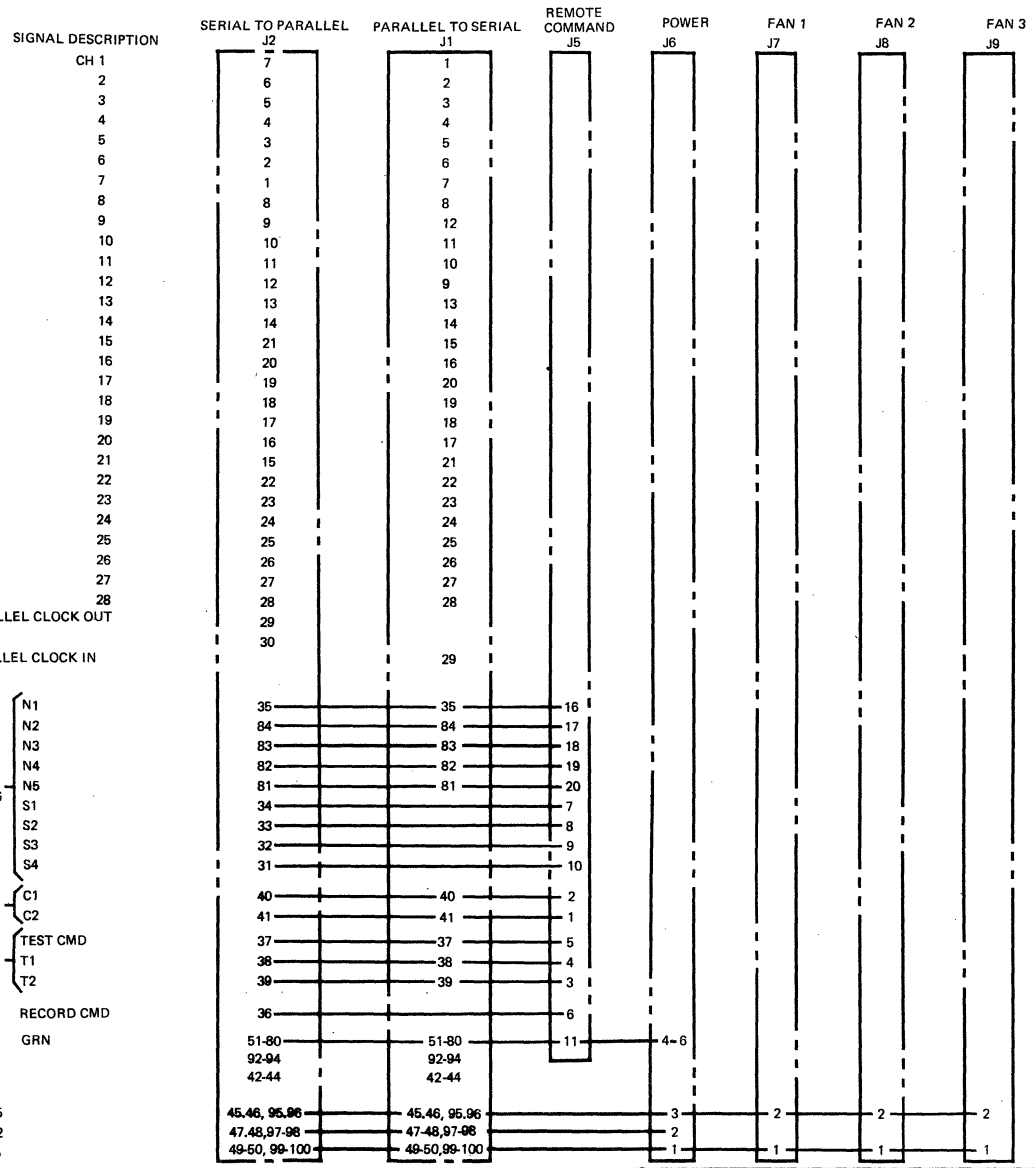
3

2

1261500-01

DISTR CODE:

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	PRE-PROD RELEASE	12-11-81 CFLW	01-28-82 WR3



D

D

C

C

B

B

A

A

1261500-01

PART NUMBER	DESCRIPTION
	PARTS LIST

<p>NOTICE</p> <p>THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT</p>	<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES</p> <p>TOL <input type="checkbox"/> 2 <input type="checkbox"/> PLC <input type="checkbox"/> 3 <input type="checkbox"/> PLC <input type="checkbox"/> ANG</p> <p>REMOVE BURRS AND SHARP EDGES</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>DO NOT SCALE THIS PRINT</p>	<p>SIGNATURE</p> <p>DATE</p> <p>DRAWN BY <i>Charles Yu 12-11-81</i></p> <p>CHK BY <i>W. Stephen 12/29/82</i></p> <p>DFT APPD</p> <p>ENGRG APPD</p> <p>AUTH BY</p>	<p>HEADQUARTERS</p> <p>Redwood City</p> <p>California 94063</p>	
	<p>MATERIAL:</p> <p>FINISH:</p>	<p>AMPEX</p> <p>SCHEMATIC DIAGRAM</p> <p>INTERCONNECT BOARD</p> <p>SERIAL DATA CONVERTER BAY</p>	<p>SIZE</p> <p>CODE IDENT NO</p> <p>C 92739 1261500-01</p>	<p>SHEET 1 OF 1</p>
	<p>APPLICATION</p> <p>1261503 HAR</p> <p>NEXT ASSY USED ON</p>	<p>THIS DRAWING IS THE PROPERTY OF AMPEX CORPORATION. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED IN THE CONTRACT. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF AMPEX CORPORATION.</p>	<p>SCALE</p>	<p>DATE</p>
	<p>J3 AND 4 SPARE</p>	<p>UC-3503 (Rev Aug 67) Printed in U.S.A.</p>	<p>4</p>	<p>1</p>

4

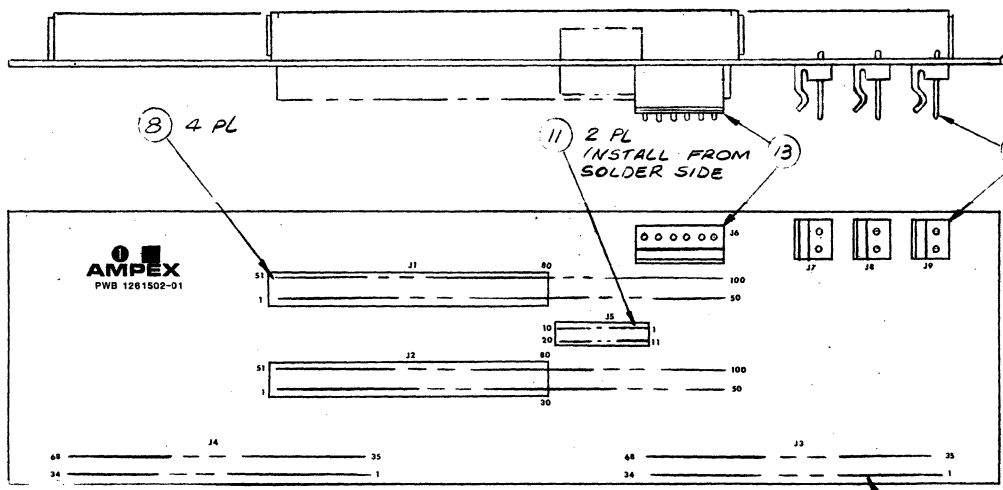
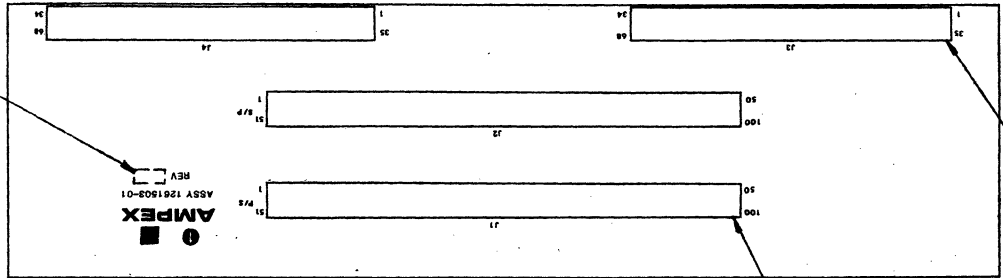
3

2

1

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REVISIONS					
CTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFT	CHK	ENGRG
1	-	PRE-PRODUCTION REL	CFR	WES	6-28-82



- 4. MARK ASSEMBLY REVISION LEVEL PER MIL-STD-130.
  - 3. ASSEMBLE PER AMPEX STANDARD HC2-2.
  - 2. REFERENCE SCHEMATIC 1261500-01.
  - 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.
- NOTES: UNLESS OTHERWISE SPECIFIED
- PARTS LIST

SIGNATURE		DATE		<b>AMPEX</b>	HEADQUARTERS Redwood City, California 94063
DRAWN BY <i>H. Hadefin</i>		12-11-81			
CHK BY <i>D. Stapp</i>		6/29/82		<b>PRINTED WIRING BD ASSY</b> INTERCONNECT, SERIAL DATA CONVERTER BAY	
DFT APPD					
ENGRG APPD					
AUTH BY					
1267955 HBR				SIZE	CODE IDENT NO.
NEXT ASSY USED ON				<b>C</b>	<b>92739</b>
APPLICATION				1261503-01	
SCALE 1 X 1				SHEET 1 OF 1	

1261503-01

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
**C**

**PL 1 2 6 1 5 0 3 - 0 1**

SHEET **1** OF **1**

REV  
**1**

REVISIONS

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PRODUCTION			DRAWN			HBR	1267955
				CHECKED <i>W. Stephens</i>	6/30/82	DRAWING TITLE PRINTED WIRING BOARD ASSEMBLY INTERCONNECT, 100 M BIT I/O BAY		
				ENGRG				
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	D	1261502	01	PRINTED WIRING BOARD		1								
2														
3	C	1261500	01	SCHEMATIC DIAGRAM		REF								
4														
5		167-314		CONN PART, HOUSING	J1-2	2								
6		167-590		CONN PART, HOUSING	J3-4	2								
7														
8		167-773		CONN PART, 50 PIN STRIP	J1-2	4								
9		167-697		CONN PART, 34 PIN STRIP	J3-4	4								
10														
11		187-326		CONN PART, 20 PIN STRIP	J5	1								
12														
13		135-112		HEADER ASSY, 6 PIN	J6	1								
14		135-267		HEADER ASSY, 2 PIN	J7-9	3								













## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1261103-01

SHEET 2 OF 4

REV

2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
16		051-770		CHOKE, FERRITE	FB1-3	3								
17														
18														
19		014-652		XSTR, PNP, SI, 2N3906	Q1	1								
20														
21		581-489		DIO, ZENER, 1N4372A	VR1	1								
22		132-397		DIO, LED, GRN, PCB MOUNT	DS1	1								
23														
24														
25		049-757		RES, FXD, 56, 5%, 1/8W	R21,28,34,40	4								
26		049-878		RES, FXD, 62, 5%, 1/8W	R23,30,83,85,87,92	6								
27		049-653		RES, FXD, 68, 5%, 1/8W	R1-20,22,25-27,29, 31-33,35,38,39,41,46, 47,49,51-53,55-57,59, 60,63,64,66,74-78,80, 81,84,94-99,101,103, 109	63								
28		049-654		RES, FXD, 75, 5%, 1/8W	R110,111	2								
29														
30		049-602		RES, FXD, 150, 5%, 1/8W	R36,37,42-45,48,50, 54,58,59,61,62,65,68 71-73,79,82,86,88-91, 100,102,105,115,118, 121,124,127,130	34								
31														
32		049-618		RES, FXD, 47K, 5%, 1/8W	R67,69,70,116,117,119, 120,122,104,106,123, 125,126,128,129,131	16								
33		041-739		RES, FXD, 180, 5%, 1/4W	R113	1								
34		041-561		RES, FXD, 5.1K, 5%, 1/4W	R114	1								
35		039-223		RES, NET, 7 X 1K, 2%	R107,108,112	3								
36														

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL1261103-01

SHEET 3 OF 4

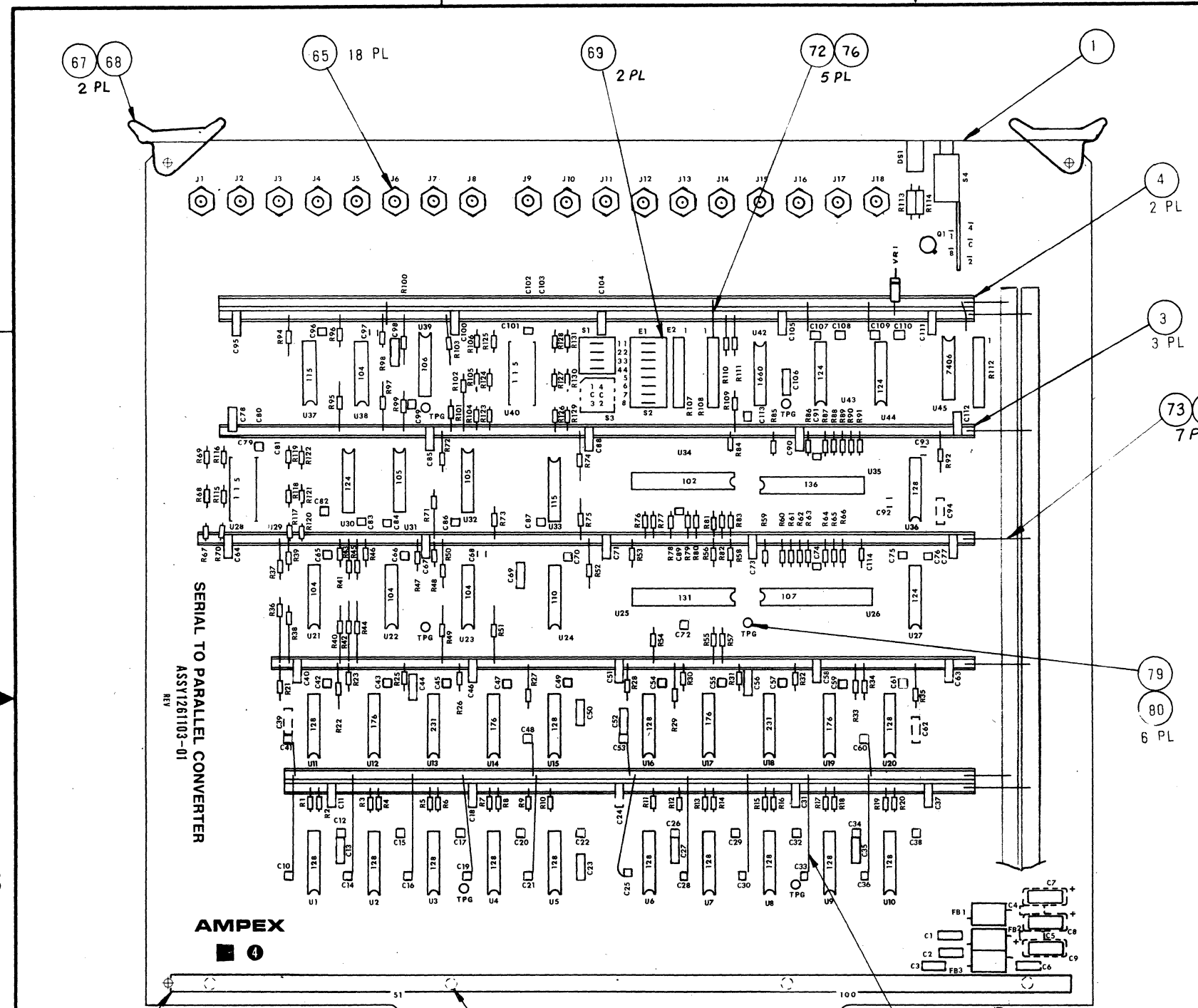
REV  
2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
37														
38		119-520		SWASSY, ROCKER, 4 X SPST	SW1	1								
39		119-521		SWASSY, ROCKER, 8 X SPST	SW2	1								
40		122-451		SW ASSY, ROTARY, SP X 4 POS	SW3	1								
41		119-649		SW ASSY, THUMBWHEEL, BCD	SW4	1								
42														
43														
44		589-690		IC, 7406, HEX INVERTER/BUFFER	U45	1								
45														
46		589-502		IC, 10104, 4 X 2 AND	U21-23,38	4								
47		589-565		IC, 10105, 2-3-2 OR/NOR	U31,32	2								
48		589-503		IC, 10106, 4-3-2 NOR	U39	1								
49		589-505		IC, 10110, 2 X 3-3 OUTPUT OR	U24	1								
50		589-630		IC, 10115, QUAD, RECEIVERS	U33,37,28,40	4								
51														
52														
53		589-507		IC, 10124, QUAD TTL TO ECL	U27,30,43,44	4								
54		000-084		IC, 10128, DUAL ECL TO TTL W/LATCH	U1-11,15,16,20,36	15								
55		589-713		IC, 10176, HEX D	U12,14,17,19	4								
56		589-920		IC, 10231, DUAL D	U13,18	2								
57														
58		589-768		IC, MC1660, 2 X 4 OR/NOR	U42	1								
59														
60		590-065		IC, F100102 5 X 2 OR/NOR	U34	1								
61		590-066		IC, F100107 5 X 2 EXC. OR	U26	1								



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REVISIONS			
REV	ZONE	DESCRIPTION	SIGNATURE AND DATE
			DFT CHK ENGRG
1	-	PRE-PROD RELEASE	6-5-82 7-1-82



- 4. MARK ASSEMBLY REVISION LEVEL PER MIL-STD-130.
  - 3. ASSEMBLE PER AMPEX STANDARD HC2-2.
  - 2. REFERENCE SCHEMATIC 1261100-XX.
  - 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.
- NOTES: UNLESS OTHERWISE SPECIFIED
- PARTS LIST

67 68  
2 PL

65 18 PL

69 2 PL

72 76  
5 PL

4  
2 PL

3  
3 PL

73 75  
7 PL

79  
80  
6 PL

72 76  
14 PL

81

82  
4 PL

SIGNATURE		DATE
DRAWN BY	<i>Charlie Fu</i>	6-5-82
CHK BY	<i>WRS</i>	7-1-82
DFT APPD		
ENGRG APPD		
AUTH BY		

**AMPEX**  
HEADQUARTERS  
Redwood City,  
California 94063

**PRINTED WIRING BD ASSY  
SERIAL TO PARALLEL  
CONVERTER, 28 CHANNEL**

1267955	HBR
NEXT ASSY	USED ON
APPLICATION	

SIZE	CODE IDENT NO.
<b>C</b>	<b>92739</b>
1261103-01	
SCALE 1 X 1	SHEET 1 OF 1

DISTR CODE:

PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063CODE  
IDENT 92739ASSY  
DWG.  
SIZE  
D

PL 1267977-01

REV

1

SHEET 1 OF 2

REVISIONS

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD REL			DRAWN <i>Jas J... 4/23/82</i>			AHBR 1700	1267955
				CHECKED		DRAWING TITLE POWER SUPPLY ASSY		
				ENGRG <i>J Barker 4-21-82</i>				
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1251355	01	INSULATOR		1								
2	C	1251522	01	LABEL, IDENT		1								
3	B	1261203	01	PWA, -2V REGULATOR		1								
4	D	1267978	01	CHASSIS, P/S		1								
5	D	1267979	01	COVER, P/S		1								
6	D	1267985	01	HARNESS ASSY, AC		1								
7	D	1268047	01	HARNESS ASSY, DC		1								
8	D	1268259	01	SCHEMATIC		REF								
9	D	1268369	01	FAN ASSY		1								
10	D	1268427	01	-5V POWER SUPPLY ASSY	PS1	1								
11	D	1268428	01	+5V POWER SUPPLY ASSY	PS2	1								
12														
13														
14														
15		018-378		ADHESIVE, LOCTITE 404		AR								
16		018-454		ADHESIVE, THD LKG, LOCTITE 601		AR								
17		018-461		ADHESIVE, THD LKG, LOCTITE 242		AR								
18														
19		225-262		TAPE, TEFLON, .010 THK X 1.0 WD		0.5'								
20		225-484		TAPE, TRANSFER, DOUBLE SIDED		1.0'								



## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1267977-01

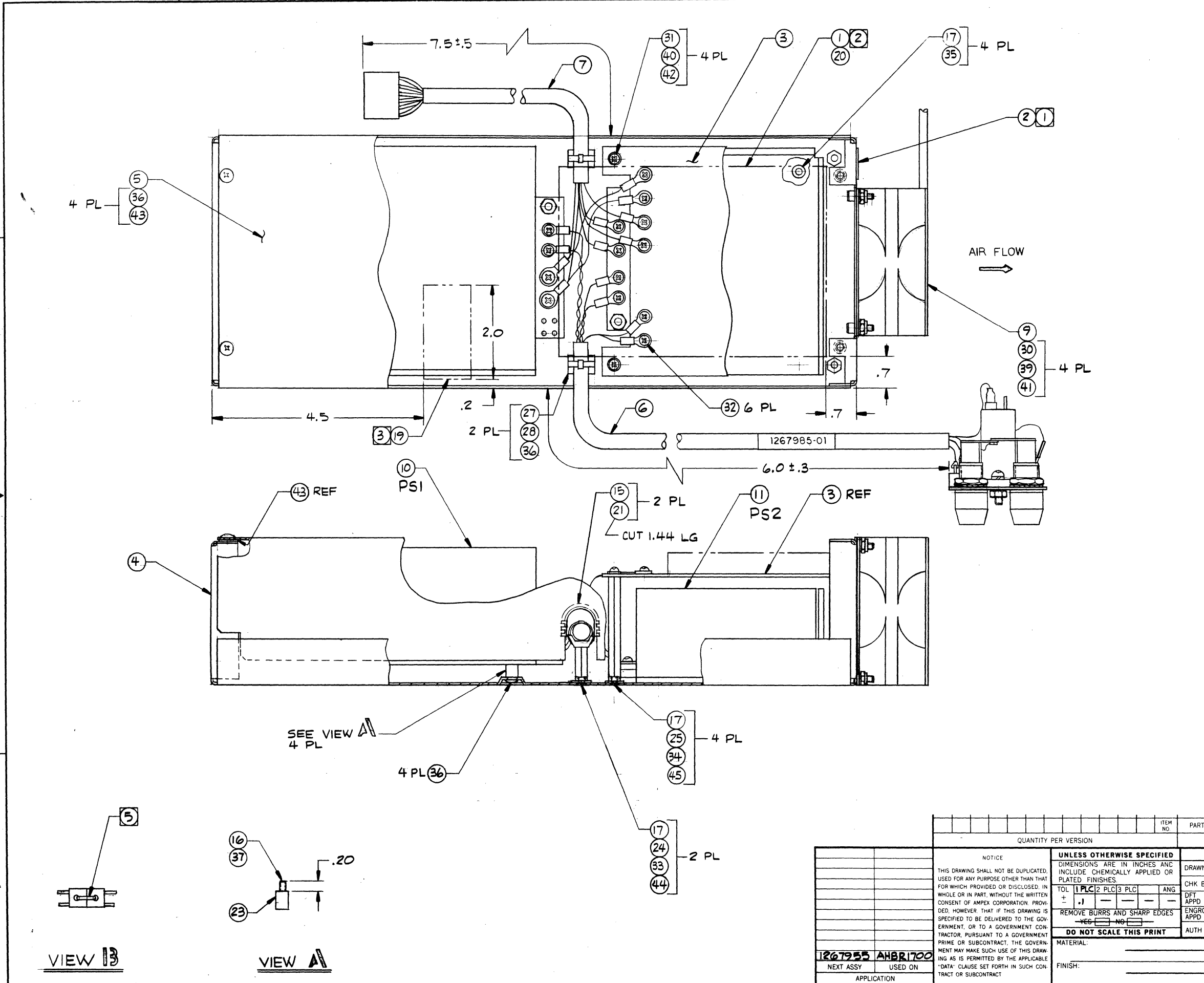
REV

1

SHEET 2 OF 2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY										
						.01	.02	.03	.04	.05	.06	.07	.08			
21		260-052		GROMMET, NYLON CATERPILLAR		0.5'										
22																
23		280-016		SPACER, 6-32 X .38		4										
24		280-040		SPACER, 6-32 X .75		2										
25		280-716		SPACER, 4-40 X 2.25		4										
26																
27		302-335		STRAP, CABLE		2										
28		302-443		SADDLE, CABLE		2										
29																
30		470-019		SCR, 6-32 X .44 SCH		4										
31		471-062		SCR, 4-40 X .38 PNH		4										
32		471-067		SCR, 6-32 X .25 PNH		6										
33		471-336		SCR, 6-32 X .38 FLH		2										
34		471-328		SCR, 4-40 X .38 FLH		4										
35		471-334		SCR, 6-32 X .25 FLH		4										
36		471-606		SCR, 6-32 X .25 TRH		10										
37		477-347		SCR, SET, 6-32 X .38		4										
38																
39		493-015		NUT, 6-32 NYLON LKG, SM PATT		4										
40		501-008		WSHR, #4 FL		4										
41		501-188		WSHR, #6 FL, SM PATT		4										
42		502-002		WSHR, #4 S LK		4										
43		503-316		WSHR, #5 FIBER		4										
44		501-205		WSHR, #8 FL		2										
45		501-009		WSHR, #6 FL		4										

REVISIONS				SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG	
1		PRE-PROD RELEASE	2/18/82			



- NOTES:
- 1 MARK ITEM 2 WITH ASSY NO, REV & TITLE (POWER SUPPLY ASSY) AND MOUNT WHERE SHOWN.
  - 2 BOND ITEM 1 TO INSIDE SURFACE OF ITEM 5 USING ITEM 20 WHERE SHOWN.
  - 3 MOUNT ITEM 19 TO INSIDE SURFACE OF ITEM 4 TO PREVENT ARCING OF DIODES CR8 & CR9 MOUNTED TO BASE OF PSI, ITEM 10.
  4. CONNECT AC & DC HARNESS ASSY PER WIRE LIST 1267985 & 1268047. REF SCHEMATIC 1268259.
  - 5 TIE CONNECTORS J1 & J2 TO P1 & P2, RESP WITH BLACK LACING CORD AS SHOWN IN VIEW 'B'.

PARTS LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION

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TOL + .1 - .1		1 PLC 2 PLC 3 PLC - - -		ANG - - -		CHECK BY DFT APPD: <i>[Signature]</i> ENGRG APPD: <i>[Signature]</i>	
REMOVE BURRS AND SHARP EDGES -YES <input type="checkbox"/> -NO <input type="checkbox"/>		DO NOT SCALE THIS PRINT		AUTH BY: <i>[Signature]</i>		HEADQUARTERS Redwood City, California 94063	
MATERIAL:		FINISH:		SIZE D 92739		CODE IDENT NO. 1267977-01	
APPLICATION 1267985 AHB1700		NEXT ASSY USED ON		SCALE 1/1		SHEET 1 OF 1	

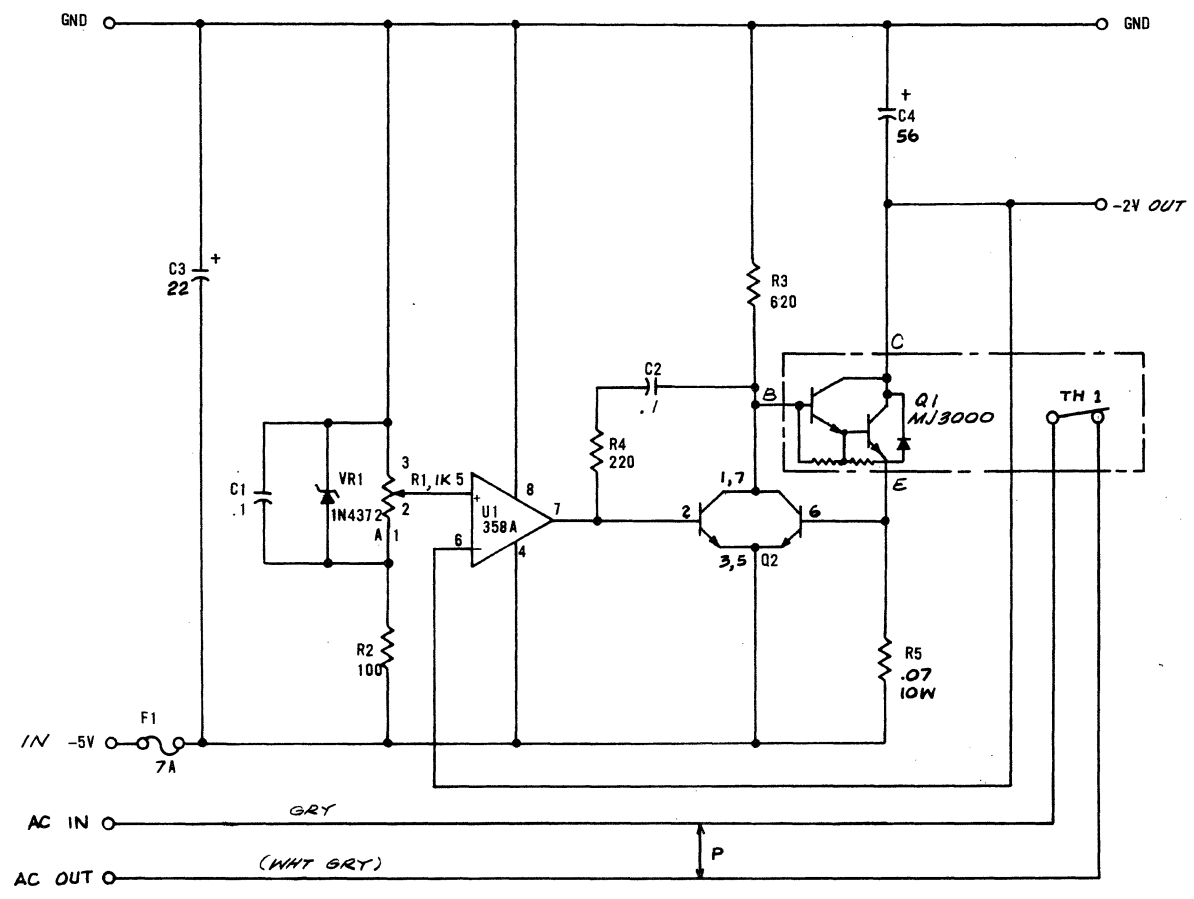
VIEW B

VIEW A

1261200-01

DISTR CODE:

REVISIONS			
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE
			DFT CHK ENGRG
1		PRE-PROD RELEASE	C.F.M. V.P.S. 7-31-81 6/2/82



- 4. ALL CAPACITORS ARE 10%, 15 VDC OR GREATER.
  - 3. ALL RESISTORS ARE 5%, 1/4 WATT.
  - 2. REFERENCE ASSEMBLY 1261203-01.
  - 1. ELECTRICAL VALUES ARE IN OHMS AND MICROFARADS.
- NOTE: UNLESS OTHERWISE SPECIFIED.

1261200-01

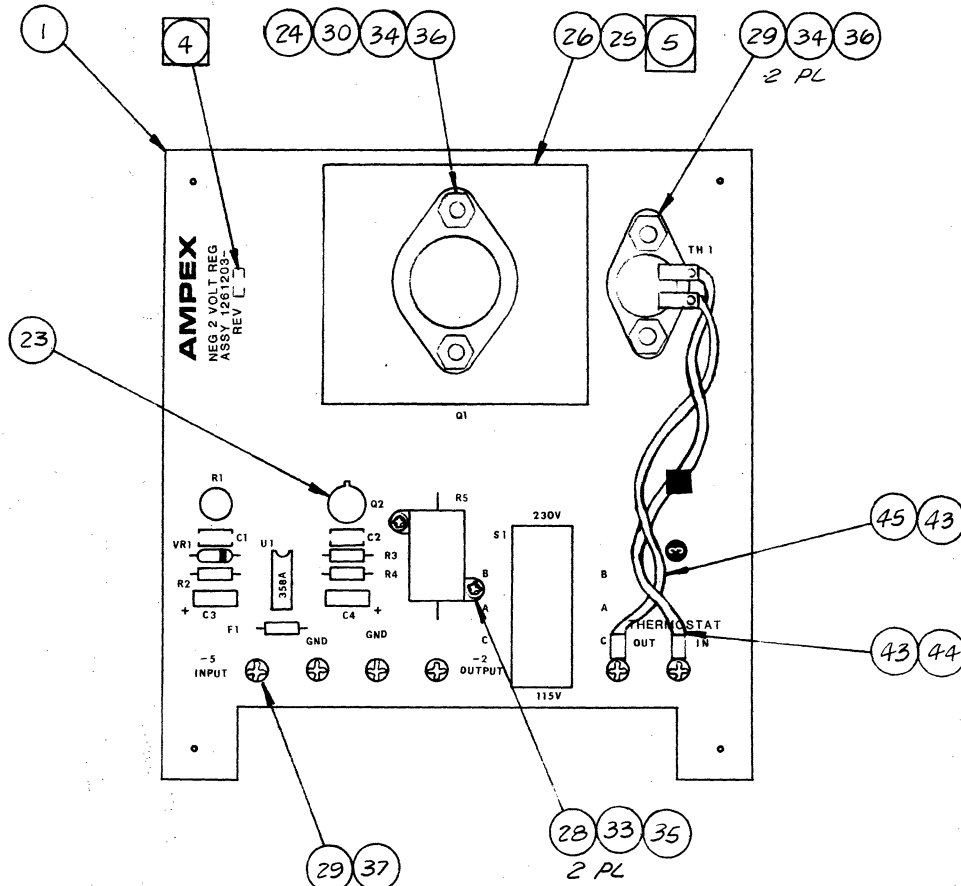
QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
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		TOL ± 2 PLC 3 PLC ANG		DRAWN BY <i>Chad Fu</i> 7-31-81
		REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/>		CHK BY <i>W. Stoy</i> 6/2/82
APPLICATION		DO NOT SCALE THIS PRINT		ENGRG APPD
NEXT ASSY USED ON		MATERIAL:		AUTH BY
1261203 HBR3000		FINISH:		AMPEX HEADQUARTERS Redwood City, California 94063
SCHEMATIC DIAGRAM		SIZE CODE IDENT NO		C 92739 1261200-01
SCALE		SHEET / OF /		

1261203-01

DISTR CODE:

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REVISIONS				
LTR	DESCRIPTION	SIGNATURE AND DATE		
		DFT	CHK	ENGRG
4	PRE-PROD RLSE	9-20-82	<i>[Signature]</i>	



INSTALL ITEM 37 NEARSIDE, SWAGE AND SOLDER FAR SIDE, 6 PL

- 5. INSULATOR BETWEEN TRANSISTOR (ITEM 17) AND HEAT SINK (ITEM 26)
- 4. MARK ASSEMBLY REVISION LEVEL, PER MIL-STD-130.
- 3. ASSEMBLE PER AMPLEX STANDARD HC2-2.
- 2. REFERENCE SCHEMATIC 1261200-01
- 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.

NOTES: UNLESS OTHERWISE SPECIFIED

PARTS LIST

DRAWN BY	<i>Charles Fu</i>	5-20-82	ENGRG APPD	
CHK BY	<i>[Signature]</i>		AUTH BY	
DFT APPD				

<b>AMPEX</b>		HEADQUARTERS Redwood City, California 94063		
		PRINTED WIRING BD ASSY - 2V REG., SER. DATA CONV. BAY		
1267977	HBR	SIZE <b>B</b>	CODE IDENT NO <b>92739</b>	<b>1261203-01</b>
NEXT ASSY	USED ON	APPLICATION	SCALE	SHEET 1 OF 1

FORM 1B

DISTR CODE:

<b>PARTS LIST</b>	<b>AMPEX</b>	<b>DATA SYSTEMS DIVISION</b> 401 BROADWAY REDWOOD CITY, CALIF. 94063	CODE IDENT <b>92739</b> ASSY DWG. SIZE <b>B</b>	<b>PL 1261203-01</b> SHEET 1 OF 2	REV <b>4</b>
-------------------	--------------	-------------------------------------------------------------------------------	----------------------------------------------------	--------------------------------------	--------------

REVISIONS		SIGNATURES		DATE		CONTRACT NUMBER		MODEL		NEXT ASSEMBLY	
LTR	DESCRIPTION	APPD	DATE								
4	PRE PRODUCTION			DRAWN	<i>A. Sweet</i>			HBR3000		1267977	
				CHECKED	<i>[Signature]</i>			DRAWING TITLE  NEGATIVE 2 VOLT REGULATOR SERIAL DATA CONVERTER BAY			
				ENGRG							
				ENGRG							
				MANAGER							

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1261202	01	PRINTED WIRING BOARD		1								
2														
3	C	1261200	01	SCHEMATIC DIAGRAM		REF								
4														
5		064-062		CAP, 0.1UF, 20%, 100V, CER	C1,2	2								
6		037-439		CAP, 22UF, 10%, 15V, TAN	C3	1								
7		037-768		CAP, 56UF, 10%, 75V, TAN	C4	1								
8														
9		058-004		RES VARIABLE, 1K, 1/2W	R1	1								
10		041-419		RES FIX, 100, 5%, 1/4W	R2	1								
11		041-505		RES FIX, 620, 5%, 1/4W	R3	1								
12		041-396		RES FIX, 220, 5%, 1/4W	R4	1								
13		047-665		RES FIX, .07, 5%, 10W	R5	1								
14														
15		581-489		DIODE, ZENER, 1N4372A	VR1	1								
16														
17		580-678		TRANS, POWER DARLINGTON MJ3000	Q1	1								
18		014-597		TRANS, DUAN NPN CD474	Q2	1								
19														
20		589-438		IC, LM-358A DUAL OP AMP	U1	1								

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1261203-01

REV

4

SHEET 2 OF 2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21		070-444		FUSE, 7 AMP, AXIAL LEAD	F1	1								
22														
23		280-139		TRANS MTG PAD, 6 PIN, TO-5		1								
24		582-109		TRANS MTG HWD, BUSHING, INSUL		2								
25		582-110		TRANS MTG HWD, INSULATOR		1								
26		582-198		HEAT SINK, THERMALLOY 6061B		1								
27														
28		472-453		SCR #2-56 x .310 PNH		2								
29		471-067		SCR #6-32 x .250 PNH		8								
30		471-069		SCR #6-32 x .375 PNH		2								
31														
32														
33		502-023		WASHER, #2 LOCKING		2								
34		502-025		WASHER, #6 LOCKING		4								
35		492-007		NUT, HEX, #2-56		2								
36		492-009		NUT, HEX, #6-32		4								
37		280-014		SPACER, THREADED, SWAGE #6-32		6								
38														
39				THERMOSTAT		1								
40														
41		087-388		SILICONE, COMPOUND, HEAT COND		A/R								
42														
43		171-010		TERMINAL LUG, CRIMP, #6 STUD		2								
44		617-055		WIRE, INSUL, 20 AWG, GRY		.2'								
45		617-064		WIRE, INSUL, 20 AWG, WHT/GRY		.2'								

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE D

**PL 1267985-01**

REV

1

SHEET 1 OF 2

REVISIONS

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>	3-18-82		AHBR 1700	1267977
				CHECKED		DRAWING TITLE  HARNES ASSEMBLY, A C		
				ENGRG <i>J Barker</i>	4-21-82			
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1267959	01	POWER PANEL		1								
2	B	1267985	01	WIRE LIST		REF								
3	D	1268259	01	SCHEMATIC		REF								
4														
5														
6														
7														
8		070-341		FUSE HOLDER		2								
9														
10		119-233		SWITCH, SLIDE, 2P2T	S1	1								
11		139-340		CONN, RECT, 3 PIN/1 SOC	P1, P2	2								
12		145-652		RECPT, PWR & FILTER	J1/FL1	1								
13														
14		171-005		TERM LUG, CRIMP #6, R TNG		6								
15														
16		471-064		SCR, 4-40 x .50 PNH		2								
17		471-327		SCR, 4-40 x .31 FLH		2								
18		492-008		NUT, 4-40 HEX		2								
19		496-004		NUT, 4-40 HEX W/CPTV L WSHR		2								
20		501-186		WSHR, #4 FL, SM PATT		2								

**PARTS LIST**

**AMPEX**

**DATA  
SYSTEMS  
DIVISION**

CODE IDENT **92739**

**PL 1267985-01**

REV

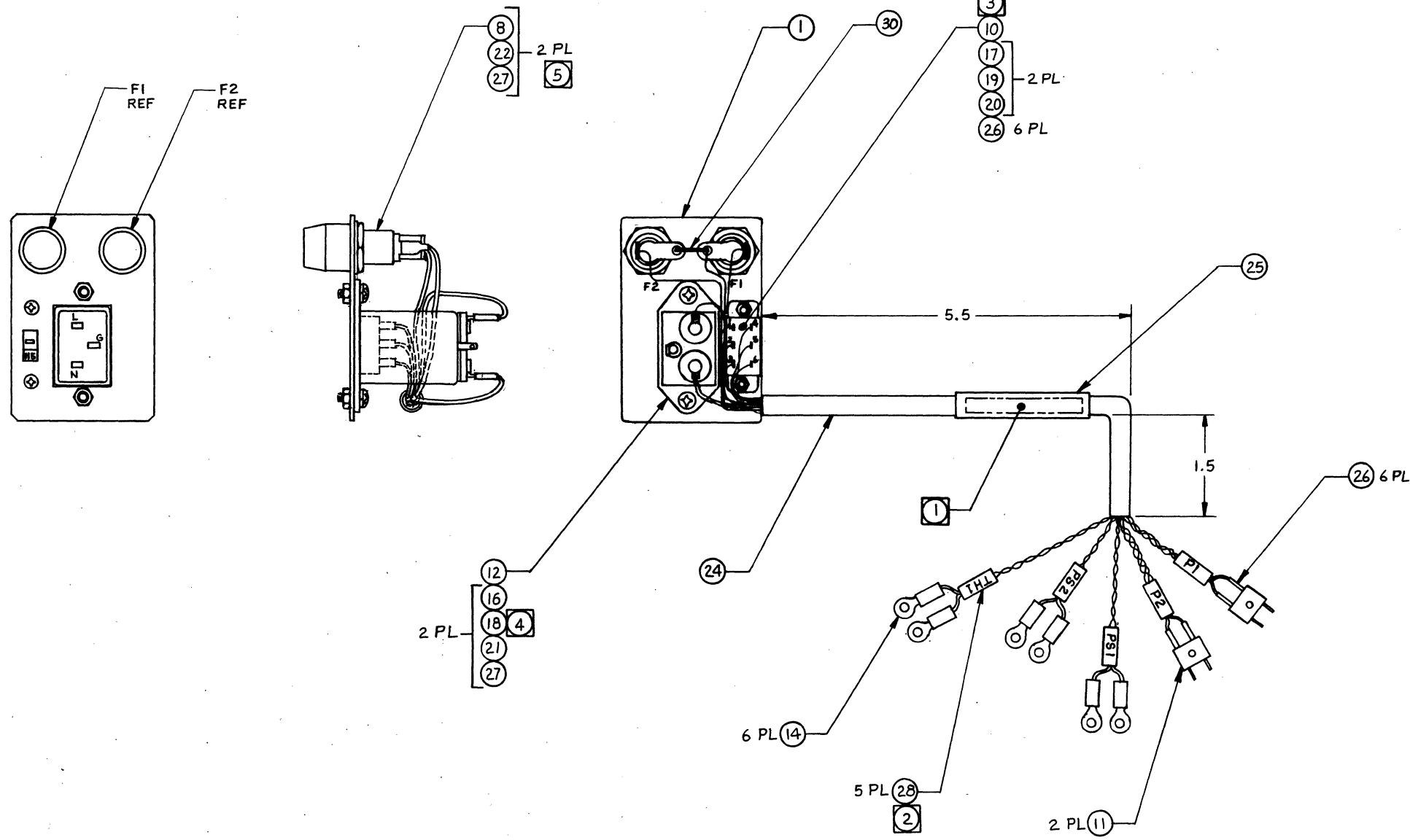
1

SHEET 2 OF 2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21		502-002		WSHR, #4 S LK		2								
22		502-064		WSHR, .500 DIA, INT TOOTH		2								
23														
24		600-043		SLVG, FLEX, .330 I.D. BLK		0.7'								
25		600-093		SLVG, SHRINK, .375/.187 I.D. BLK		0.2'								
26		600-130		SLVG, SHRINK, .093/.047 I.D. CLR		0.4'								
27		600-132		SLVG, SHRINK, .187/.093 I.D. CLR		0.1'								
28		600-153		SLVG, SHRINK, .125/.062 I.D. BLK		0.3'								
29														
30		615-090		WIRE, SOLID, BARE, 18 AWG		0.1'								
31		611-607		WIRE, STRD, INSUL, 20 AWG, WHT		4.2'								
32		617-055		↑ ↑ ↑ ↑ GRY		3.2'								
33		617-056		↓ ↓ ↓ ↓ WHT/BLK		1.2'								
34		617-057		↓ ↓ ↓ ↓ WHT/BRN		1.2'								
35		617-059		↓ ↓ ↓ ↓ WHT/ORN		2.0'								
36		617-064		WIRE, STRD, INSUL, 20 AWG, WHT/GRY		1.2'								



REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	PRE-PRODUCTION RELEASE	<i>J. Barker</i> 5-18-82	<i>J. Barker</i> 4-21-82



- NOTES: UNLESS OTHERWISE SPECIFIED.
- 1 MARK ASSY NUMBER AND REVISION IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130. ASSY 1267985-01  
1
  - 2 MARK REFERENCE DESIGNATIONS ON ITEM 28, 5 PL, AS SHOWN, COLOR IS WHITE, PER MIL-STD-130.
  - 3 SLIDE SWITCH CONTACTS ARE IDENTIFIED AS SHOWN FOR ASSEMBLY PURPOSES.
  - 4 TIGHTEN TEMPORARY ASSY NUT FINGER TIGHT.
  - 5 FUSE CARTRIDGES ARE ADDED AT BAY ASSEMBLY 1267955-01.

SEE SEPARATE PARTS AND WIRE LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DATE
1267977 AHBR 1700		TOL		<i>Amex</i> 3-18-82
NEXT ASSY USED ON		+ .2 - - - - -		CHK BY
APPLICATION		- .2 - - - - -		DFT APPD
		REMOVE BURRS AND SHARP EDGES		ENGRG APPD
		YES <input type="checkbox"/> NO <input type="checkbox"/>		<i>J. Barker</i> 4-21-82
		DO NOT SCALE THIS PRINT		AUTH BY
		MATERIAL:		
		FINISH:		
		SIGNATURE		
		DATE		
		AMPEX		HEADQUARTERS Redwood City, California 94063
		HARNESS ASSEMBLY, AC		
		SIZE		
		D 92739		1267985-01
		SCALE 1/1		SHEET 1 OF 1

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
D

**PL 1268047-01**

REV  
1

REVISIONS

SHEET 1, OF 1

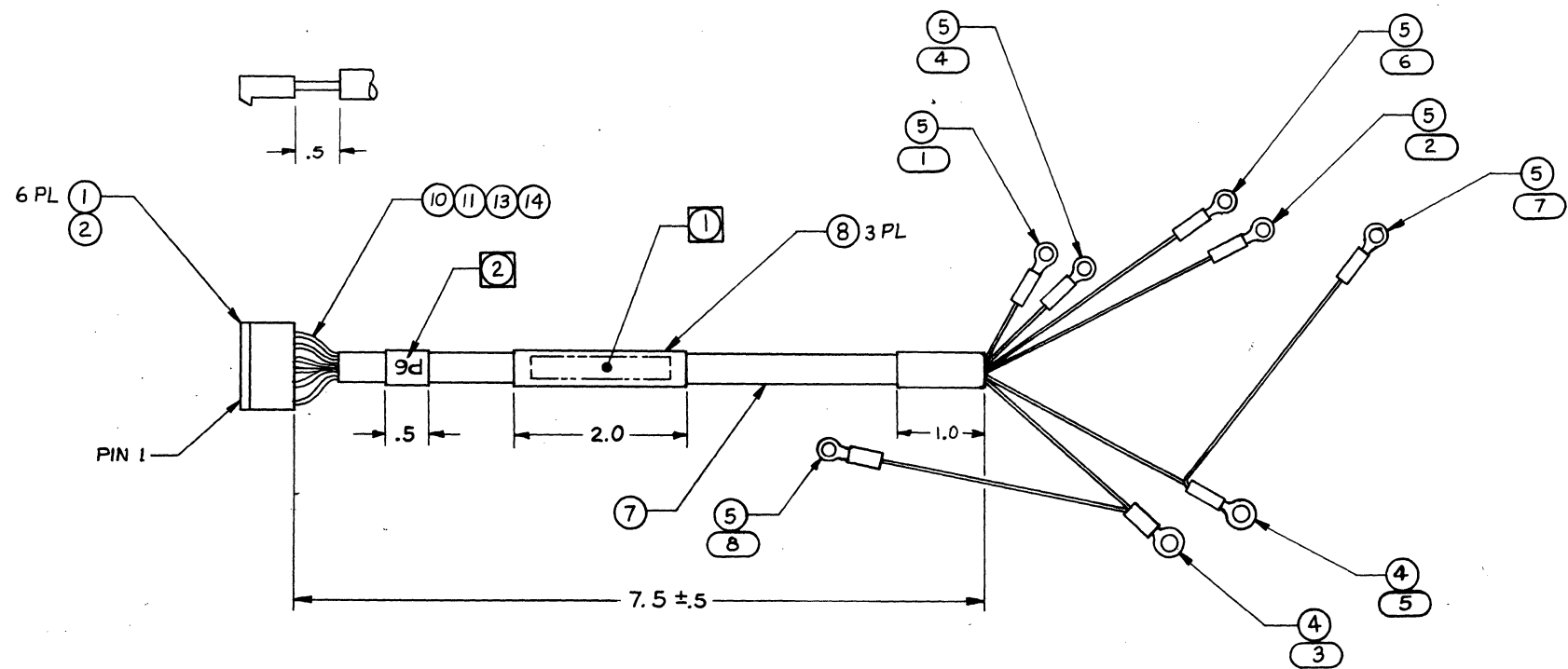
LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>	3-7-82		AHBR 1700	1267977
				CHECKED		DRAWING TITLE HARNESS ASSEMBLY, DC		
				ENGRG <i>J. Barker</i>	4-21-82			
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1		167-019		CONTACT, SOC CRIMP		6								
2		167-553		CONN, PLUG, RECT, 6 POS		1								
3														
4		171-007		TERM LUG, CRIMP, #10, R TNG		2								
5		171-044		TERM, LUG, CRIMP, #6, R TNG		6								
6														
7		600-007		SLVG, .263 I.D., BLK		0.7'								
8		600-093		SLVG, .375/.188 I.D., BLK		0.3'								
9														
10		611-718		WIRE, STRD, INSUL, 16 AWG, BRN		1.0'								
11		611-723		WIRE, STRD, INSUL, 16 AWG, BLK		3.0'								
12		611-724		WIRE, STRD, INSUL, 16 AWG, BLU		1.5'								
13		611-726		WIRE, STRD, INSUL, 16 AWG, GRN		1.0'								
14														
15														
16	B	1268047	01	WIRE LEAD LIST		REF								
17	D	1268259	01	SCHEMATIC		REF								

DIST CODE:

WIRE LIST		AMPEX		DATA SYSTEMS DIVISION		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT 92739		ASSY DWG. SIZE D		WL 1268047-01		REV 1
REVISIONS														
LTR	DESCRIPTION		APPD	DATE	SIGNATURES		DATE	CONTRACT NUMBER		MODEL		NEXT ASSEMBLY		
1	PRE-PROD RLSE				DRAWN <i>[Signature]</i>		1/78			AHBR 1700		1267977		
					CHECKED <i>[Signature]</i>		1/22			DRAWING TITLE		HARNES ASSY, D C		
					ENGRG									
					MANAGER									
WIRE			FROM				TO				BM # 1268047-01		BM ITEM NO.	
WIRE NO.	GAUGE/DESC	LGTH (INCHES)	REF DESIG TERMINAL	PROCESS	STA	STA	PROCESS	REF DESIG TERMINAL	REMARKS	FROM	WIRE	TO		
1	16/5	9.0	P6-1	CRIMP			CRIMP	PS2 (+)		2	13	5		
2	1	11.25	2					-2V REG (OUT)		2	10	5		
3	6	10.5	3					PS1 (-)	CRIMP W/WIRE #8	2	12	4		
4	0	9.25	4					PS2 (-)		2	11	5		
5	0	11.0	5					PS1 (+)	CRIMP W/WIRE #7	2	11	4		
6	0	11.0	P6-6					-2V REG (GND)		2	11	5		
7	0	3.75	PS1 (+)					-2VREG (GND)	CRIMP W/WIRE #5	4	11	5		
8	16/6	3.75	PS1 (-)	CRIMP			CRIMP	-2V REG (IN)	CRIMP W/WIRE #3	4	12	5		

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	PRE-PRODUCTION RELEASE	<i>J. Barker</i> 3-17-82	<i>J. Barker</i> 4-21-82



NOTES: UNLESS OTHERWISE SPECIFIED.

① MARK ASSY NUMBER AND REVISION IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130. ASSY 1268047-01  
1

② MARK REF DES 'P6' ON ITEM 8 AS SHOWN WITH WHITE INK PER MIL-STD-130.

○ INDICATES ITEM NO.  
 ○ INDICATES WIRE LIST NO.

SEE SEPARATE PARTS AND WIRE LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
		-01		

NOTICE THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES. TOL: 1 PLC 2 PLC 3 PLC ANG + .2 - - - - REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/> <b>DO NOT SCALE THIS PRINT</b>	SIGNATURE DRAWN BY <i>Ammons</i> CHK BY DFT APPD ENGRG APPD <i>J. Barker</i> AUTH BY	DATE 3-17-82 4-21-82	HEADQUARTERS Redwood City, California 94063
	MATERIAL:	FINISH:	AMPEX	
	NEXT ASSY 1267977	USED ON AHBR 1700	HARNES ASSEMBLY, DC	
	APPLICATION	SIZE D 92739	CODE IDENT NO. 1268047-01	SCALE: 1/1

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
D

**PL 1268427-01**

REV  
**1**

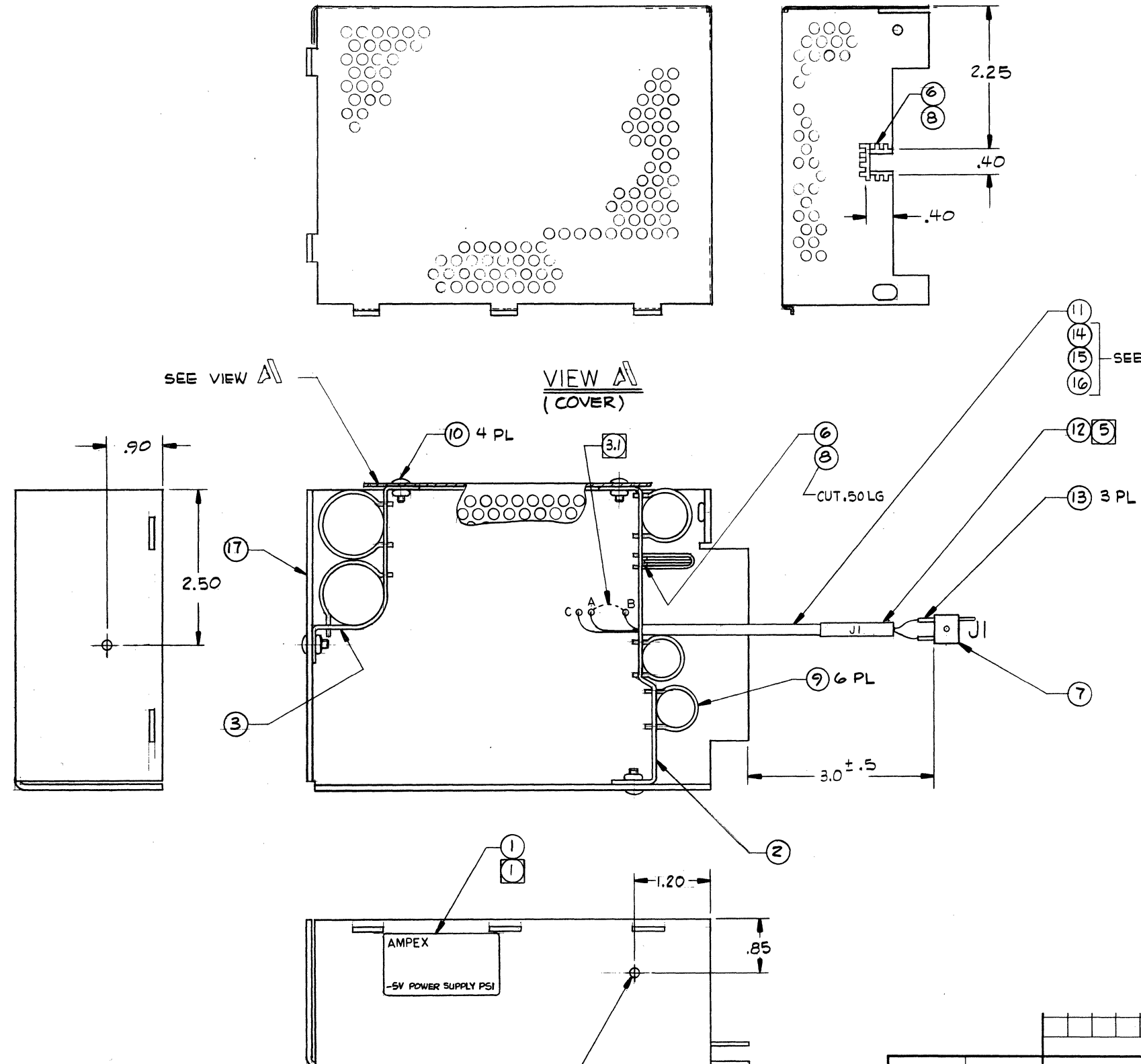
REVISIONS

SHEET 1 OF 1

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD RELEASE			DRAWN <i>Lee Sweet</i>	3/2/82		AHBR17000	1267977
				CHECKED		DRAWING TITLE		
				ENGRG <i>J. Barker</i>	4-21-82	-5V POWER SUPPLY PS1		
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1251522	01	LABEL, IDENT		1								
2	B	1268545	01	BRACKET		1								
3	B	1268546	01	BRACKET		1								
4														
5														
6		018-378		ADHESIVE, LOCTITE: 404		AR								
7		139-341		CONN, RECT, 3 SOC/1 PIN	J1	1								
8		260-052		GROMMET, NYLON, CATERPILLAR		0.1'								
9		302-527		STRAP, CABLE 3"		6								
10		471-606		SCR, 6-32 x .250 TRH		4								
11		600-009		SLVG, FLEX .208 ID, BLK		0.4'								
12		600-092		SLVG, SHRINK .250/.125 BLK		0.1'								
13		600-130		SLVG, SHRINK .093/.047 CLR		0.1'								
14		617-055		WIRE, STR, INS, 20 AWG, GRY		0.5'								
15		617-059		WIRE, STR, INS, 20 AWG, WHT/ORN		0.5'								
16		617-607		WIRE, STR, INS, 20 AWG, WHT		0.5'								
17		570-588		POWER SUPPLY 5V, 20A		1								

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE-PROD RELEASE	<i>[Signature]</i>		



WIRE LIST

ITEM NO.	FROM	TO
14	PSI-B	J1-B
15	PSI-C	J1-C
16	PSI-A	J1-A

- NOTES:
- MARK ITEM 1 WITH PART NO. 1268427-01, REVISION AND TITLE (-5V POWER SUPPLY, PSI) AND MOUNT WHERE SHOWN.
  - MODIFY COVER PER VIEW A.
  - MODIFY POWER SUPPLY AS FOLLOWS:
    - REMOVE JUMPER BETWEEN TERMINALS A & B.
    - ADD TWO .156 DIA HOLES.
  - WIRE CONNECTOR J1 PER WIRE LIST. TWIST ALL THREE WIRES TOGETHER.
  - MARK ITEM 12 WITH J1 AND SHRINK IN PLACE.

PARTS LIST

ITEM NO.	PART NUMBER	DESCRIPTION	QUANTITY PER VERSION

NOTICE THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF A PROPRIETARY NATURE TO AMPEX CORPORATION. REPRODUCTION, TRANSMISSION OR USE FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF AMPEX CORPORATION IS PROHIBITED. PROVIDED HOWEVER, THAT IF THIS DOCUMENT IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DOCUMENT AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES. TOL: 2 PLC 3 PLC ANG ± .05 - - REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/> DO NOT SCALE THIS PRINT		SIGNATURE DRAWN BY <i>[Signature]</i> DATE 2-25-62 CHK BY DFT APPD ENGRG APPD <i>[Signature]</i> 4-21-62 AUTH BY		HEADQUARTERS AMPEX Redwood City, California 94063	
MATERIAL:		FINISH:		SIZE CODE IDENT NO. D 92739 1268427-01		SCALE 1/1 SHEET 1 OF 1	

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
D

**PL 1268428-01**

SHEET 1 OF 1

REV  
1

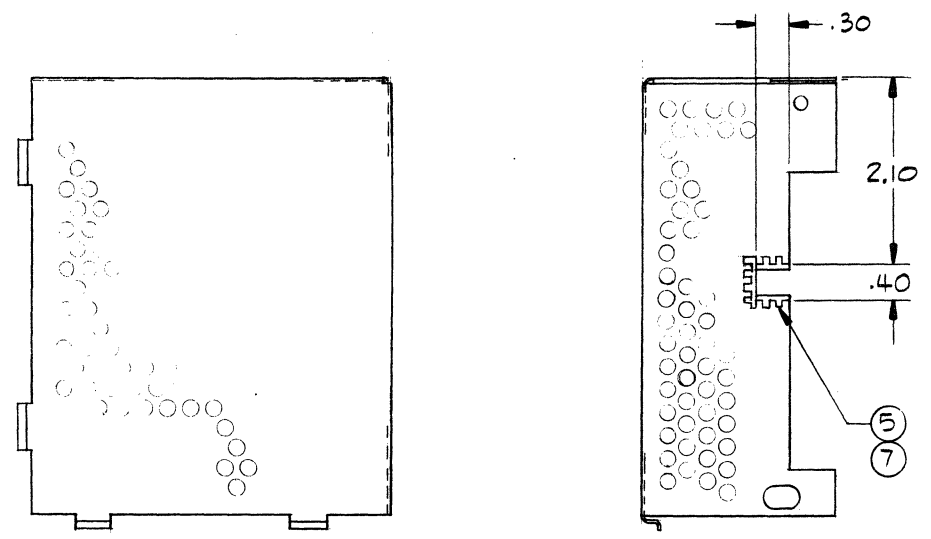
REVISIONS

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE
1	PRE-PROD RELEASE			DRAWN <i>De Sweet</i>	3/2/82
				CHECKED	
				ENGRG <i>J Barker</i>	4-21-82
				ENGRG	
				MANAGER	

CONTRACT NUMBER	MODEL AHBR1700	NEXT ASSEMBLY 1267977
DRAWING TITLE <b>+5V POWER SUPPLY PS2</b>		

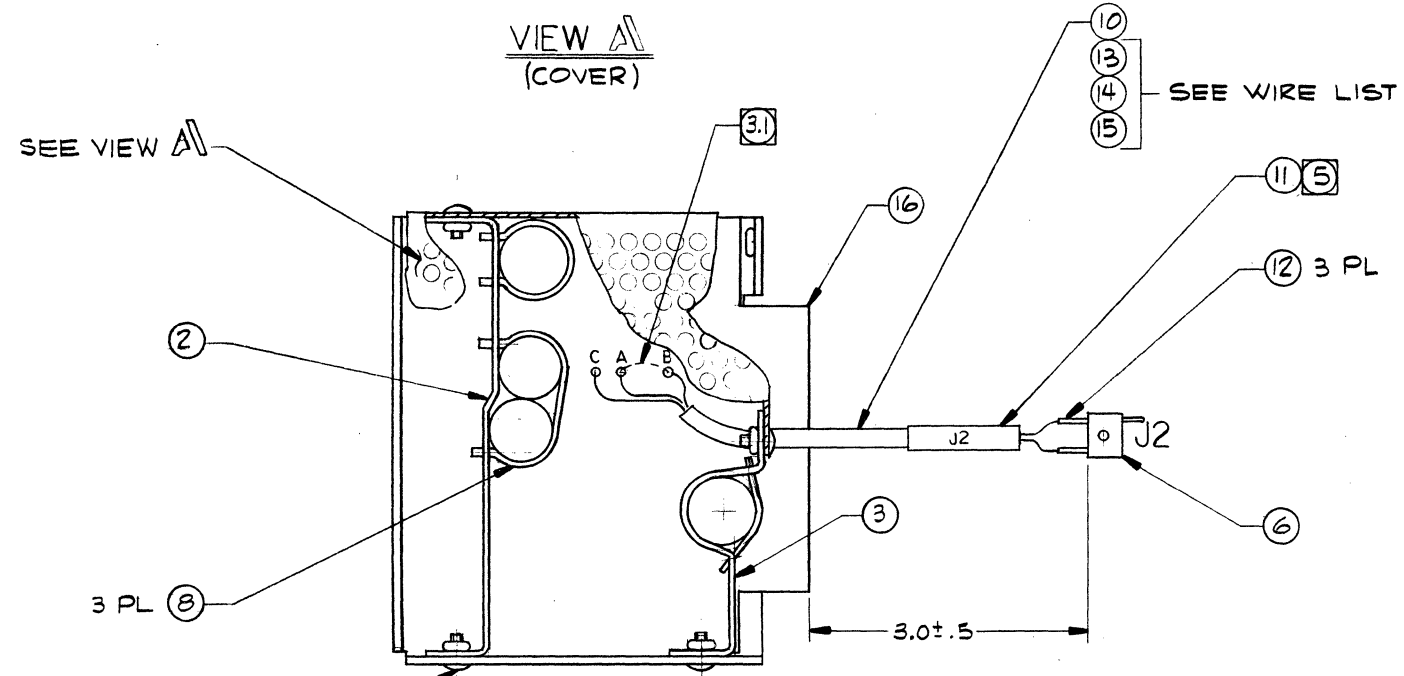
ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1251522	01	LABEL, IDENT		1								
2	B	1268547	01	BRACKET		1								
3	B	1268548	01	BRACKET		1								
4														
5		018-378		ADHESVIE, LOCTITE: 404		AR								
6		139-341		CONN, RECT, 3 SOC/1PIN	J2	1								
7		260-052		GROMMET, NYLON, CATERPILLAR		0.1'								
8		302-527		STRAP, CABLE, 3"		3								
9		471-606		SCR, 6-32 x .250 TRH		4								
10		600-009		SLVG, FLEX .208 ID, BLK		0.4'								
11		600-092		SLVG, SHRINK .250/.125 BLK		0.1'								
12		600-130		SLVG, SHRINK .093/.047 CLR		0.1'								
13		317-055		WIRE, STR, INS, 20 AWG, GRY		0.5'								
14		617-059		WIRE, STR, INS, 20 AWG, WHT/ORN		0.5'								
15		617-607		WIRE, STR, INS, 20 AWG, WHT		0.5'								
16		570-587		POWER SUPPLY, 5V, 10A		1								

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE-PROD RELEASE	2/27/52		



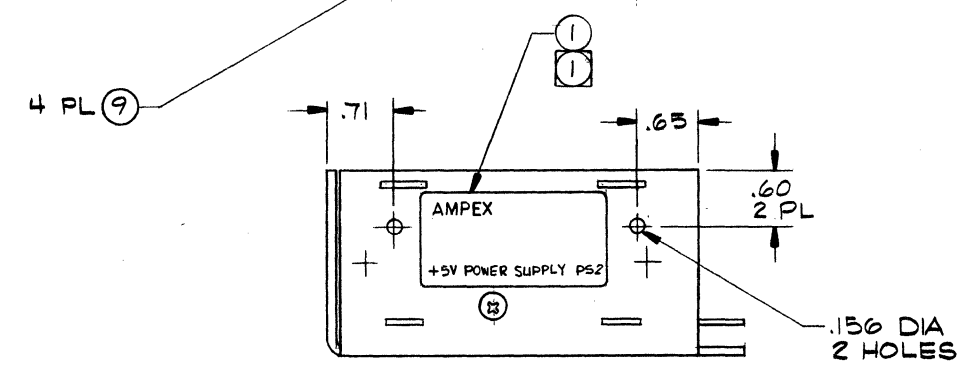
WIRE LIST

ITEM NO	FROM	TO
13	PS2-B	J2-B
14	PS2-C	J2-C
15	PS2-A	J2-A



NOTES:

- 1 MARK ITEM 1 WITH PART NO. 1268428-01, REVISION AND TITLE (+5V POWER SUPPLY PS2) AND MOUNT WHERE SHOWN.
2. MODIFY COVER PER VIEW A.
- 3.0 MODIFY POWER SUPPLY AS FOLLOWS:
  - 3.1 REMOVE JUMPER BETWEEN TERMINALS A & B.
  - 3.2 ADD TWO .156 DIA HOLES.
4. WIRE CONNECTOR J2 PER WIRE LIST. TWIST ALL THREE WIRES TOGETHER.
- 5 MARK ITEM 11 WITH J2 AND SHRINK IN PLACE.



☑ PARTS LIST

QUANTITY PER VERSION		ITEM NO	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF A PROPRIETARY NATURE TO AMPEX CORPORATION. REPRODUCTION, TRANSMISSION OR USE FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF AMPEX CORPORATION IS PROHIBITED. PROVIDED HOWEVER, THAT IF THIS DOCUMENT IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DOCUMENT AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DATE
1267977 AHBR1700		TOL	2 PLC 3 PLC	ANG
NEXT ASSY USED ON		±	.05	
APPLICATION		REMOVE BURRS AND SHARP EDGES		ENG APPD
		YES <input type="checkbox"/> NO <input type="checkbox"/>		2/27/52
		DO NOT SCALE THIS PRINT		AUTH BY
		MATERIAL:		
		FINISH:		
		SIGNATURE		DATE
		DRAWN BY		2/27/52
		CHK BY		
		DFT APPD		
		ENGRG APPD		
		AUTH BY		
		AMPEX		HEADQUARTERS Redwood City, California 94063
		+5V POWER SUPPLY PS2		
		SIZE	CODE IDENT NO.	
		D	92739	1268428-01
		SCALE	1 / 1	SHEET OF





# POWER/MATE CORP

514 S. River Street, Hackensack, NJ 07601  
Phone: (201) 440-3100 TWX: (701) 990-5023

## POWER SUPPLY APPLICATION AND MAINTENANCE DATA ES-F Series

### SPECIFICATIONS

**AC Input:** 85-to-132 or 170-to-264VAC, at 47-440Hz.

**DC Output:** See voltage and current rating chart.

**DC Output Adjustment:**  $\pm 10$  percent.

**Regulation:** Line,  $\pm 0.1$  percent, +1mV within the specified AC limits. Load,  $\pm 0.1$  percent, +1mV from no-load to full-load conditions.

**Noise and Ripple:** 50mV peak-to-peak maximum, 20Hz to 20MHz.

**Efficiency:** 70-to-80 percent.

**Transient Response:** Recovery to 1.0 percent in 300 microseconds for a 50-to-100 percent load change.

**Remote or Local Sensing:** A provision is included for improved overall regulation.

**Overload and Short-Circuit Protection:** Solid-state short-circuit protection is a standard feature. An automatic current-limiting circuit limits the output current which provides protection for the load and supply. Units cannot be damaged by prolonged short circuits.

**Overshoot:** No voltage spikes on turn-on, turn-off, or during power failure.

**Logic Inhibit Function (optional):** A 4.5.-to-5.5. VDC command signal, referenced to the negative sense terminal, will inhibit the DC output. It may be used for control, sequencing, or maintenance.

**Over-Voltage Protection:** Built-in, fixed.

**Energy-Storage Time:** The output voltage will remain within the regulation range for a minimum of 16 ms after the loss of AC power (from nominal line voltage).

**Polarity:** Positive, negative, or floating up to 300VDC.

**Soft Start:** Provides input current limiting at turn on.

**Parallel Operation:** Units may be paralleled for increased output current. Consult the factory for the proper procedures.

**Long-Term Stability:** 0.1 percent for 8 hours after a 20 minute warm up.

**Ambient Operating Temperature:** Continuous duty from 0 to +71°C, full rating from 0 to +50°C. Derate linearly to 60 percent of full

rating at +71°C.

**Storage Temperature:** -55°C to +85°C.

**Quality Control:** In accordance with MIL-I-45208.

### OPERATING INSTRUCTIONS

#### AC INPUT

Normally, the unit is shipped for operation at an input of 115VAC. If a 230VAC input is desired, the selection is made on the PC board with a plug-in jumper. The jumper between the three input voltage-selection terminals A, B, and C (on the interior of the board behind the AC terminals) may be removed from between terminals A and B (115VAC) and placed across terminals A and C (230VAC) as shown in Fig. 1.

#### SENSING TERMINALS

For local sensing the supply can be used as delivered. For remote sensing, connect the load to the DC output terminals. Then wire the (+) and (-) sensing terminals respectively across the load. This permits sensing directly at the load. See Fig. 2.

#### VOLTAGE AND CURRENT ADJUSTMENTS

The voltage adjustment (VR2) is a precision multi-turn potentiometer which is accessible from the terminal end of the unit. The current adjustment potentiometer is factory set and no further adjustment is required.

#### COVERS

Covers for the ES units are available as options.

Power/Mate power supplies are designed for convection cooling, therefore, it's important not to impede the air flow across or through the power supply's case. Impeding the flow of air through your power supply may shorten its life. If there is doubt about the convection air flow through your Power/Mate supply's heat generating components, it's recommended that you use a small fan to insure satisfactory air flow.

**CAUTION: High-voltage circuits present an electrical shock hazard. Do not handle the unit while it is operating.**

### ES-F Series

MODEL	VOLTAGE	CURRENT
ES-5F	5 VOLTS	20 AMPS
ES-12F	12 VOLTS	10 AMPS
ES-15F	15 VOLTS	8 AMPS
ES-24F	24 VOLTS	5 AMPS
ES-28F	28 VOLTS	4 AMPS
ES-36F	36 VOLTS	3 AMPS

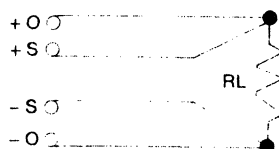


FIG. 2

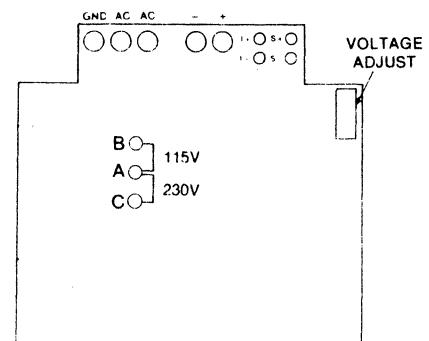
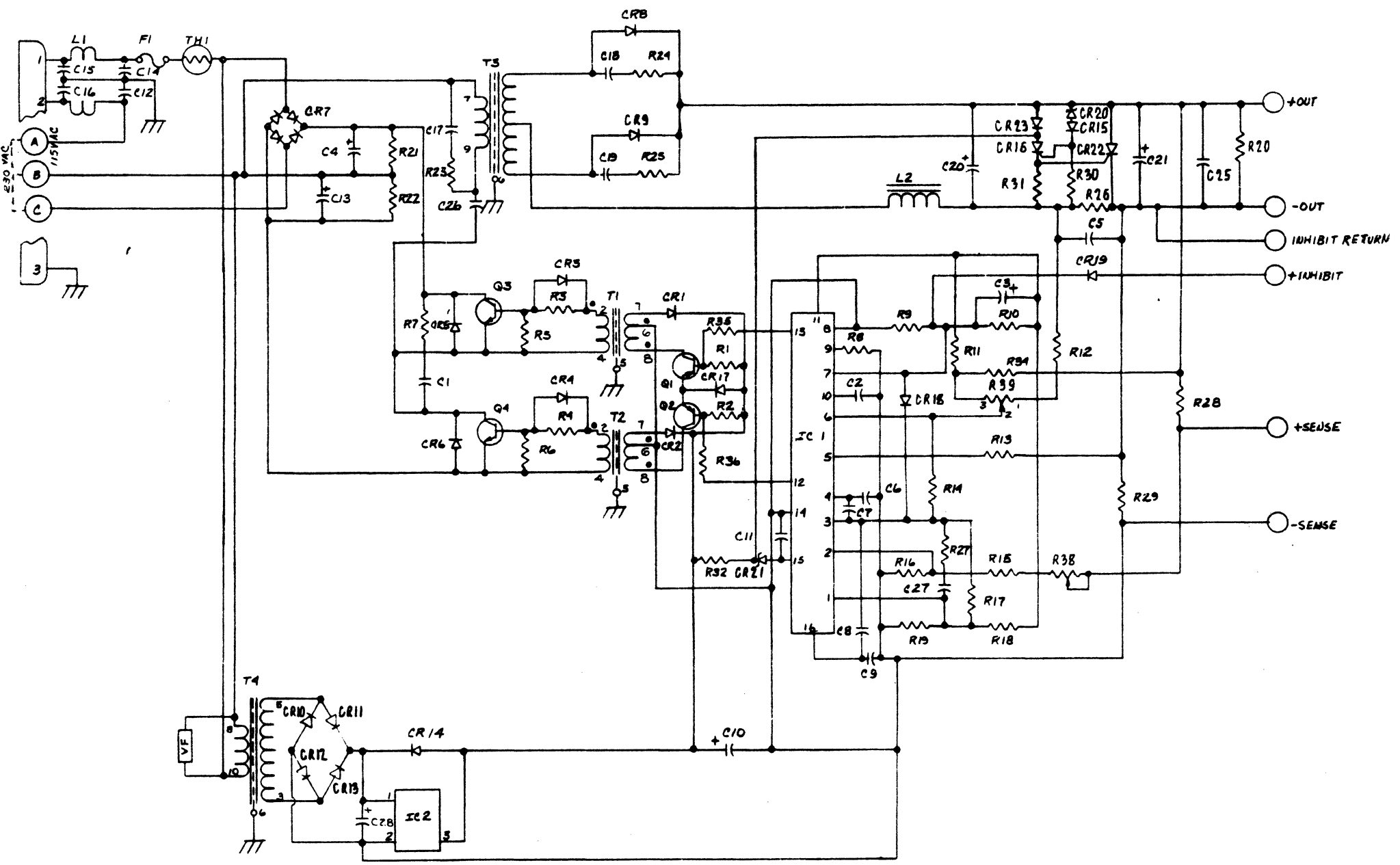


FIG. 1





DISTR CODE:

<b>PARTS LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b>		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE <b>D</b>	<b>PL 1268106-01</b>			REV <b>1</b>		
REVISIONS											SHEET 1 OF 1				
LTR	DESCRIPTION		APPD	DATE	SIGNATURES		DATE	CONTRACT NUMBER		MODEL	NEXT ASSEMBLY				
<b>1</b>	<b>PRE-PROD RLSE</b>				DRAWN <i>AmpeX</i>		<i>12-9-81</i>	---		<b>HBR</b>	<b>1267955</b>				
					CHECKED			DRAWING TITLE <b>CABLE ASSEMBLY, OUTPUT 28 CHANNEL, SERIAL DATA CONVERTER BAY</b>							
					ENGRG										
					ENGRG										
					MANAGER										
ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION		REFERENCE		QUANTITY REQUIRED PER ASSEMBLY							
								-01	-02	-03	-04	-05	-06	-07	-08
<b>1</b>		<b>140-174</b>		<b>CONNECTOR, RIGHT ANGLE PLUG</b>				<b>14</b>							
<b>2</b>		<b>143-824</b>		<b>CONNECTOR, BULKHEAD, MIN, COAX</b>				<b>14</b>							
<b>3</b>															
<b>4</b>		<b>302-335</b>		<b>STRAP, CABLE, 4.00 LG</b>				<b>4</b>							
<b>5</b>															
<b>6</b>		<b>600-057</b>		<b>SLVG, .50 I.D., FLEX</b>	<b>BLK</b>			<b>1.7'</b>							
<b>7</b>		<b>600-093</b>		<b>SLVG, .38 I.D., SHK,</b>	<b>BLK</b>			<b>0.1'</b>							
<b>8</b>		<b>600-097</b>		<b>SLVG, .75 I.D., SHK,</b>	<b>BLK</b>			<b>0.5'</b>							
<b>9</b>		<b>600-153</b>		<b>SLVG, .12 I.D., SHK,</b>	<b>BLK</b>			<b>1.8'</b>							
<b>10</b>															
<b>11</b>		<b>613-989</b>		<b>CABLE, COAX, 75Ω</b>				<b>60.0'</b>							

DIST CODE:

<b>WIRE LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b>		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE D	<b>WL 1268106-01</b>		REV <b>1</b>
REVISIONS												
LTR	DESCRIPTION	APPD	DATE	SIGNATURES		DATE	CONTRACT NUMBER		MODEL	NEXT ASSEMBLY		
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>		12/81			HBR	1267955		
				CHECKED			DRAWING TITLE		CABLE ASSEMBLY, OUTPUT 28 CHANNEL, SERIAL DATA CONVERTER BAY			
				ENGRG								
				ENGRG								
				MANAGER								

WIRE			FROM			TO			SM # 1268106-01	BM ITEM NO.		
WIRE NO.	GAUGE/DESC	LGTH	REF DESIG TERMINAL	PROCESS	STA	STA	PROCESS	REF DESIG TERMINAL	REMARKS	FROM	WIRE	TO
1	CTR	43.4	P1-CTR	SOLDER			SOLDER	J1-CTR	DATA 4	1	11	2
	SHLD		SHELL	CRIMP			CRIMP	SHELL		↑	↑	↑
2	CTR	43.2	P2-CTR	SOLDER			SOLDER	J2-CTR	DATA 4			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
3	CTR	43.0	P3-CTR	SOLDER			SOLDER	J3-CTR	DATA 3			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
4	CTR	42.7	P4-CTR	SOLDER			SOLDER	J4-CTR	DATA 3			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
5	CTR	42.5	P5-CTR	SOLDER			SOLDER	J5-CTR	DATA 2			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
6	CTR	42.3	P6-CTR	SOLDER			SOLDER	J6-CTR	DATA 2			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
7	CTR	42.1	P7-CTR	SOLDER			SOLDER	J7-CTR	DATA 1			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
8	CTR	41.9	P8-CTR	SOLDER			SOLDER	J8-CTR	DATA 1			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
9	CTR	51.4	P9-CTR	SOLDER			SOLDER	J9-CTR	TEST DATA			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
10	CTR	51.2	P10-CTR	SOLDER			SOLDER	J10-CTR	TEST DATA			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
11	CTR	54.2	P11-CTR	SOLDER			SOLDER	J11-CTR	TEST CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
12	CTR	54.0	P12-CTR	SOLDER			SOLDER	J12-CTR	TEST CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
13	CTR	52.2	P13-CTR	SOLDER			SOLDER	J13-CTR	SER CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
14	CTR	52.0	P14-CTR	SOLDER			SOLDER	J14-CTR	SER CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL		↓	↓	↓
										1	11	2

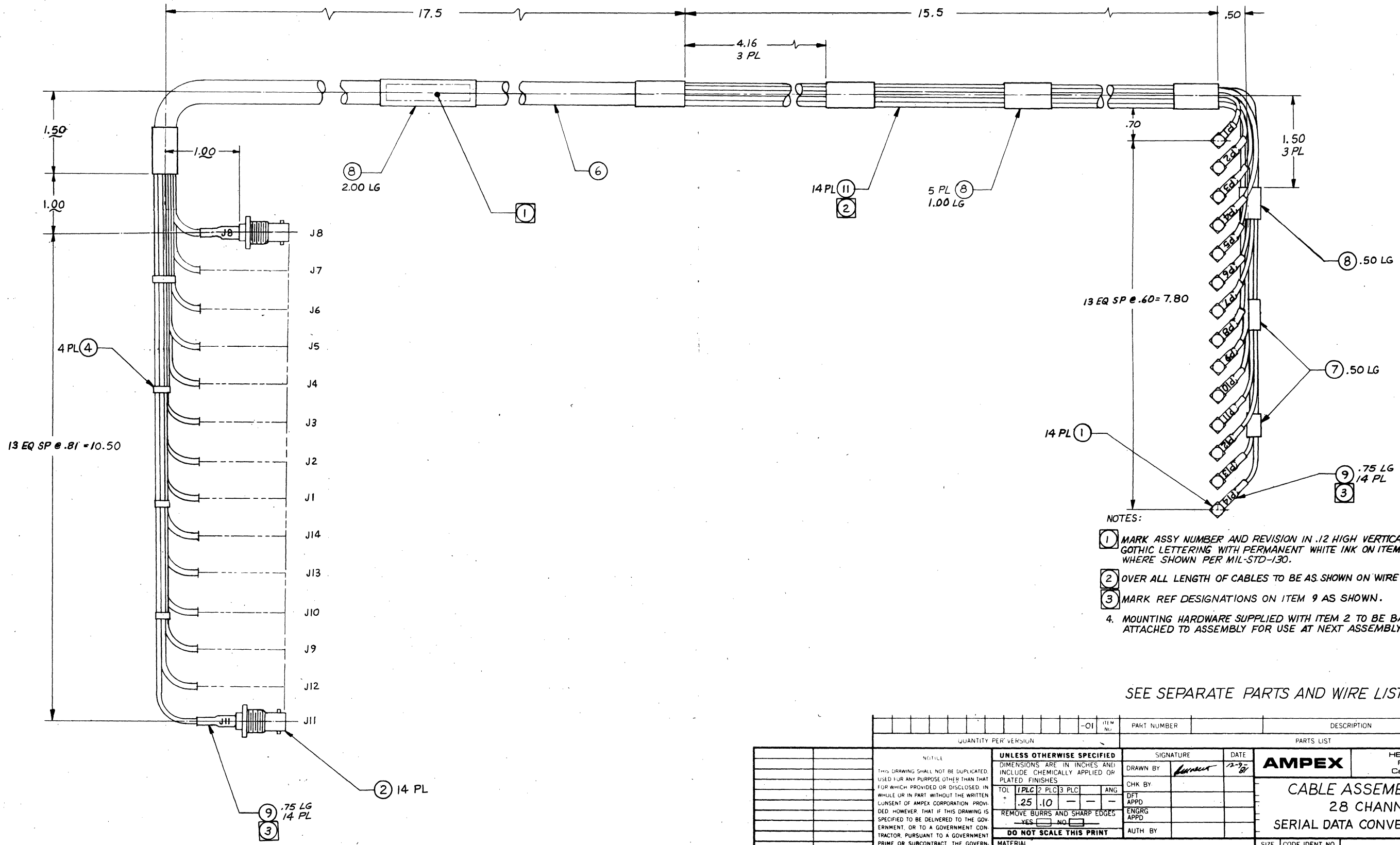
REVISIONS				SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG	
1	-	PRE-PRODUCTION RELEASE	<i>[Signature]</i>			

D

C

B

A



- NOTES:
- 1 MARK ASSY NUMBER AND REVISION IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK ON ITEM 8 WHERE SHOWN PER MIL-STD-130. ASSY 1268106-01  
1
  - 2 OVER ALL LENGTH OF CABLES TO BE AS SHOWN ON WIRE LIST ±.25 IN.
  - 3 MARK REF DESIGNATIONS ON ITEM 9 AS SHOWN.
  - 4. MOUNTING HARDWARE SUPPLIED WITH ITEM 2 TO BE BAGGED AND ATTACHED TO ASSEMBLY FOR USE AT NEXT ASSEMBLY.

SEE SEPARATE PARTS AND WIRE LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION. PROVIDED HOWEVER THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		DATE
TOL		PLC 2	PLC 3	PLC
+ .25 .10 - - -		ANG		
REMOVE BURRS AND SHARP EDGES		YES <input type="checkbox"/> NO <input type="checkbox"/>		CHK BY
DO NOT SCALE THIS PRINT		MATERIAL		DFT APPD
FINISH:		AUTH BY		ENGRG APPD
1267955 HBR		APPLICATION		
NEXT ASSY USED ON		SCALE 1/1		
		SIZE		CODE IDENT NO.
		D 92739		1268106-01
		SHEET		OF

PARTS LIST

AMPEX

DATA SYSTEMS DIVISION

401 BROADWAY REDWOOD CITY, CALIF. 94063

CODE IDENT 92739

ASSY DWG. SIZE D

PL 1268107-01

REV 1

REVISIONS

SHEET 1 OF 1

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>	12-87		HBR	1267955
				CHECKED		DRAWING TITLE		
				ENGRG		CABLE ASSEMBLY, INPUT		
				ENGRG		28 CHANNEL, SERIAL DATA		
				MANAGER		CONVERTER BAY		

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1		140-174		CONN, RIGHT ANGLE PLUG		16								
2		143-824		CONN, BULKHEAD, MINITURE COAX		16								
3														
4		302-335		STRAP, CABLE, 4.00 LG		4								
5														
6		600-057		SLVG, .50 I.D., FLEX, BLK		1.7'								
7		600-093		SLVG, .38 I.D., SHK, BLK		0.1'								
8		600-097		SLVG, .75 I.D., SHK, BLK		0.5'								
9		600-153		SLVG, .12 I.D., SHK, BLK		2.0'								
10														
11		613-989		CABLE, COAX, 75Ω		66.0'								

DIST CODE:

<b>WIRE LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b>		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE <b>D</b>	<b>WL 1268107-01</b>		REV <b>1</b>
REVISIONS												
LTR	DESCRIPTION	APPD	DATE	SIGNATURES		DATE	CONTRACT NUMBER		MODEL	NEXT ASSEMBLY		
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>		12-8-81			HBR	1267955		
				CHECKED					DRAWING TITLE			
				ENGRG					CABLE ASSEMBLY, INPUT 28 CHANNEL, SERIAL DATA CONVERTER BAY			
				ENGRG								
				MANAGER								

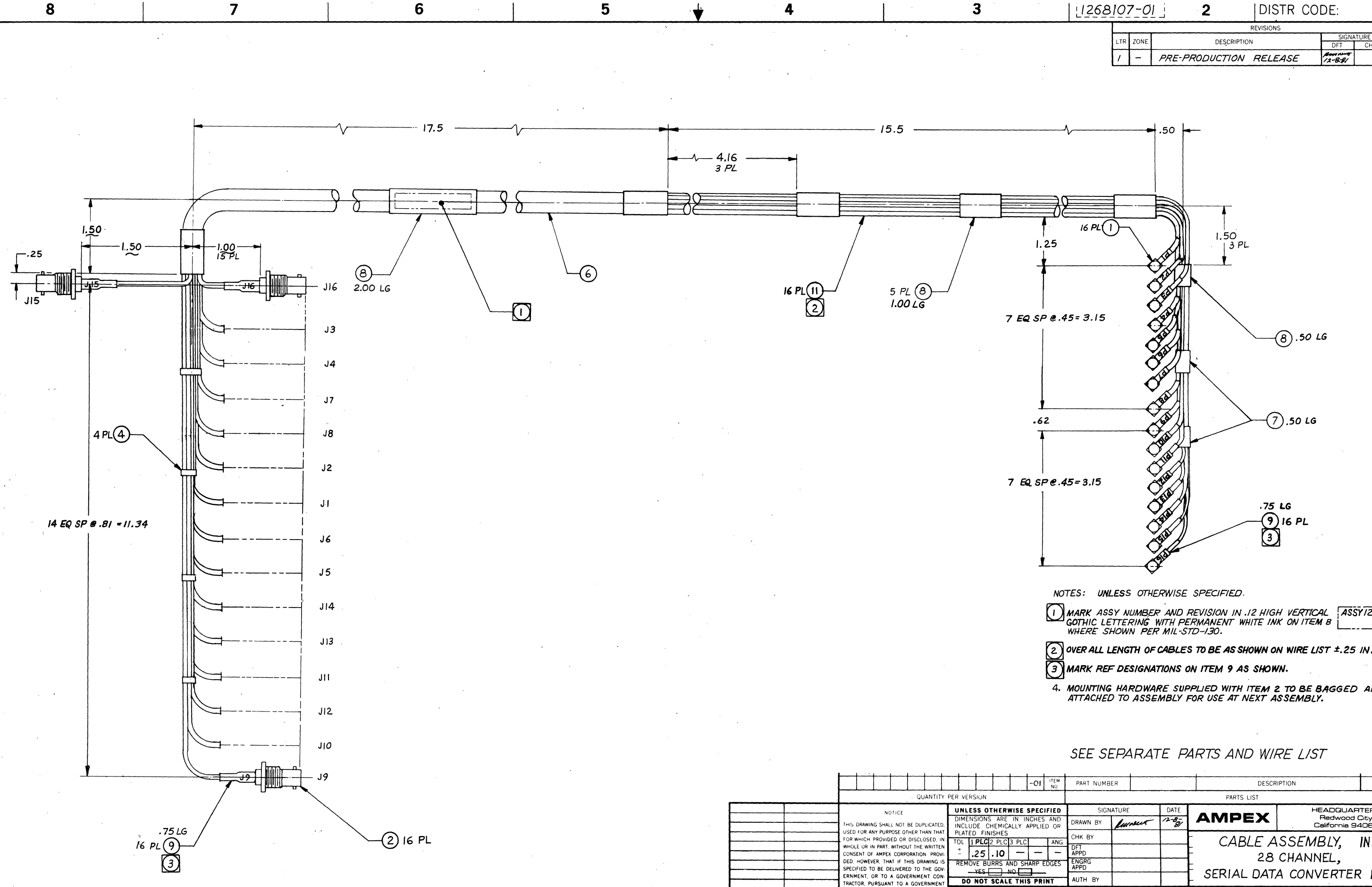
WIRE			FROM			TO			BM # 1268107-01	BM ITEM NO.		
WIRE NO.	GAUGE/DESC	LGTH	REF DESIG TERMINAL	PROCESS	STA	STA	PROCESS	REF DESIG TERMINAL	REMARKS	FROM	WIRE	TO
1	CTR	42.4	P1-CTR	SOLDER			SOLDER	J1-CTR	DATA 3			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
2	CTR	42.0	P2-CTR	SOLDER			SOLDER	J2-CTR	DATA 3			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
3	CTR	39.2	P3-CTR	SOLDER			SOLDER	J3-CTR	DATA 1			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
4	CTR	40.5	P4-CTR	SOLDER			SOLDER	J4-CTR	DATA 1			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
5	CTR	45.8	P5-CTR	SOLDER			SOLDER	J5-CTR	DATA 4			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
6	CTR	45.4	P6-CTR	SOLDER			SOLDER	J6-CTR	DATA 4			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
7	CTR	42.6	P7-CTR	SOLDER			SOLDER	J7-CTR	DATA 2			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
8	CTR	43.9	P8-CTR	SOLDER			SOLDER	J8-CTR	DATA 2			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
9	CTR	52.6	P9-CTR	SOLDER			SOLDER	J9-CTR	TEST CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
10	CTR	52.3	P10-CTR	SOLDER			SOLDER	J10-CTR	TEST CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
11	CTR	51.1	P11-CTR	SOLDER			SOLDER	J11-CTR	TEST DATA			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
12	CTR	52.4	P12-CTR	SOLDER			SOLDER	J12-CTR	TEST DATA			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
13	CTR	51.2	P13-CTR	SOLDER			SOLDER	J13-CTR	SER CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
14	CTR	50.8	P14-CTR	SOLDER			SOLDER	J14-CTR	SER CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
15	CTR	44.5	P15-CTR	SOLDER			SOLDER	J15-CTR	XTAL CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL				
16	CTR	44.5	P16-CTR	SOLDER			SOLDER	J16-CTR	XTAL CLK			
	SHLD		SHELL	CRIMP			CRIMP	SHELL		1	11	2



1268107-01

DISTR CODE:

REVISIONS		SIGNATURE AND DATE			
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE-PRODUCTION RELEASE	12-8-81		



- NOTES: UNLESS OTHERWISE SPECIFIED.
- 1 MARK ASSY NUMBER AND REVISION IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK ON ITEM 8 WHERE SHOWN PER MIL-STD-130.
  - 2 OVER ALL LENGTH OF CABLES TO BE AS SHOWN ON WIRE LIST ±.25 IN.
  - 3 MARK REF DESIGNATIONS ON ITEM 9 AS SHOWN.
  - 4. MOUNTING HARDWARE SUPPLIED WITH ITEM 2 TO BE BAGGED AND ATTACHED TO ASSEMBLY FOR USE AT NEXT ASSEMBLY.

SEE SEPARATE PARTS AND WIRE LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
		-01		

NOTICE THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES TOL: 1 PLC 2 PLC 3 PLC ANG .25 .10 - - - REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/>	SIGNATURE DRAWN BY: <i>[Signature]</i> DATE: 12-8-81 CHK BY: DFT APPD: ENGRG APPD: AUTH BY:	HEADQUARTERS Redwood City, California 94063 <b>AMPEX</b>
	MATERIAL:	FINISH:	CABLE ASSEMBLY, INPUT 28 CHANNEL, SERIAL DATA CONVERTER BAY
	1267955 HBR NEXT ASSY USED ON APPLICATION	DO NOT SCALE THIS PRINT	SIZE CODE IDENT NO. <b>D 92739 1268107-01</b>
			SCALE 1/1 SHEET 1 OF 1

4

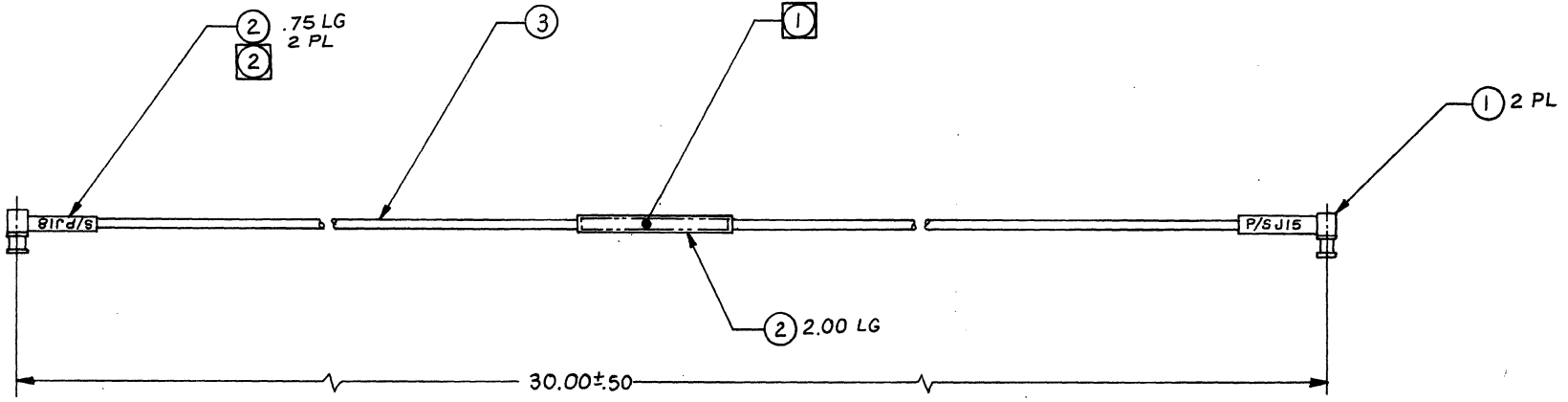
3

2

1268115-01

DISTR CODE:

REVISIONS					
LTR	ZONE	DESCRIPTION		SIGNATURE AND DATE	
		DFT	CHK	ENGRG	
1	-	PRE-PRODUCTION RELEASE		<i>[Signature]</i>	12-7-81
				<i>[Signature]</i>	6/29/82



NOTES: UNLESS OTHERWISE SPECIFIED.

- 1 MARK ASSY NO. AND REV LETTER ON ITEM 2. ASSY 1268115-01 IN .12 HIGH GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130.
- 2 MARK REF DES 'S/P J18' AND 'P/S J15' ON ITEM 2 AS SHOWN IN WHITE INK PER MIL-STD-130.

2.6	3	613-989	---	CABLE, COAX, 75 OHM
0.4	2	600-253	---	SLVG, .12 I.D., SHK, BLACK
2	1	140-174	---	CONN, PLUG, RIGHT ANGLE

QUANTITY PER VERSION		PARTS LIST	
ITEM NO.	PART NUMBER	DESCRIPTION	
-01			

<p>NOTICE</p> <p>THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.</p>	<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.</p> <p>TOL</p> <table border="1"> <tr> <td>+</td> <td>2 PLC</td> <td>3 PLC</td> <td>ANG</td> </tr> <tr> <td>-</td> <td>.10</td> <td></td> <td></td> </tr> </table> <p>REMOVE BURRS AND SHARP EDGES</p> <p>YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>DO NOT SCALE THIS PRINT</p>	+	2 PLC	3 PLC	ANG	-	.10			<p>SIGNATURE</p> <p>DATE</p> <p>DRAWN BY <i>[Signature]</i> 12-7-81</p> <p>CHK BY <i>[Signature]</i> 6/29/82</p> <p>DFT APPD</p> <p>ENGRG APPD</p> <p>AUTH BY</p>	<p>HEADQUARTERS</p> <p>Redwood City, California 94063</p> <p><b>AMPEX</b></p> <p>CABLE ASSEMBLY, INTERCONNECT, HBR SERIAL DATA CONVERTER BAY</p>
	+	2 PLC	3 PLC	ANG							
	-	.10									
	<p>MATERIAL:</p> <p>FINISH:</p>	<p>SIZE</p> <p>CODE IDENT NO.</p> <p><b>C 92739</b> 1268115-01</p>	<p>SCALE 1/1</p> <p>SHEET 1 OF 1</p>								
<p>APPLICATION</p> <p>1267955 HBR</p> <p>NEXT ASSY USED ON</p>											

4

3

2

1

1268115-01

DISTR CODE:

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
**D**

**PL 1268116-01**

REV  
**1**

REVISIONS

SHEET **1** OF **1**

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
1	PRE-PROD RLSE			DRAWN <i>R. Moore</i>	12/8/70	—	HBR	1267955
				CHECKED		DRAWING TITLE		
				ENGRG		<b>CABLE ASSEMBLY, 28 CHAN, DIGITAL PROCESS BAY OUTPUT TO SERIAL DATA CONVERTER BAY</b>		
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1268125	01	STRAIN RELIEF/PULL TAB		1								
2		177-177		CONN, HOUSING, 60 POS	P1	1								
3		139-822		CONN, MIN, COAX, BNC	P2-P29	28								
4		177-147		CONTACT, CONN, CRIMP, 20-24 AWG	(P1 REF)	56								
5	C	1268429	01	INSTRUCTION SHEET, COAX TERM		REF								
6		018-456		ADHESIVE, EPOXY		AR								
7														
8		302-587		STRAP, CABLE, 4.0 LG		1								
9														
10		600-057		SLVG, .50 I.D., FLEX, BLK		9.2'								
11		600-153		SLVG, .12 I.D., SHK, BLK		4.7'								
12		600-097		SLVG, .75 I.D., SHK, BLK		0.5'								
13														
14		613-989		WIRE, COAX, 75Ω		300'								
15		611-208		WIRE, 24 GA, BLK		2.6'								

DIST CODE:

WIRE LIST		AMPEX		DATA SYSTEMS DIVISION		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT 92739		ASSY DWG. SIZE D		WL 1268116-01		REV 1	
REVISIONS												SHEET 1 OF 2			
LTR	DESCRIPTION	APPD	DATE	SIGNATURES		DATE	CONTRACT NUMBER		MODEL	NEXT ASSEMBLY					
1	PRE-PROD RLSE			DRAWN <i>[Signature]</i>		7/7/87			HBR	1267955					
				CHECKED			DRAWING TITLE		CABLE ASSEMBLY, 28 CHAN DIGITAL PROCESS BAY OUTPUT TO SERIAL DATA CONVERTER BAY						
				ENGRG											
				ENGRG											
				MANAGER											
WIRE			FROM			TO			BM # 1268116-01			BM ITEM NO.			
WIRE NO.	GUAGE/DESC	LGTH	REF DESIG TERMINAL	PROCESS	STA	STA	PROCESS	REF DESIG TERMINAL	REMARKS	FROM	WIRE	TO			
1	CTR		P1- 1	CRIMP			SOLDER	P2-CTR	PARA 1 OUTPUT	2	14	4			
	SHLD		31				M. ASSY	SHELL							
2			2					P3-	PARA 2						
			32												
3			3					P4-	PARA 3						
			33												
4			4					P5-	PARA 4						
			34												
5			5					P6-	PARA 5						
			35												
6			6					P7-	PARA 6						
			36												
7			7					P8-	PARA 7						
			37												
8			8					P9-	PARA 8						
			38												
9			9					P10-	PARA 12						
			39												
10			10					P11-	PARA 11						
			40												
11			11					P12-	PARA 10						
			41												
12			12					P13-	PARA 9						
			42												
13			13					P14-	PARA 13						
			43												
14			14					P15-	PARA 14						
			44												
15			15					P16-	PARA 15						
			45												
16			16					P17-	PARA 16						
			46												
17			17					P18-	PARA 20						
			47												
18			18					P19-	PARA 19						
			48												
19			19					P20-	PARA 18						
			49												
20			20					P21-	PARA 17						
			50												
21			21					P22-	PARA 21						
			51												
22			22					P23-	PARA 22						
			52												
23			23					P24-	PARA 23						
			53												
24			24					P25-	PARA 24						
			54												
25	CTR		P1- 25				SOLDER	P26-CTR	PARA 25 OUTPUT	2	14	4			
	SHLD		55	CRIMP			M. ASSY	SHELL							

DIST CODE:

**WIRE LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
**D**

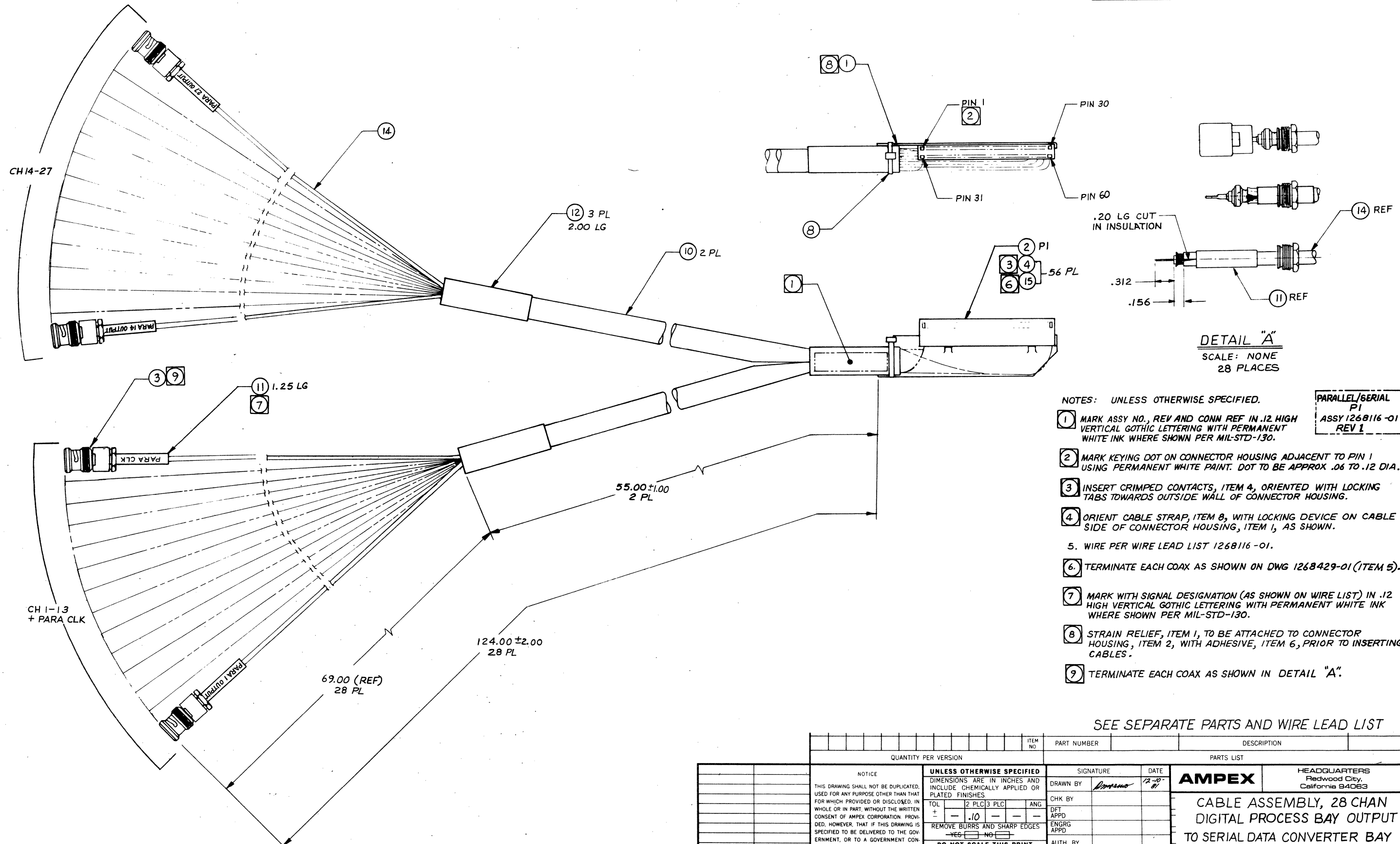
**WL 1268116-01**

SHEET **2** OF **2**

REV **1**

WIRE			FROM				TO				BM # 1268116-01		BM ITEM NO.		
WIRE NO.	GAUGE/DESC	LGTH	REF DESIG TERMINAL	PROCESS	STA	STA	PROCESS	REF DESIG TERMINAL	REMARKS	FROM	WIRE	TO			
26	CTR		P1-26	CRIMP			SOLDER	P27-CTR	PARA 26 OUTPUT	2	14	4			
	SHLD		56				M. ASSY	SHELL							
27	CTR		27				SOLDER	P28-CTR	PARA 27						
	SHLD		57				M. ASSY	SHELL							
28	CTR		29				SOLDER	P29-CTR	PARA CLK OUTPUT						
	SHLD		P1-59	CRIMP			M. ASSY	SHELL		2	14	4			

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK
1	-	PRE-PRODUCTION RELEASE	12-10-81	



**DETAIL "A"**  
SCALE: NONE  
28 PLACES

- NOTES: UNLESS OTHERWISE SPECIFIED.
- MARK ASSY NO., REV AND CONN REF IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130.
  - MARK KEYING DOT ON CONNECTOR HOUSING ADJACENT TO PIN 1 USING PERMANENT WHITE PAINT. DOT TO BE APPROX .06 TO .12 DIA.
  - INSERT CRIMPED CONTACTS, ITEM 4, ORIENTED WITH LOCKING TABS TOWARDS OUTSIDE WALL OF CONNECTOR HOUSING.
  - ORIENT CABLE STRAP, ITEM 8, WITH LOCKING DEVICE ON CABLE SIDE OF CONNECTOR HOUSING, ITEM 1, AS SHOWN.
  - WIRE PER WIRE LEAD LIST 1268116-01.
  - TERMINATE EACH COAX AS SHOWN ON DWG 1268429-01 (ITEM 5).
  - MARK WITH SIGNAL DESIGNATION (AS SHOWN ON WIRE LIST) IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130.
  - STRAIN RELIEF, ITEM 1, TO BE ATTACHED TO CONNECTOR HOUSING, ITEM 2, WITH ADHESIVE, ITEM 6, PRIOR TO INSERTING CABLES.
  - TERMINATE EACH COAX AS SHOWN IN DETAIL "A".

PARALLEL/SERIAL  
P1  
ASSY 1268116-01  
REV 1

SEE SEPARATE PARTS AND WIRE LEAD LIST

QUANTITY PER VERSION		ITEM NO	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		SIGNATURE		DATE
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED. IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DRAWN BY <i>Domano</i>		12-10-81
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		CHK BY		
TOL ± .10		DFT APPD		
REMOVE BURRS AND SHARP EDGES		ENGRG APPD		
DO NOT SCALE THIS PRINT		AUTH BY		
MATERIAL:		HEADQUARTERS		
FINISH:		Redwood City,		
		California 94063		
1267955 HBR		CABLE ASSEMBLY, 28 CHAN		
NEXT ASSY USED ON		DIGITAL PROCESS BAY OUTPUT		
APPLICATION		TO SERIAL DATA CONVERTER BAY		
		SIZE CODE IDENT NO.		
		D 92739 1268116-01		
		SCALE 1/1		SHEET 1 OF 1

DISTR CODE:

<b>PARTS LIST</b>	<b>AMPEX</b>	<b>DATA SYSTEMS DIVISION</b> 401 BROADWAY REDWOOD CITY, CALIF. 94063	CODE IDENT <b>92739</b> ASSY DWG. SIZE <b>D</b>	<b>PL 1268118-01</b> SHEET <b>1</b> OF <b>1</b>	REV <b>1</b>
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REVISIONS				SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
LTR	DESCRIPTION	APPD	DATE				<b>HBR</b>	<b>1267955</b>
<b>1</b>	<b>PRE-PROD RLSE</b>			DRAWN <i>Rmoene</i>	<b>12-70</b>			
				CHECKED		DRAWING TITLE <b>CABLE ASSEMBLY, 28 CHAN.          SERIAL DATA CONVERTER BAY TO          DIGITAL PROCESS BAY INPUT</b>		
				ENGRG				
				ENGRG				
				MANAGER				

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	C	1268125	01	STRAIN RELIEF/PULL TAB		1								
2		177-177		CONN, HOUSING, 60 POS	P1	1								
3		139-822		CONN, MIN, COAX, BNC	P2-P30	29								
4		177-147		CONTACT, CONN, CRIMP, 20-24 AWG	(P1 REF)	58								
5	C	1268429	01	INSTRUCTION SHT, COAX TERM		REF								
6		018-456		ADHESIVE, EPOXY		AR								
7														
8		302-587		STRAP, CABLE, 4.0 LG		1								
9														
10		600-057		SLVG, .50 I.D., FLEX, BLK		9.2'								
11		600-153		SLVG, .12 I.D., SHK, BLK		4.9'								
12		600-097		SLVG, .75 I.D., SHK, BLK		0.5'								
13														
14		613-989		WIRE, COAX, 75Ω		330'								
15		611-208		WIRE, 24 GA, BLK		2.6'								
16														
17		139-747		CONN, BODY, RECTANGULAR, 1 POS	P31-P34	4								
18		167-227		CONN, CONTACT, CRIMP, 26-22 AWG		4								

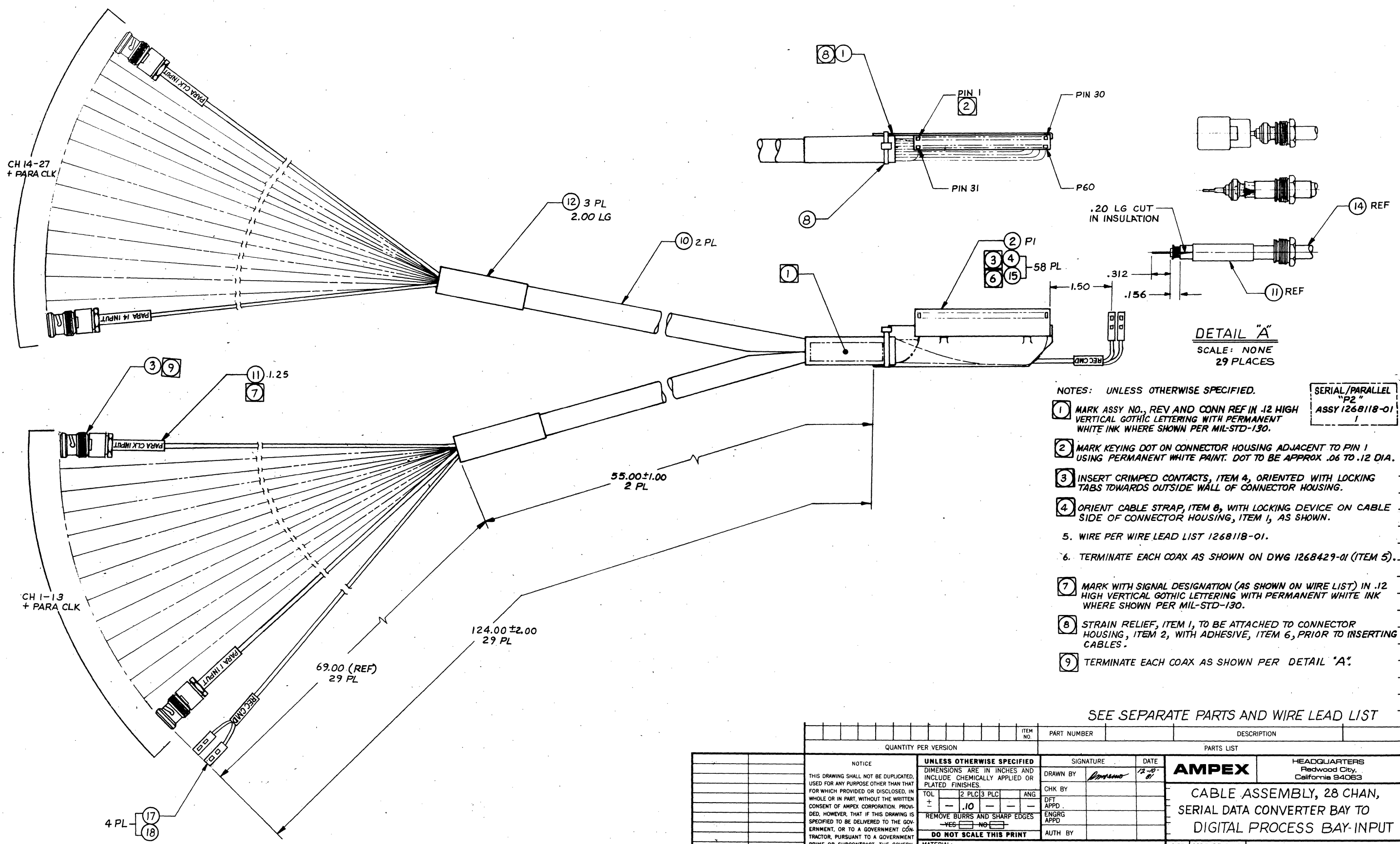
DIST CODE:

WIRE LIST		AMPEX		DATA SYSTEMS DIVISION		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT 92739		ASSY DWG. SIZE D		WL 1268118-01		REV 1	
REVISIONS				SIGNATURES		DATE		CONTRACT NUMBER		MODEL		NEXT ASSEMBLY			
LTR	DESCRIPTION	APPD	DATE	DRAWN		DATE				HBR		1267955			
1	PRE-PROD RLSE			<i>[Signature]</i>		7-2-57									
				CHECKED											
				ENGRG											
				ENGRG											
				MANAGER											
DRAWING TITLE												CABLE ASSEMBLY, 28 CHAN SERIAL DATA CONVERTER BAY DIGITAL PROCESS BAY INPUT			
WIRE			FROM				TO				BM # 1268118-01		BM ITEM NO.		
WIRE NO.	GAUGE/DESC	LGTH	REF DESIG	PROCESS	STA	STA	PROCESS	REF DESIG	TERMINAL	REMARKS	FROM	WIRE	TO		
1	CTR		P1- 1	CRIMP			SOLDER	P2-CTR		PARA 7 INPUT	2	14	4		
	SHLD		31				M. ASSY	SHELL							
2			2					P3-		PARA 6					
			32												
3			3					P4-		PARA 5					
			33												
4			4					P5-		PARA 4					
			34												
5			5					P6-		PARA 3					
			35												
6			6					P7-		PARA 2					
			36												
7			7					P8-		PARA 1					
			37												
8			8					P9-		PARA 8					
			38												
9			9					P10-		PARA 9					
			39												
10			10					P11-		PARA 10					
			40												
11			11					P12-		PARA 11					
			41												
12			12					P13-		PARA 12					
			42												
13			13					P14-		PARA 13					
			43												
14			14					P15-		PARA 14					
			44												
15			15					P16-		PARA 21					
			45												
16			16					P17-		PARA 20					
			46												
17			17					P18-		PARA 19					
			47												
18			18					P19-		PARA 18					
			48												
19			19					P20-		PARA 17					
			49												
20			20					P21-		PARA 16					
			50												
21			21					P22-		PARA 15					
			51												
22			22					P23-		PARA 22					
			52												
23			23					P24-		PARA 23					
			53												
24			24					P25-		PARA 24					
			54												
25	CTR		P1- 25	CRIMP			SOLDER	P26-CTR		PARA 25 INPUT	2	14	4		
	SHLD		55				M. ASSY	SHELL							





REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	PRE-PRODUCTION RELEASE	Ampeco	12-10-81



**DETAIL "A"**  
SCALE: NONE  
29 PLACES

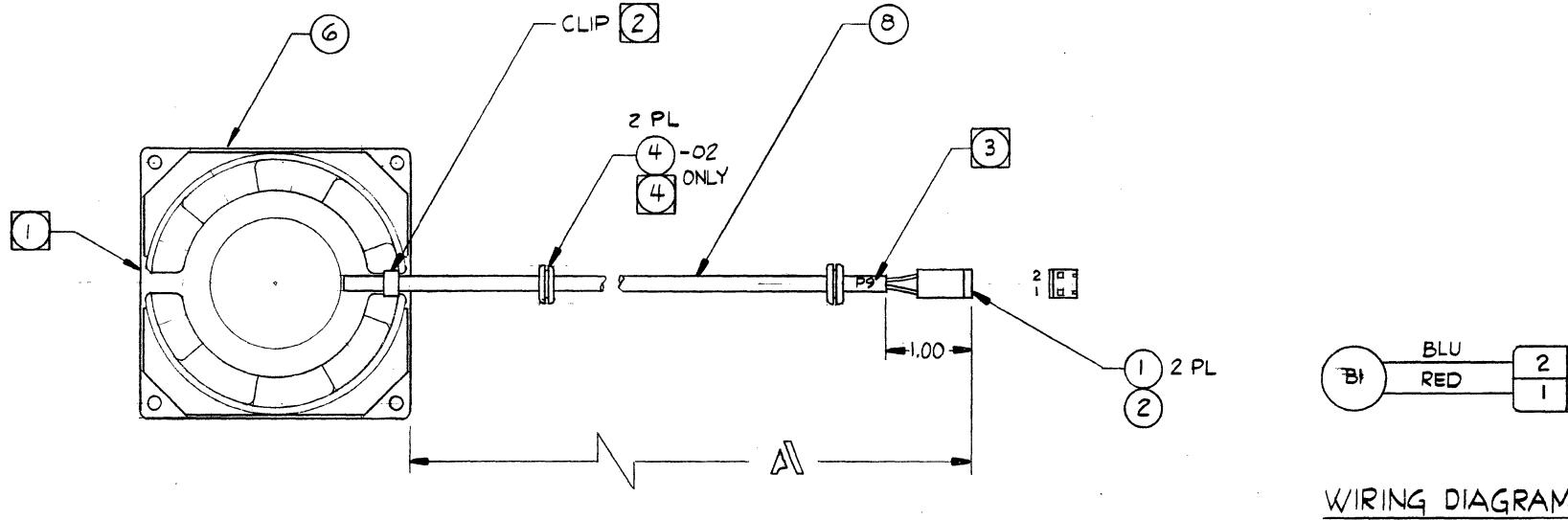
- NOTES: UNLESS OTHERWISE SPECIFIED.
- MARK ASSY NO., REV AND CONN REF IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130.
  - MARK KEYING DOT ON CONNECTOR HOUSING ADJACENT TO PIN 1 USING PERMANENT WHITE PAINT. DOT TO BE APPROX .06 TO .12 DIA.
  - INSERT CRIMPED CONTACTS, ITEM 4, ORIENTED WITH LOCKING TABS TOWARDS OUTSIDE WALL OF CONNECTOR HOUSING.
  - ORIENT CABLE STRAP, ITEM 8, WITH LOCKING DEVICE ON CABLE SIDE OF CONNECTOR HOUSING, ITEM 1, AS SHOWN.
  - WIRE PER WIRE LEAD LIST 1268118-01.
  - TERMINATE EACH COAX AS SHOWN ON DWG 1268429-01 (ITEM 5).
  - MARK WITH SIGNAL DESIGNATION (AS SHOWN ON WIRE LIST) IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT WHITE INK WHERE SHOWN PER MIL-STD-130.
  - STRAIN RELIEF, ITEM 1, TO BE ATTACHED TO CONNECTOR HOUSING, ITEM 2, WITH ADHESIVE, ITEM 6, PRIOR TO INSERTING CABLES.
  - TERMINATE EACH COAX AS SHOWN PER DETAIL "A".

SERIAL/PARALLEL  
"P2"  
ASSY 1268118-01  
1

SEE SEPARATE PARTS AND WIRE LEAD LIST

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DATE
1267955 HBR		TOL		12-10-81
NEXT ASSY USED ON		2 PLC 3 PLC ANG		
APPLICATION		± .10		
		REMOVE BURRS AND SHARP EDGES		
		YES <input type="checkbox"/> NO <input type="checkbox"/>		
		DO NOT SCALE THIS PRINT		
		MATERIAL:		
		FINISH:		
		DRAWN BY		
		CHK BY		
		DFT APPD		
		ENGRG APPD		
		AUTH BY		
		HEADQUARTERS		
		Redwood City,		
		California 94063		
		CABLE ASSEMBLY, 28 CHAN,		
		SERIAL DATA CONVERTER BAY TO		
		DIGITAL PROCESS BAY-INPUT		
		SIZE		
		CODE IDENT NO.		
		D 92739		1268118-01
		SCALE 1/1		SHEET 1 OF 1

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK ENGRG
1	-	PRE - PROD RELEASE	<i>J. Burke</i>	<i>J. Burke</i>
2			2-10-82	2-10-82



WIRING DIAGRAM

- (1) ? SHOWN

NOTES: UNLESS OTHERWISE SPECIFIED

- 1** MARK ASSY NO. AND REVISION IN .12 HIGH VERTICAL GOTHIC LETTERING WITH PERMANENT INK WHERE SHOWN PER MIL-STD-130. ASSY 1268369-XX
- 2** REMOVE CLIP AND INSTALL SLEEVING OVER FAN LEADS UP TO LABEL AND REPLACE CLIP.
- 3** MARK P7/P8 OR P9 APPROX WHERE SHOWN PER VERSION TABLE.
- 4** POSITION OF GROMMETS TO BE DETERMINED AT NEXT ASSY.

VERSION TABLE

ASSY NO.	DIM A	"P" MARKING	NEXT ASSY
1268369-01	7.0 ± .5	P7/P8	1267955/1267977
1268369-02	12.0 ± .5	P9	1267955

SEE SEPARATE PARTS LIST

QUANTITY PER VERSION			ITEM NO.	PART NUMBER	DESCRIPTION													
NOTICE			PARTS LIST															
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.			<b>UNLESS OTHERWISE SPECIFIED</b> DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES. TOL ± <table border="1"> <tr> <td>2</td> <td>PLC</td> <td>3</td> <td>PLC</td> <td></td> <td>ANG</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> <b>DO NOT SCALE THIS PRINT</b>		2	PLC	3	PLC		ANG							<b>AMPEX</b> HEADQUARTERS Redwood City, California 94063	
2	PLC	3	PLC		ANG													
PER TABLE <b>AHB7100</b> NEXT ASSY USED ON APPLICATION			SIGNATURE DATE DRAWN BY <i>J. Burke</i> 2-4-82 CHK BY <i>J. Burke</i> 2-10-82 DFT APPD ENGRG APPD <i>J. Burke</i> 2-10-82 AUTH BY		<b>FAN ASSY</b>													
			MATERIAL: _____ FINISH: _____		SIZE CODE IDENT NO. <b>C 92739 1268369-XX</b>													
APPLICATION			SCALE 1/1		SHEET 1 OF 1													

1268369-XX

DISTR CODE:

<b>PARTS LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b> 401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE <b>C</b>	<b>PL 1268369-XX</b>								REV <b>1</b>	
REVISIONS										CONTRACT NUMBER		MODEL		NEXT ASSEMBLY			
LTR	DESCRIPTION			APPD	DATE	SIGNATURES		DATE	DRAWING TITLE								
<b>1</b>	<b>PRE PROD RELEASE</b>			<i>J. Barker</i>	<b>2-10-82</b>	DRAWN <i>Del Foye</i>		<b>2/4/82</b>	FAN ASSEMBLY								
						CHECKED <i>J. Barker</i>		<b>2-10-82</b>									
						ENGRG											
						ENGRG <i>J. Barker</i>		<b>2-10-82</b>									
						MANAGER											
ITEM NO	DWG SIZE	PART/DRAWING NUMBER		-XX	DESCRIPTION				REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
									-01	-02	-03	-04	-05	-06	-07	-08	
<b>1</b>		<b>167-019</b>			<b>PIN, CRIMP</b>					<b>2</b>	<b>2</b>						
<b>2</b>		<b>167-907</b>			<b>PLUG, 2 POS</b>					<b>1</b>	<b>1</b>						
<b>3</b>																	
<b>4</b>		<b>260-019</b>			<b>GROMMET, .438x.188 I.D., RUBBER</b>					<b>-</b>	<b>2</b>						
<b>5</b>																	
<b>6</b>		<b>591-300</b>			<b>FAN UNIT 9.5-14 VDC</b>					<b>1</b>	<b>1</b>						
<b>7</b>																	
<b>8</b>		<b>600-014</b>			<b>SLVG, .133 I.D., FLEX, BLK</b>					<b>0.7'</b>	<b>1.0'</b>						



8

7

6

5

4

3

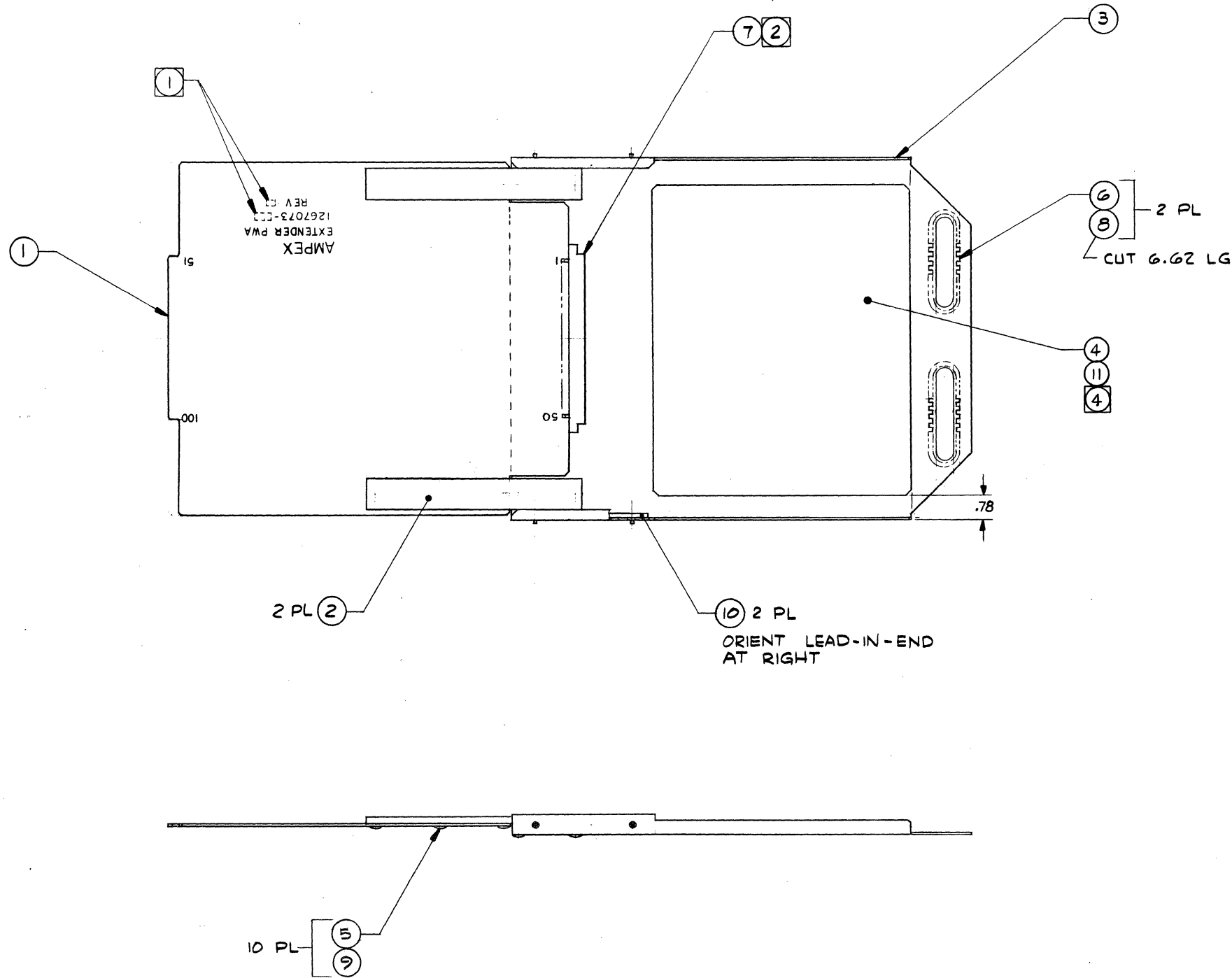
267073-01

2

DISTR CODE:

1.

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE - PROD RELEASE			



NOTES: UNLESS OTHERWISE SPECIFIED

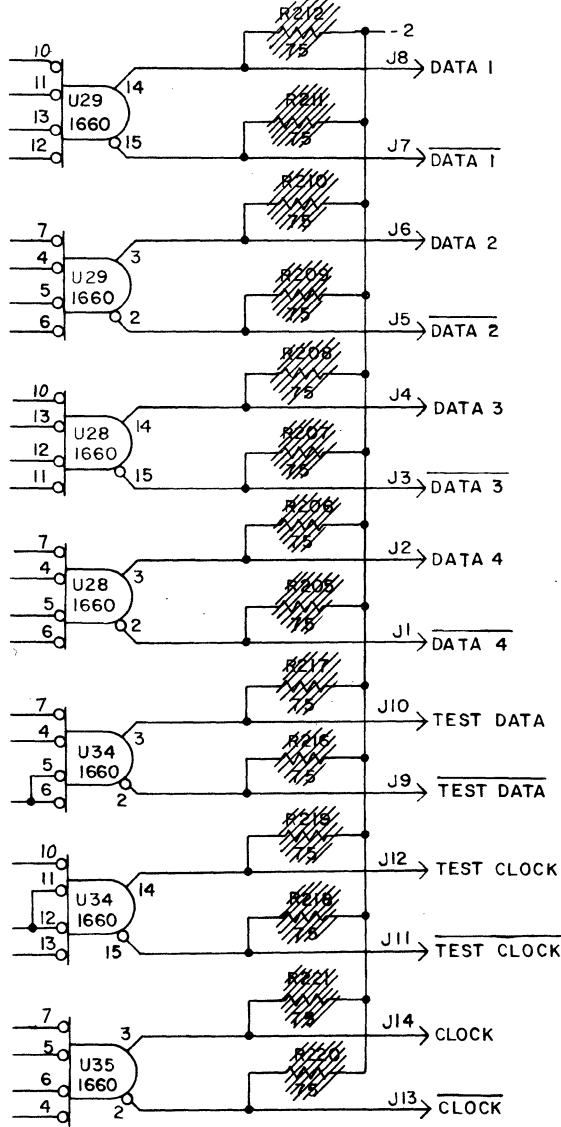
- ① MARK DASH NO. AND REVISION LEVEL.
- ② SOLDER TERMINALS OF ITEM 7 TO ITEM 1.
- ③ THIS ASSY DESIGNED FOR USE WITH PWA 1259963 & PWA 1261103 IN I/O BAY ASSY 1267955.
- ④ BOND ITEM 4 TO ITEM 3 USING ITEM 11 AS SHOWN.

SEE SEPARATE PARTS LIST

QUANTITY PER VERSION		ITEM NO	PART NUMBER	DESCRIPTION
PARTS LIST				
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DATE
3		TOL		2 4 82
CAT		2 PLC 3 PLC		ANG
NEXT ASSY		.06		DFT
USED ON		REMOVE BURRS AND SHARP EDGES		ENGRG
APPLICATION		YES <input type="checkbox"/> NO <input type="checkbox"/>		APPD
		DO NOT SCALE THIS PRINT		AUTH BY
		MATERIAL		
		FINISH:		
		SIGNATURE		
		DATE		
		AMPEX		HEADQUARTERS
		PWA, EXTENDER BOARD		Redwood City, California 94063
		SIZE		CODE IDENT NO
		D		92739 1267073-01
		SCALE		SHEET
		1/2		1 OF 1

1267073-01

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK ENGRG
1	-	CUSTOM RELEASE	<i>Sumner</i> 4-3-82	<i>W</i> 7/1/82



NOTES:

1.0 GENERAL:

THIS MODIFICATION PROVIDES DIFFERENTIAL OUTPUTS THAT ARE COMPATIBLE WITH CIRCUITS THAT HAVE PULL DOWN TO -2 VOLTS AT THE RECEIVING END OF THE TRANSMITTER LINES.

2.0 MODIFICATION INSTRUCTIONS:

2.1 REMOVE 75 OHM PULL DOWN RESISTORS R205-212, AND R216-R221.

3.0 IDENTIFICATION INSTRUCTIONS:

- 3.1 MODIFICATION NO. IS 1269028-01
- 3.2 MARK MOD. NO. NEAR EXISTING I.D.

1269028-01

1	1	1259963-01	PARALLEL TO SERIAL CONVERTER
-01	ITEM NO.	PART NUMBER	DESCRIPTION
QUANTITY PER VERSION		PARTS LIST	

NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE	
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DRAWN BY <i>Sumner</i>		6-3-82	
MOD <i>HBR</i>		TOL		CHK BY <i>W</i>		7/1/82	
NEXT ASSY USED ON		2 PLC 3 PLC ANG		DFT APPD		ENGRG APPD	
APPLICATION		REMOVE BURRS AND SHARP EDGES		AUTH BY		AMPEX	
		YES <input type="checkbox"/> NO <input type="checkbox"/>				HEADQUARTERS Redwood City, California 94063	
		DO NOT SCALE THIS PRINT				PARALLEL TO SERIAL CONVERTER, P.W.A., MODIFICATION	
		MATERIAL				SIZE CODE IDENT NO	
		FINISH:				C 92739 1269028-01	
						SCALE SHEET 1 OF 1	

1269059-01

DISTR CODE:

NOTES:

1.0 GENERAL :

- 1.1 THIS MODIFICATION INCREASES THE REPRODUCE OUTPUT LEVEL AT LOW FREQUENCIES FOR PURPOSES OF READING TIME CODE AT LOW TAPE SPEEDS.
- 1.2 IRIG A TIME CODE HAS 10 KHz CARRIER. 32:1 SPEED REDUCTION YIELDS 312 Hz CARRIER.

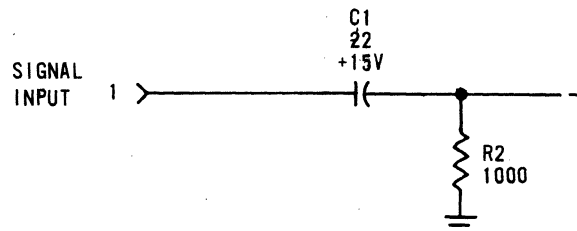
2.0 MODIFICATION:

- 2.1 REPLACE EXISTING SIGNAL INPUT RESISTOR R2 (75 OHMS) WITH NEW VALUE 1000 OHMS.

3.0 IDENTIFICATION :

- 3.1 MARK "MOD PER 1269059-01" NEAR EXISTING ASSY NUMBER.

LTR	DESCRIPTION	REVISIONS		
		SIGNATURE AND DATE		
		DFT	CHK	ENGRG
1	CUSTOM RELEASE	G. 29. 82		<i>[Signature]</i> 6-29-82



1	2	066-865	RESISTOR, 1K, 5%, 1/4 WATT
REF	1	1257473-01	7 SPEED REPRO AMP
-01	ITEM NO.	PART NUMBER	DESCRIPTION
QUANTITY PER VERSION			PARTS LIST
NOTICE		UNLESS OTHERWISE SPECIFIED	SIGNATURE
THIS DRAWING SHALL NOT BE DUPLICATED. USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	DRAWN BY <i>[Signature]</i> DATE 6-29-82
MOD HBR 3000		TOL	AMPEX HEADQUARTERS Redwood City, California 94063
NEXT ASSY USED ON APPLICATION		REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input type="checkbox"/>	7 SPEED REPRO AMPLIFIER MODIFICATION FOR TIME CODE
		DO NOT SCALE THIS PRINT	SIZE CODE IDENT NO B 92739 1269059-01
		MATERIAL FINISH	SCALE - CPA 9429-511976 SHEET 1 OF 1



## UPDATE MATERIAL FOR FR-3000

This package of update material contains revised direct record and seven-speed reproduce adjustment procedures, a circuit description of the seven-speed reproduce amplifier (1257473), and the updated drawings listed below. The drawings are arranged in numerical order following the text.

- a. 1256883-03, Interconnect and Bias Oscillator PWA
- b. 1256899-xx, Digital Process Bay Assembly
- c. 1257470-01, Seven-Speed Direct Reproduce Amplifier Schematic Diagram
- d. 1257473-01, Seven-Speed Direct Reproduce Amplifier PWA
- e. 1258155-02, 14 Channel Installation Drawing
- f. 1258156-02, 28 Channel Installation Drawing
- g. 1259500-01, Record Headdriver Schematic Diagram
- h. 1259503-01, Record Headdriver PWA
- i. 1259510-02, Voltage Regulator Schematic Diagram (includes bias osc.)
- j. 1259670-01, Encoder No. 1 Schematic Diagram
- k. 1259673-01, Encoder No. 1 PWBA
- l. 1259730-01, 3.3 MHz, 75 $\Omega$ , Filter Schematic Diagram
- m. 1259733-01, 3.3 MHz, 75 $\Omega$ , Filter PWBA
- n. 1261898-02, 14-Channel System
- o. 1261899-02, 28-Channel System

# SEVEN-SPEED DIRECT-REPRODUCE PWA 1257473

## 1. DESCRIPTION

The seven-speed direct-reproduce amplifier is assembled on a plug-in printed wiring board and is used for one channel of a multichannel reproduce system. This printed wiring assembly (PWA) amplifies and equalizes both the phase and frequency of the preamplified reproduce signals over the required frequency band. The correct equalization components are manually selected for any one of seven speeds when the pushbutton corresponding to the IRIG tape speed next lower than the actual tape speed (data clock determined) is activated in the reproduce bay speed-selector assembly. Refer to figure 1 and schematic diagram 1257470. The direct-reproduce amplifier consists of an input stage, speed-control switching, a low-to-mid frequency equalization stage, a high-frequency equalization stage, a phase-equalizer stage, and an output amplifier stage.

## 2. Input Amplifier

The signal from the preamplifier enters the direct-reproduce amplifier at P1, pins 1 and 35 (ground). The signal is amplified by inverting operational amplifier U1. (See sheet 1 of the schematic diagram.)

## 3. Speed-Control Switching

Integrated circuits U2 and U3 receive a BCD word representing the selected tape speed. They decode the word and select the appropriate equalization circuits (high frequency and low-to-mid frequency). Phase correction is switched by U4, U8, and U10.

## 4. High-Frequency Equalizer

Equalization from the reproduce-head peak frequency to the highest specified frequency is performed by switched-RLC networks (R5, C6, L2 to R11, C11, L7). Speed switching is accomplished by IC U2, which switches the appropriate network in parallel with fixed resistor R48.

Adjustable resistors R5 through R11 provide variable damping of their respective LC resonant circuits, allowing adjustment of the reproduce amplifier response at the upper bandedge frequency at each speed.

## 5. Low-to-Mid-Frequency Equalizer

Equalization from the lowest frequency to the reproduce-head peak frequency is performed by IC U9 and switched-RC networks R12, C59 to R18, C67. U9 functions as an AC operational amplifier with a speed-selected, frequency-dependent feedback network which provides amplitude equalization. This stage has its highest gain at the lowest signal frequency. Its gain decreases at 6 dB per octave as the frequency increases until a midband frequency is reached. This frequency is determined by a speed-selected resistor-capacitor combination, switched by U3. Above midband, the gain of the stage remains constant as the frequency increases to the upper bandedge.

## 6. Phase Equalization

Phase equalization is accomplished by differential amplifier Q1, Q3, Q4, Q6 in conjunction with IC switches U4, U8, and U10, phase capacitors C14, C16, C18, C19, C21, C22, C23, C24, and C65, and phase adjustment potentiometers R19 through R22.

The output of U9 is applied to gain control R64. The arm of R64 is connected directly to the base of Q6 of the differential amplifier. The same signal is also connected to the paralleled ends of phase adjustment potentiometers R19 through R22. U10 selects either R19 and R21 (speeds below 120 IPS) or U20 and R22

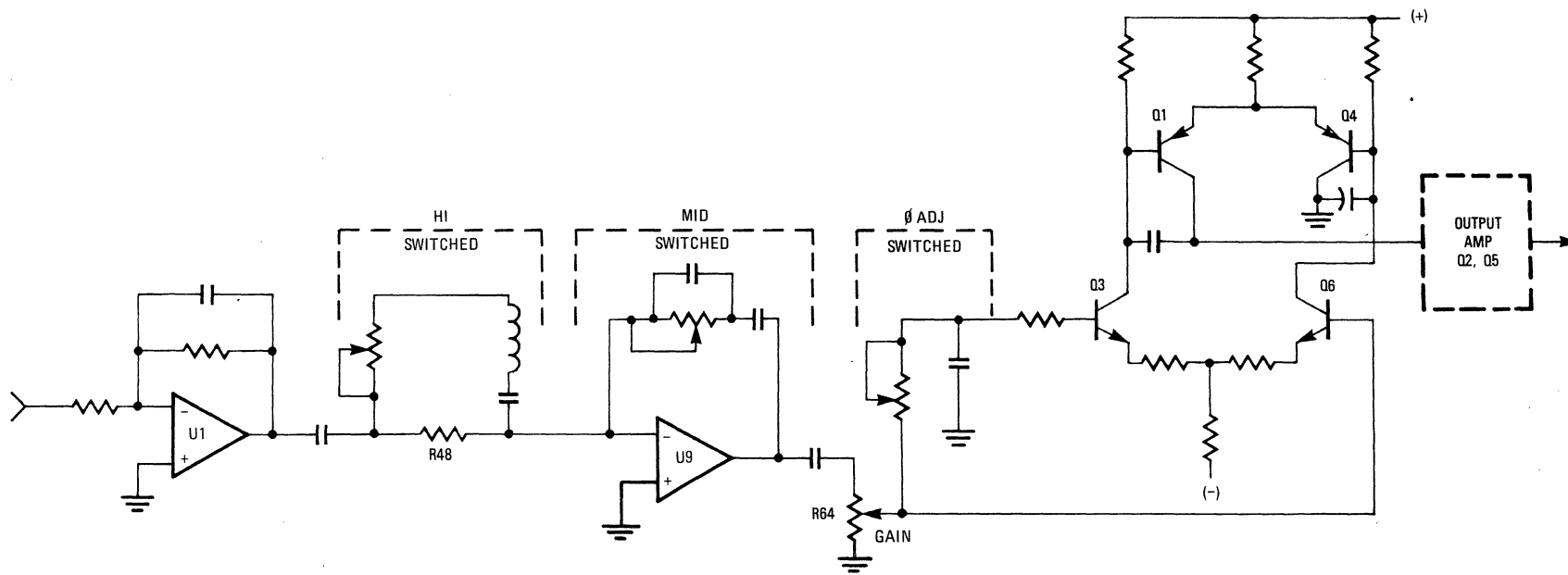


Figure 1. Seven-Speed Reproduce Amplifier Simplified Schematic

(120 IPS). U8 then selects one of the pair of resistors selected by U10. U8 selects according to tape motion direction. (U8 also adds a parallel capacitor, C68, to the feedback loop around U9 when tape motion is in reverse.) The selected phase adjustment potentiometer (R19 through R22) is switched in series from the output of U9 to R50 in series with the base of Q3. A capacitor selected according to tape speed by U4 is connected from the junction of R50 and the phase adjustment potentiometer to ground. The resulting signal with adjustable phase lag is applied to Q3 and combined with the direct signal from U9 in the differential amplifier. The phase-corrected output of the differential amplifier is applied to the output amplifier.

## **7. Output Amplifier**

Complementary emitter-follower pair Q2 and Q5 form the output amplifier stage.

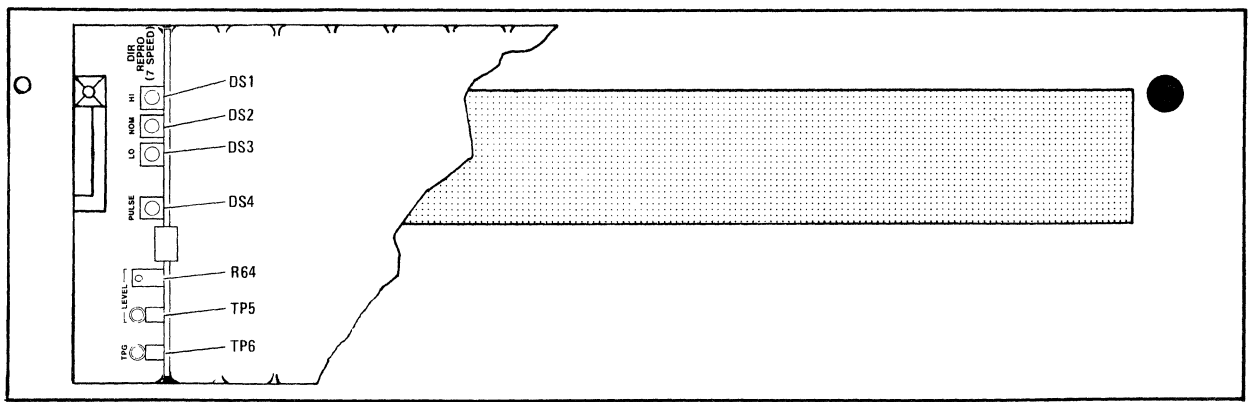
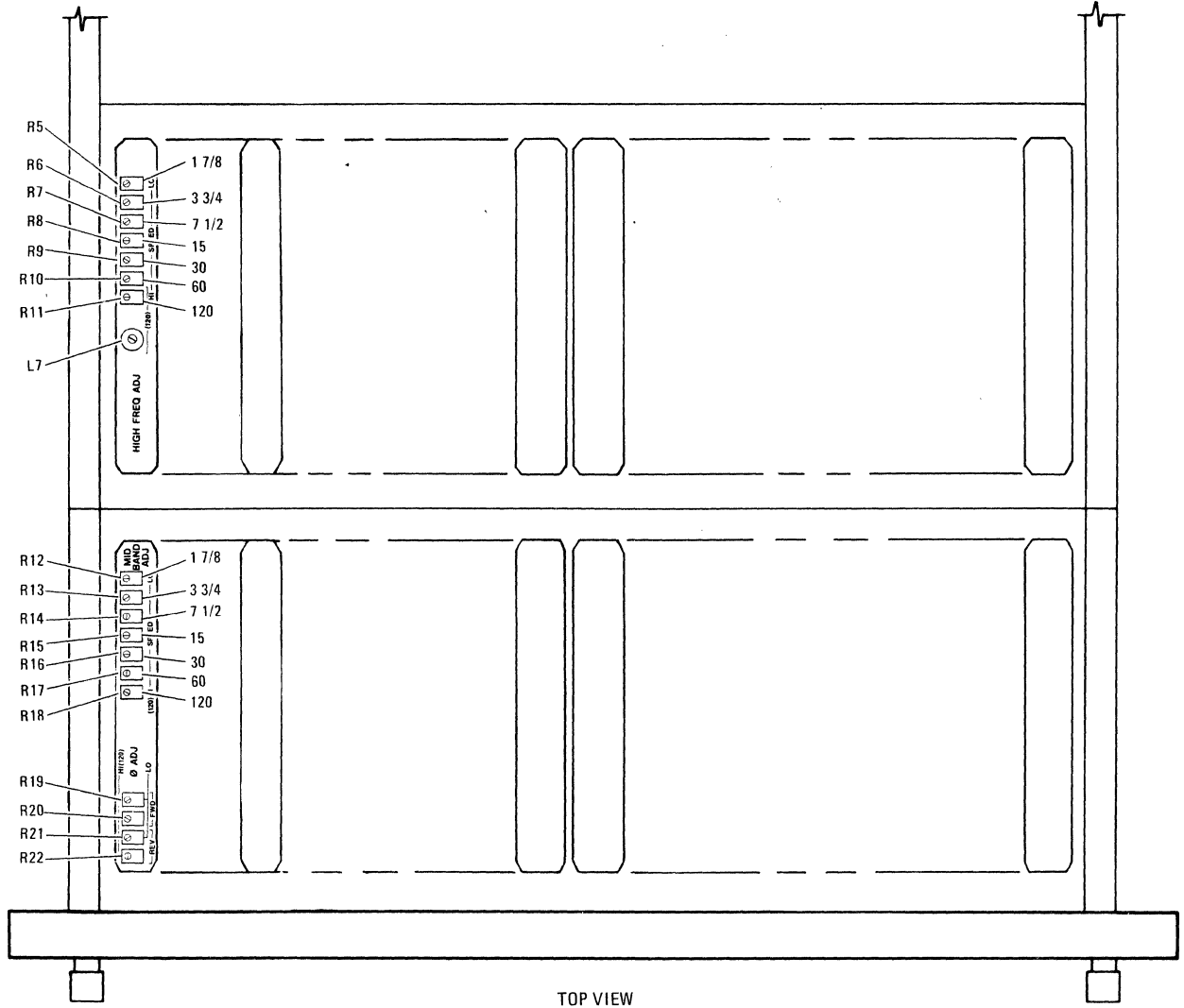
## **8. Level-Detector Circuits**

Three comparator circuits (U5) and three LED indicators (DS1 through DS3) show the presence of a low, nominal, or high output level. DS3 (red) lights when the level is below normal. DS2 (green) lights when the output is within the correct output range. DS1 (red) lights if the output level exceeds the nominal range.

## **9. ADJUSTMENT PROCEDURE**

The seven-speed reproduce-amplifier adjustments are as follows. Set the SYNC switch on the power and servo chassis test panel to the TACH position for this procedure only. (This allows the recorded tape to be reproduced without the tape sync signal.)

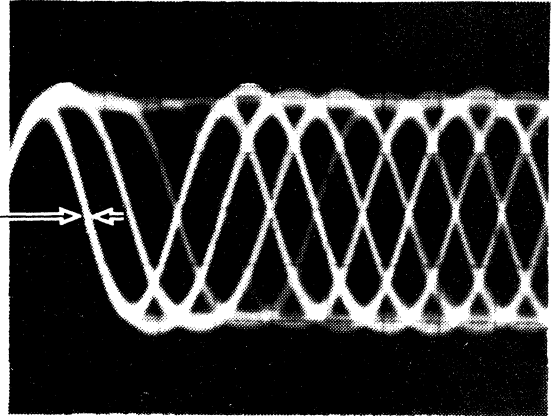
- a. While reproducing test data at the rate for a tape speed near 60 IPS, use an oscilloscope to monitor the output of the reproduce amplifier to be adjusted. TP5 is signal, TPG (6) is ground (see figure 2). Adjust the oscilloscope to display the eye pattern (see figure 3). If necessary, adjust the reproduce amplifier output level (R64) for a nominal 2.0 V P-P.
- b. Adjust the low-/mid-range potentiometer (R12 to R18) for the tape speed selected to produce the cleanest zero-crossing of the first negative-going transition.
- c. Adjust the high-frequency potentiometer (R5 to R11) for an even amplitude across the display which does not degrade the clean zero-crossing. Often this is 6 dB down from nominal level (see figure 3).
- d. Adjust the forward phase control (R19 or R20) for the cleanest overall eye pattern. In most systems, the reverse phase control is not used.
- e. Make minor readjustments of any or all of the controls for the best compromise of clean first crossover, even amplitude, and overall clean pattern.
- f. Repeat all but the phase adjustment for any other tape speeds below 120 IPS to be used. For 120 IPS, repeat the entire procedure, including the separate phase adjustment, R20, and adjustable inductor L7 in the high-frequency equalizer.
- g. Repeat for all digital channels to be adjusted.
- h. Return the SYNC switch to the TAPE position.



**Figure 2. Reproduce Amplifier Adjustment Locations**

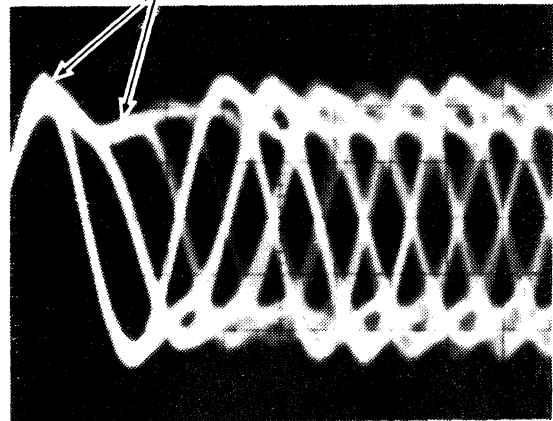
A. CORRECT ADJUSTMENTS.

CLEAN  
CROSSOVER



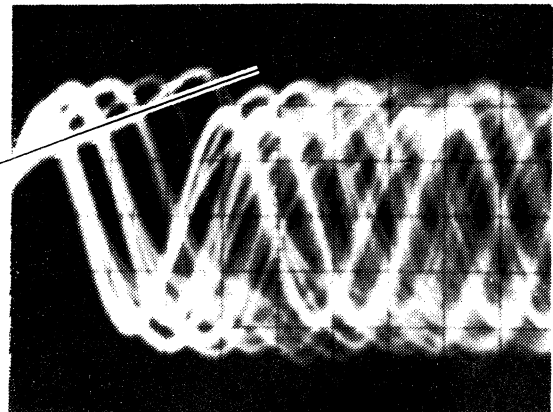
B. HIGH BAND  
MISADJUSTED  
(R21-27 7 SPEED)  
(R5 2 SPEED)

RINGING



C. PHASE CONTROL MISADJUSTED

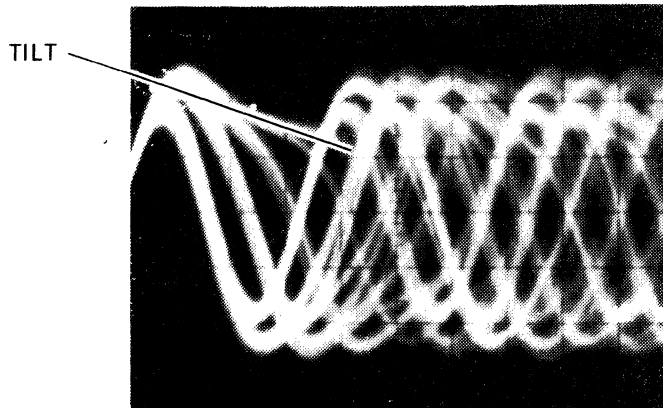
TILT



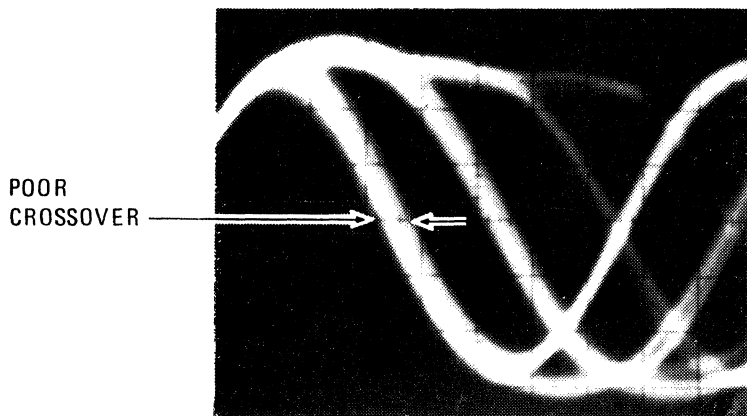
001508

Figure 3. Reproduce Amplifier Adjustment Waveforms (Sheet 1 of 2)

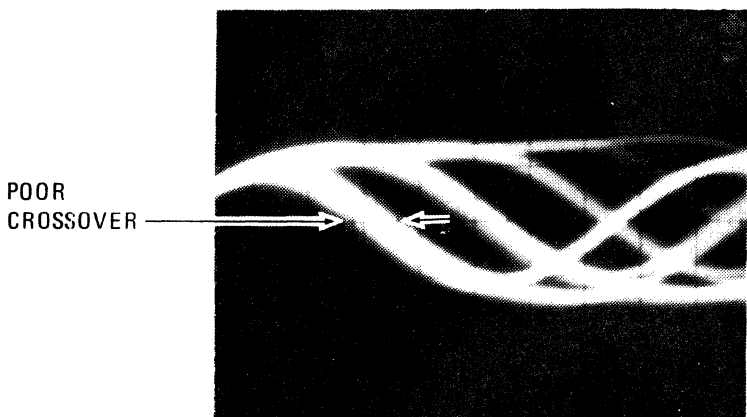
D. PHASE CONTROL MISADJUSTED



E. MID-BAND ADJUSTED  
TOO HIGH GAIN  
(R7-13 7 SPEED)  
(R2 2 SPEED)



F. MID-BAND ADJUSTED  
TOO LOW GAIN  
(R7-13 7 SPEED)  
(R2 2 SPEED)



001508

Figure 3. Reproduce Amplifier Adjustment Waveforms (Sheet 2 of 2)

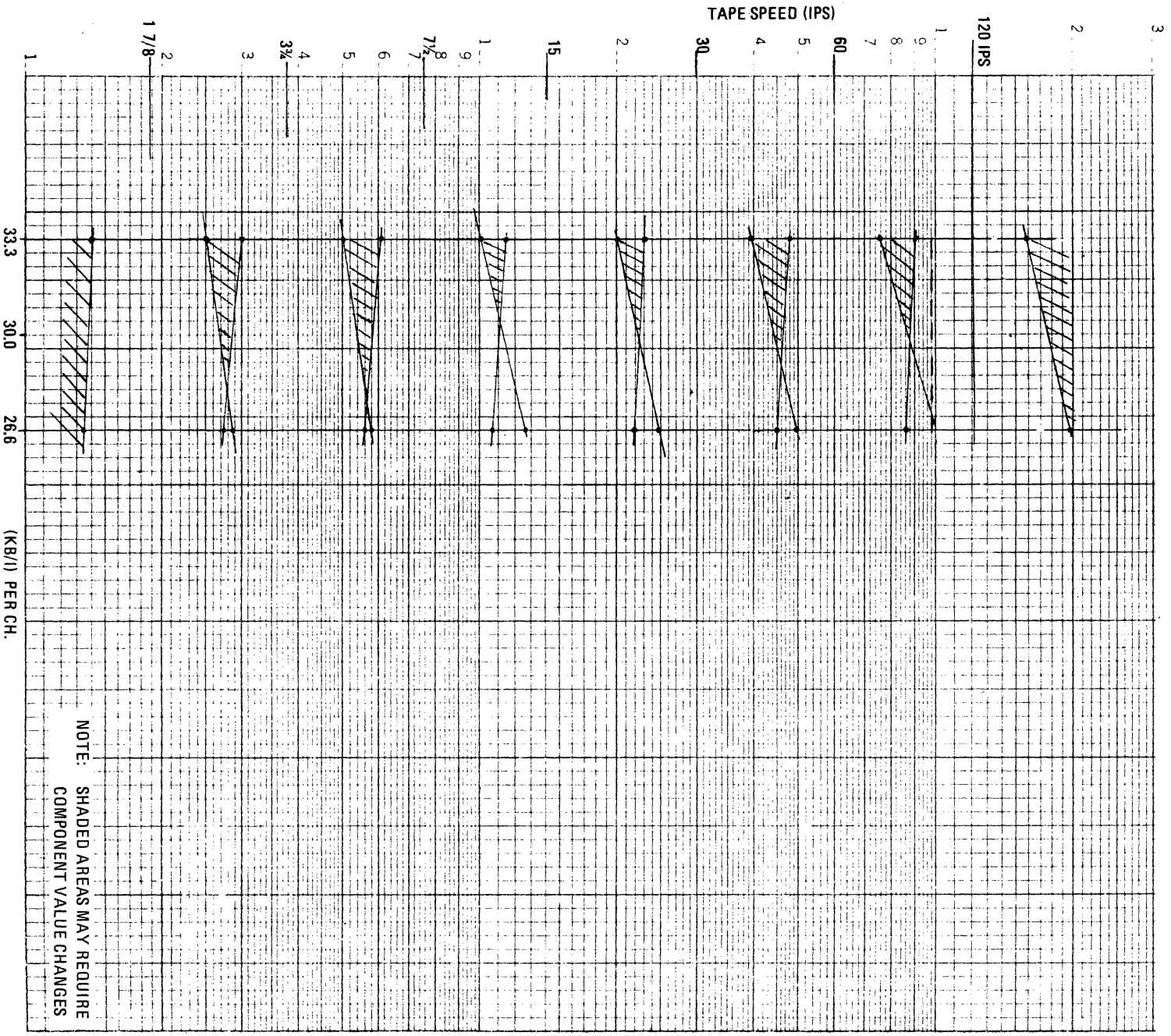


Figure 4. Equalizer Adjustment Ranges



**AMPEX**

Ampex Corporation  
REDWOOD CITY, CALIFORNIA

**LIST OF MATERIALS**

LM-1256883-03

SHEET 1 OF 2

D

REVISIONS				CODE IDENT NO.	TITLE
LTR	DESCRIPTION	DATE	APPROVED	92739	P.W.A. INTERCONNECT & BIAS OSCILLATOR
A	PRODUCTION RLSE	9/14/79	9/14/79		
A1	REVISED PER ECR 29466	9/20/79	[Signature]		
B	ADDED -02 PER ECN 29517-1	9/27/79	[Signature]		
C	REV PER ECN 29817-1	10-19-81	[Signature]		
D	REV PER ECN 30541-1	4-12-82	[Signature]		
				1258377	1258377
				CAT. ITEM	USED ON
				IN. MF. PR CODE	
				APPLICATION	
				ENGR APPD	9-10-78
				APPD BY	9/14/79
				DRAWN BY	4/1/78
				CHECKED BY	14-SEP-79
				SIGNATURE	DATE

ITEM NO.	AMPEX PART NO.	LONG LEAD ITEM	PART DESCRIPTION	REF DESIG	EQUIVALENT VENDOR OR MIL PART NUMBER (REF ONLY)	FMC	ASSY CONTROL NO.				
							QUANTITY PER UNIT				
							-01	-02	-03	-04	-05
1	1256882-01		P.W.B. INTERCONNECT & BIAS OSCILLATOR				1	1	-		
2	1256850-01		COMPOSITE SCHEMATIC, 7.7 MHz				REF	-	-		
3	1254619-01		COVER, BIAS OSCILLATOR				1	1	1		
4	1259510-01		COMPOSITE SCHEMATIC 13.6 MHz				-	REV 8	-		
5	051-391		INDUCTOR, 2.2 UH, 5%	L1			-	1	1		
6	139-673		CONNECTOR, PC 16 DUAL CONTACTS	XA1-5			5	5	5		
7	139-785		CONNECTOR, RECT, RECEPT, 36 SOC	J1, J2			2	2	2		
8	615-019		WIRE, BARE, 18 AWG				A/R	A/R	-		
9	586-249		INTEG. CIRCUIT, LINEAR RF-IF AMPL	U1			1	1	1		
10	586-289		INTEG. CIRCUIT, LINEAR VIDEO AMPL	U2			1	1	1		
11	041-418		RES, COMP, 22Ω, 0.25W, 5%	R6,7,8			3	3	3		
12	041-427		RES, COMP, 330Ω, 0.25W, 5%	R1,4,5			3	-	-		
13	041-440		RES, COMP, 1.2KΩ, 0.25W, 5%	R2			1	1	1		
14	041-495		RES, COMP, 8.2KΩ, 0.25W, 5%	R3			1	1	1		
15	540-016		INDUCTOR, 3.9uH, 10%	L1			1	-	-		
16	034-320		CAPACITOR, MICA, 750pF, 300V, 5%	C1			1	-	-		
17	056-508		CAPACITOR, MICA, 115pF, 500V, 1%	C2			1	-	-		
18	030-057		CAPACITOR, CER, 0.01uF, 100V, 20%	C3-9			6	6	7		
19	017-050		CRYSTAL UNIT, QUARTZ, 7.7 MHz	Y1			1	-	-		
20	267-071		INSULATOR, MOUNTING, VERTICAL				2	2	2		
21	586-512		MOUNTING PAD, 10 PINS				2	2	2		
22	472-113		SCREW, MACH, PAN HD, XREC 2-56 X 0.25 LG				2	2	2		
23	471-063		SCREW, MACH, PAN HD, XREC 4-40 X .438 LG				4	4	4		
24	501-155		WASHER, PLAIN, #2				2	2	2		
25	501-186		WASHER, PLAIN, SMALL PATT. #4				4	4	4		
26	502-001		WASHER, LOCK, SPRING, #2				2	2	2		
27	496-004		NUT, LOCKING, ASSEMBLED WASHER, #4-40				4	4	4		
28	615-019		WIRE, SOLID, BARE, 18 AWG				A/R	A/R	0.3'		
29	600-157		SLEEVING, TEFLON, 16 AWG				A/R	A/R	0.1'		
30	501-008		WASHER, PLAIN, #4				4	4	4		
31	041-504		RES, COMP, 510Ω, 0.25W, 5%	R4			1	1			
32	041-738		RES, COMP, 160Ω, 0.25W, 5%	R5			1	1			
33	034-288		CAPACITOR, MICA, 390PF, 500V, 5%	C1			1	1			
34	034-918		CAPACITOR, MICA, 68PF, 500V, 1%	C2			1	1			
35	017-233		CRYSTAL UNIT, QUARTZ, 13.6 MHz	Y1			1	1			
36	041-427		RES, COMP, 330Ω, 0.25W, 5%	R1			1	1			

INACTIVE SUPERSEDED BY -02

LM-1256883-03



<b>PARTS LIST</b>	<b>AMPEX</b>	<b>DATA PRODUCTS DIVISION</b>	401 BROADWAY REDWOOD CITY, CALIF. 94063	ASSY DWG SIZE <b>D</b>	<b>PL 1256899-XX</b>	SHEET 1 OF 4	<b>REV J</b>
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REVISIONS		SIGNATURES		DATE	CODE IDENT	CONTRACT NUMBER	NEXT ASSEMBLY
LTR	DESCRIPTION	APPD	DATE				
A	PRODUCTION RELEASE	<i>[Signature]</i>	8/10/77	DRAWN <i>R. Simmons</i>	<b>92739</b>		<b>1255989</b>
H	REV PER ECN 30411	<i>[Signature]</i>	2-17-82	CHECKED <i>J.V. G...</i>			
J	REV PER ECN 30547	<i>[Signature]</i>	7-12-82	ENGRG <i>J.V. G...</i>			
				ENGRG			
				MANAGER			

DRAWING TITLE  
**TRAY ASSEMBLY  
DIGITAL PROCESS**

ITEM NO	DWG SIZE	PART / DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						-01	-02	-03	-04	-05	-06	-07	-08
1	C	1256017	01	LATCH, FRONT PANEL (LEFT)		1	1	1	1				
2	C	1256017	02	LATCH, FRONT PANEL (RIGHT)		1	1	1	1				
3	C	1256037	02	ARM, LIMITING		2	2	2	2				
4	C	1256038	01	BAR, MOUNTING, FRONT PNL		1	1	1	1				
5	D	1256045	01	CARD TRAY, 8-3/4 INCH		1	1	1	1				
6	C	1213679	01	LABEL, VOLTAGE CAUTION		-	-	2	2				
7	D	1256055	01	PANEL, FRONT		1	1	1	1				
8	D	1256058	01	TRAY, 8-3/4 INCH		1	1	1	1				
9	D	1256068	01	BRKT, 8-3/4 INCH		1	1	1	1				
10	B	1256147	01	BRKT, LATCH		4	4	4	4				
11	C	1256148	01	COVER, BOTTOM		1	1	1	1				
12	C	1256149	01	COVER, TOP		1	1	1	1				
13		1255819	01	PWA, INTERCONNECT A BAY		1	-	-	-				
14	C	1257168	04	LABEL, FUSE VALUE		1	1	1	1				
15	C	1251522	01	LABEL, ID		1	1	1	1				
16	B	1257068	02	HOLDDOWN, CABLE		1	1	1	1				
17	D	1257486	01	HARNESS ASSY		1	1	1	1				
18	C	1257425	01	CABLE, COAX ASSY	J217, J218	2	2	2	2				
19	C	1257425	02	CABLE, COAX ASSY	J240	1	-	1	-				
20	C	1257425	03	CABLE, COAX ASSY	J233	1	1	1	1				

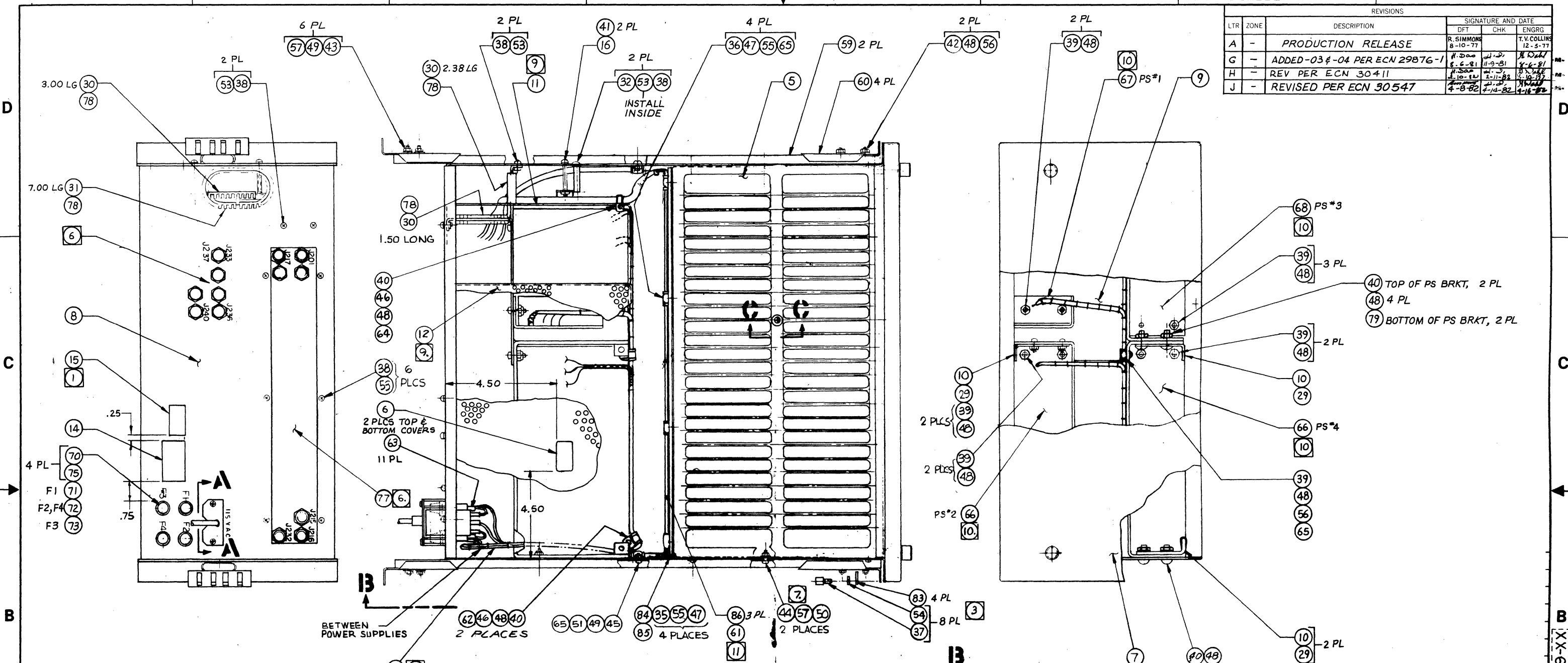
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						-01	-02	-03	-04	-05	-06	-07	-08
21	C	1262646	01	RETAINER, POWER CORD		-	-	1	1				
22	C	1257425	05	CABLE, COAX ASSY	J234, 235	2	-	2	-				
23	C	1257425	06	CABLE, COAX ASSY	J201, 202, 239	3	-	3	-				
24	C	1257425	08	CABLE, COAX ASSY	J236	1	-	1	-				
25	C	1257425	06	CABLE, COAX ASSY	J201, 202	-	2	-	2				
26	D	1255980	01	SCHEMATIC DIAGRAM		REF	REF	REV A	REV A				
27		084-051		CORD 115 VAC	SWITCHCRAFT # P2392	1	1	1	1				
28		139-448		CONNECTOR 115 VAC	SWITCHCRAFT # EAC-301	1	1	1	1				
29		498-630		RECEPTACLE, NUT	SOUTHCO #09-43-101-11	4	4	4	4				
30		260-052		GROM. CATERPILLAR NYLON		4'	4'	4.0'	4.0'				
31		260-058		GROM. CATERPILLAR NYLON		1'	1'	1.0'	1.0'				
32		280-160		SPACER, 6-32 x .88 LG		2	2	2	2				
33		406-020		PIN, ROLL, .062 DIA x .25 LG		2	2	2	2				
34		471-063		SCR 4-40 x .44 PNH		2	2	4	4				
35		470-009		SCR 4-40 x .31 SCH		4	4	4	4				
36		470-010		SCR 4-40 x .38 SCH		12	12	12	12				
37		470-035		SCR 10-32 x .31 SCH		8	8	8	8				
38		471-068		SCR 6-32 x .31 PNH		16	16	16	16				
39		471-069		SCR 6-32 x .38 PNH		18	18	20	20				
40		471-071		SCR 6-32 x .50 PNH		9	9	9	9				
41		471-449		SCR 6-32 x 1.38 PNH		2	2	2	2				
42		471-336		SCR 6-32 x .38 FLH		2	2	2	2				
43		471-078		SCR 8-32 x .38 PNH		6	6	6	6				
44		471-080		SCR 8-32 x .50 PNH		2	2	2	2				

ITEM NO	DWG SIZE	PART / DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						-01	-02	-03	-04	-05	-06	-07	-08
45		471-079		SCR, 8-32 x .44 PNH		1	1	1	1				
46		506-027		WSHR, #6 D4-140		3	3	3	3				
47		496-004		NUT KEP 4-40		10	10	8	8				
48		496-005		NUT KEP 6-32		31	31	31	31				
49		496-006		NUT KEP 8-32		7	7	7	7				
50		493-007		NUT, LOCKING, NYLON INSERT 8-32		2	2	2	2				
51		506-140		WSHR, #8 D4-167		1	1	1	1				
52		502-002		WSHR, #4 SLK		8	8	12	12				
53		502-003		WSHR, #6 SLK		16	16	18	18				
54		502-005		WSHR, #10 SLK =		8	8	8	8				
55		501-008		WSHR, #4 FLAT		10	10	10	10				
56		501-009		WSHR, #6 FLAT		3	3	5	5				
57		501-205		WSHR, #8 FLAT x .438 OD		8	8	8	8				
58		501-192		WSHR, #10 FLAT SMALL PATTERN		8	8	-	-				
59		530-352		SLIDES 16" SLIDE TRAVEL		2	2	2	2				
60		530-491		BRKT, MTG,		2	2	4	4				
61		302-325		STRAP, CABLE, .095 x 4.00 LG		-	-	6	6				
62		302-429		CLAMP, .44 ID x .38 WIDE		2	2	2	2				
63		600-255		TUBING, SHRINK, .25 ID		AR	AR	2.0'	2.0'				
64		302-160		CLAMP, .25 ID x .38 WIDE		1	1	1	1				
65		302-200		CLAMP, .38 ID x .38 WIDE		6	6	6	6				
66		570-470		POWER SUPPLY HD5 - 12/OVP (+5V)	REF PS NO. 2,4	2	2	2	2				
67		570-467		POWER SUPPLY HA5 - 1.2/OVP (-5V)	REF PS NO. 1	1	1	1	1				
68		570-472		POWER SUPPLY HC12 - 3.4 (+12V)	REF PS NO. 3	1	1	1	1				

PARTS LIST		AMPEX		DATA PRODUCTS DIVISION		CODE IDENT 09150	CODE IDENT 92739	PL 1 2 5 6 8 9 9 -XX				REV J	
								SHEET 4 OF 4					
ITEM NO	DWG SIZE	PART / DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						-01	-02	-03	-04	-05	-06	-07	-08
69													
70		085-005		FUSE HOLDER			4	4	4	4			
71		070-005		FUSE 0.25 AMP SB	F1		1	1	1	1			
72		070-019		FUSE 2.0 AMP SB	F2, F4		2	2	2	2			
73		070-004		FUSE 1.0 AMP SB	F3		1	1	1	1			
74		615-011		WIRE, SOLID, BARE, 16 AWG			AR	AR	1.0'	1.0'			
75		502-064		WSHR, INT, TOOTH, 1/2 I.D,			4	4	4	4			
76		1255819	02	PWA, INTERCONNECT B BAY			-	1	-	-			
77	D	1257488	01	PANEL/CABLE ASSY			1	1	1	1			
78		018-004		ADH, LIQUID			AR	AR	AR	AR			
79		471-070		SCR, 6-32 x .44 PNH			2	2	2	2			
80		260-062		GROM. CATERPILLAR NYLON			1.5'	1.5'	1.5'	1.5'			
81		502-423		WSHR, FLAT			6	1	6	1			
82		280-135		SPACER, THD, 4-40X.875 LG HEX					2	2			
83	C	1267305	01	CLAMPING STRIP, SLIDE BRKT					4	4			
84	D	1259893	01	PWA, INTERCONNECT (A) BAY					1	-			
85	D	1259893	02	PWA, INTEPCONNECT (B) BAY					-	1			
86	C	1267868	03	CABLE ASSY, COAX/PUSH-ON					3	-			
87	C	1258599	01	LABEL, 14/28 TRK (A) BAY		8			1	-			
88	C	1258599	02	LABEL, 14/28 TRK (B) BAY		8			-	1			
89	D	1262507	01	LABEL, ADJ & TP (A) BAY		8			1	-			
90	D	1262507	02	LABEL, ADJ & TP (B) BAY		8			-	1			
91	B	1267428	01	SPACER					1	1			

8  
8  
8  
8  
SUPERCEDED BY -05  
SUPERCEDED BY -04

REVISIONS		SIGNATURE AND DATE			
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	-	PRODUCTION RELEASE	R. SIMMONS 8-10-77	T.V. COLLINS 12-5-77	
G	-	ADDED -03 & -04 PER ECN 29876-1	H. Doo 8-6-81	H. Doo 11-9-81	H. Doo 8-6-81
H	-	REV PER ECN 30411	H. Doo 8-10-81	H. Doo 2-11-82	H. Doo 8-10-81
J	-	REVISED PER ECN 30547	H. Doo 4-8-82	H. Doo 4-14-82	H. Doo 4-16-82



- NOTES: UNLESS OTHERWISE SPECIFIED.
- TYPE ASSY NO., SERIAL NO., REVISION LETTER AND TITLE ON ITEM 15 PER MIL-STD-130.
  - MIN SLVG LOOP REQUIRED SO TRAY MAY BE FULLY EXTENDED AND ROTATED 90° WITH FRONT FACING DOWN.
  - ITEMS 37, 54 AND 83 TO BE PACKAGED SEPARATELY AND LATER USED FOR ASSY INSTALLATION.
  - WIRE PER WIRE LIST 1257486.
  - CONNECT BNC COAX CABLES PER WIRE LIST TABLES, SHT 2. TIE WRAP TO HARNESS ASSY.
  - SEE SHEET 2 FOR BNC COAX CABLE MOUNTING DETAILS.
  - SCREW LENGTH OF ITEM 44 IS EXCEPTION TO AMPLEX STD HC2-B AS TO THREAD EXTENSION BEYOND SELF-LOCKING NUT.
  - BAG, TAG AND ATTACH TO ASSEMBLY.
  - ADD ITEM 30, USING ITEM 78, TO SHARP EDGES OF TOP AND BOTTOM COVERS TO PROTECT WIRES.
  - ADD ITEM 80, USING ITEM 78, TO EDGES OF POWER SUPPLIES TO PROTECT WIRES.
  - CONNECT PUSH ON COAX CABLES PER CABLE TABLE, SHT 2. TIE WRAP CABLES TO HARNESS ASSY AT THE BOTTOM OF THE TRAY.

SEE SEPARATE PARTS LIST

QUANTITY PER VERSION		-OI	ITEM NO	PART NUMBER	DESCRIPTION
PARTS LIST					
NOTICE					
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT CONTRACT, PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT					
UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE	
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DRAWN BY R. SIMMONS		8-10-77	
TOL		CHK BY T.V. COLLINS		12-5-77	
2 PLC 3 PLC ANG		DFT APPD		ENGRG APPD	
REMOVE BURRS AND SHARP EDGES		AUTH BY		T.V. COLLINS 12-5-77	
YES NO		DO NOT SCALE THIS PRINT			
MATERIAL:		FINISH:			
1261899 HBR		NEXT ASSY USED ON			
1261898 HBR		APPLICATION			
AMPEX		HEADQUARTERS		Redwood City, California 94063	
TRAY ASSEMBLY, DIGITAL PROCESS		SIZE		CODE IDENT NO.	
D		92739		1256899-XX	
SCALE 1/2		SHEET 1 OF 2			

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGR
J	-	SEE SHEET ONE	-	-	-

WIRE LIST TABLE A BAY

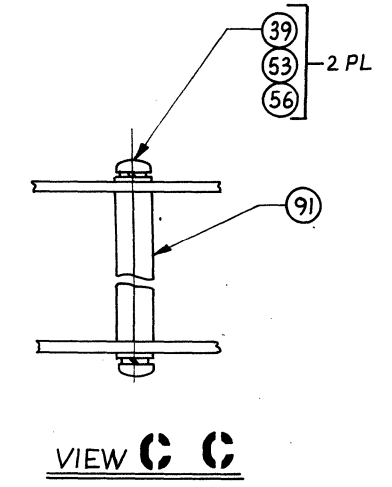
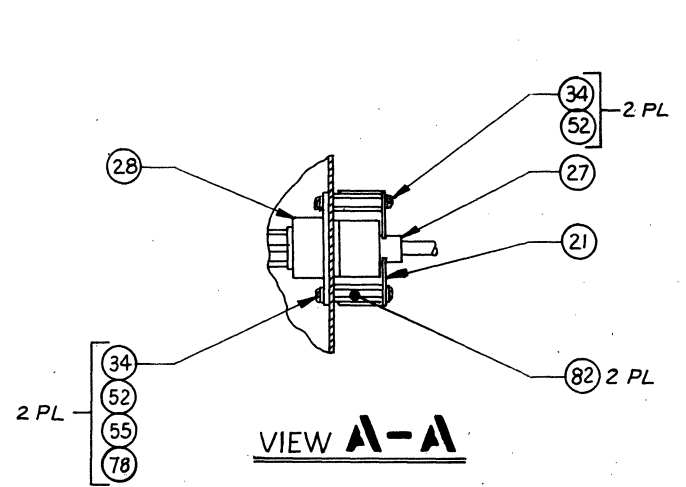
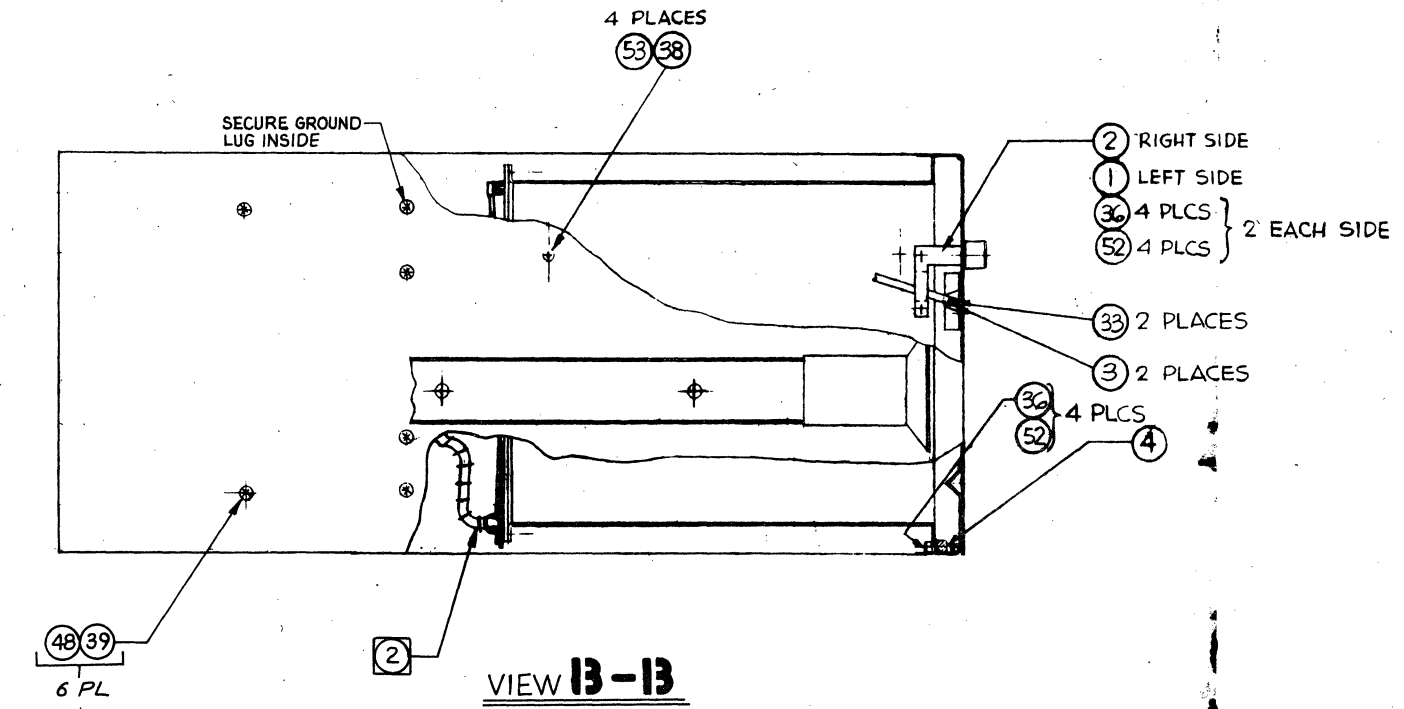
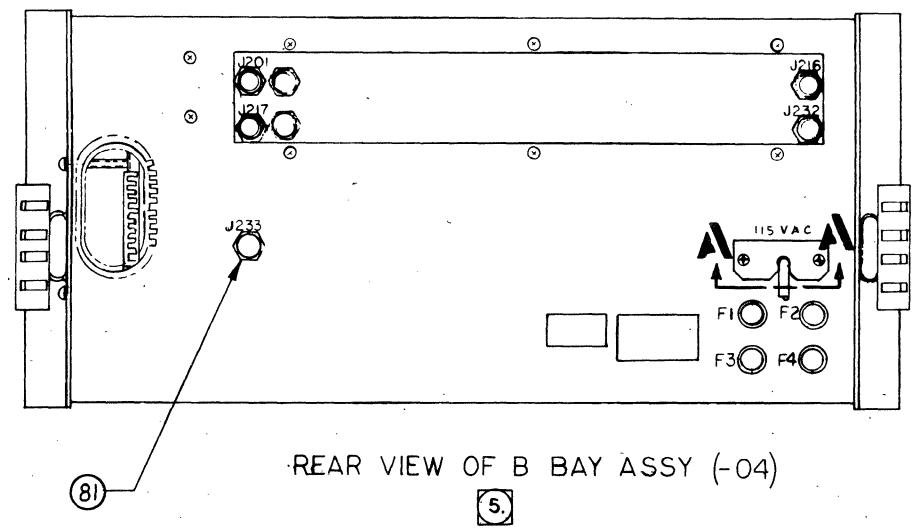
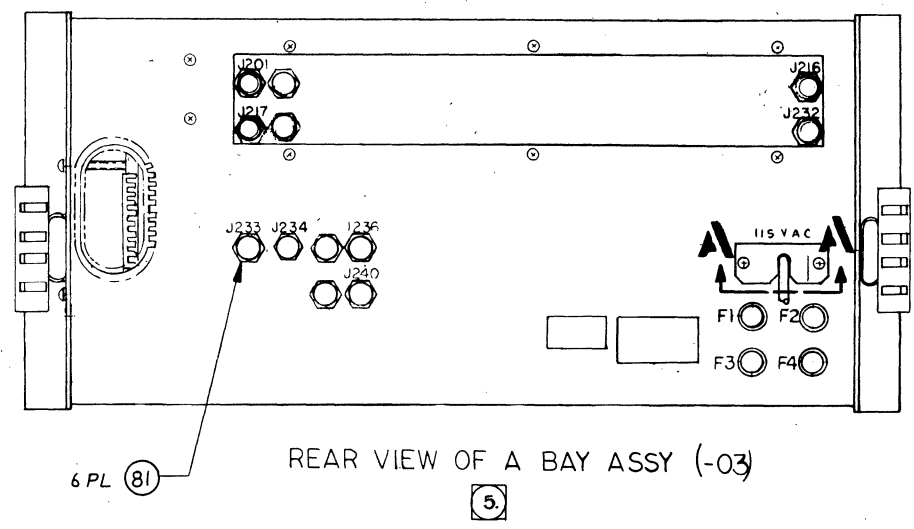
ITEM NO.	FROM	TO		FUNCTION
		CENTER COND	SHIELD	
23	J201	J43 PIN 9	J43 PIN 27	SER DATA IN
23	J202	J43 PIN 16	J43 PIN 37	SER CLK IN
18	J217	J46 PIN 7	J46 PIN 26	SER DATA OUT
18	J218	J46 PIN 8	J46 PIN 29	SER CLK OUT
20	J233	J7 PIN 60	J7 PIN 59	AUX IN
22	J234	J2 PIN 119	J2 PIN 118	PRL XTAL CLK IN
22	J235	J1 PIN 119	J1 PIN 113	EXT REF IN
24	J236	J1 PIN 56	J1 PIN 116	SER XTAL CLK IN
23	J239	J1 PIN 57	J1 PIN 117	REF FREQ OUT
19	J240	J12 PIN 119	J12 PIN 118	TAPE FREQ OUT
74	PS*2+OUT	PS #2 +S		
74	PS*2-OUT	PS #2 -S		
74	PS #3+OUT	PS #3 +S		
74	PS #3-OUT	PS #3 -S		
74	PS*4+OUT	PS #4 +S		
74	PS*4-OUT	PS #4 -S		

WIRE LIST TABLE B BAY

ITEM NO.	FROM	TO		FUNCTION
		CENTER COND	SHIELD	
25	J201	J43 PIN 9	J43 PIN 27	SER DATA IN
25	J202	J43 PIN 16	J43 PIN 37	SER CLK IN
18	J217	J46 PIN 7	J46 PIN 26	SER DATA OUT
18	J218	J46 PIN 8	J46 PIN 29	SER CLK OUT
20	J233	J7 PIN 56	J7 PIN 116	AUX IN
74	PS #2 +OUT	PS #2 +S		
74	PS #2 -OUT	PS #2 -S		
74	PS #3 +OUT	PS #3 +S		
74	PS #3 -OUT	PS #3 -S		
74	PS #4 +OUT	PS #4 +S		
74	PS #4 -OUT	PS #4 -S		

PUSH ON COAX CABLE TABLE A BAY

ITEM NO.	FROM		TO		FUNCTION
	CNTR COND	SHIELD	CNTR COND	SHIELD	
86	J1 PIN 53	PIN L	J20 PIN 53	J20 PIN 113	SER CLK
86	J3 PIN 34	J3 PIN 94	J46 PIN 2	J46 PIN 21	SER TEST DATA
86	J3 PIN 35	J3 PIN 95	J46 PIN 3	J46 PIN 24	SER TEST CLK





1257473-XX

DISTR CODE: AG

VERSION TABLE

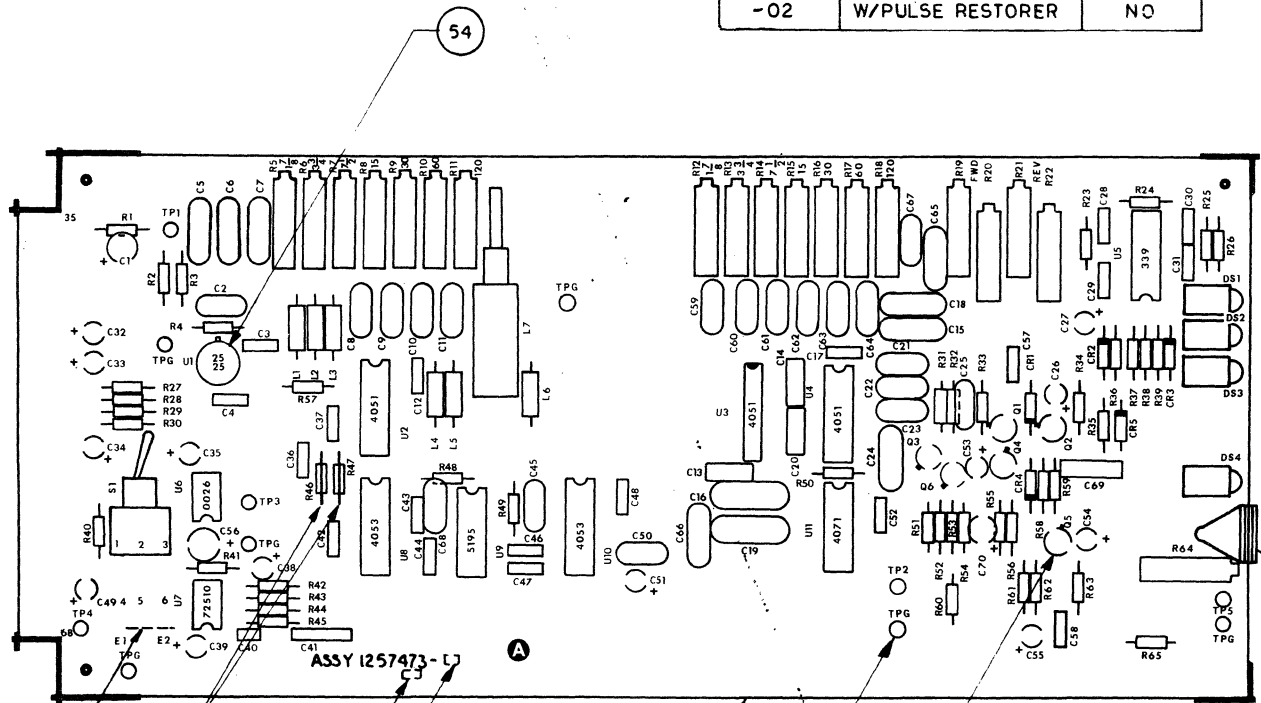
VERSION	FUNCTION	JUMPER E1 TO E2
-01		YES
-02	W/PULSE RESTORER	NO

NOTICE

THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.

REVISIONS

LTR	DESCRIPTION	SIGNATURE AND DATE		
		DFT	CHK	ENGRG
A	PROD RLSE ECR 29762	R/B/80	R/S/80	
A1	REV PER ECR 30431			
A2	REV PER ECR 30748	H. Dao		



- 7. STATIC SENSITIVE DEVICE: SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH AMPLEX STANDARDS HC2-36 AND HE1-1.
  - 6. INSTALL JUMPERS IN PLACE OF R46, 47.
  - 5. MARK DASH NO. WHERE SHOWN PER MIL-STD-130.
  - 4. MARK ASSEMBLY REVISION LEVEL, PER MIL-STD-130.
3. ASSEMBLE PER AMPLEX STANDARD HC2-2.
  2. REFERENCE SCHEMATIC 125747 0
  1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.

NOTES: UNLESS OTHERWISE SPECIFIED

PARTS LIST

DRAWN BY	R. Lampan	8/4/80	ENGRG APPD	J. Allen
CHK BY	S. Sabat	18 NOV 80	AUTH BY	J. A.
DFT APPD				

**AMPEX** HEADQUARTERS  
Redwood City,  
California 94063

**PRINTED WIRING BD ASSY**  
7 SPEED DIRECT REPRODUCE AMPL

CAT	HBR-3000	SIZE	B	CODE IDENT NO	92739	1257473-XX
NEXT ASSY	USED ON	APPLICATION	SCALE	1 X 1	SHEET	1 OF 1

DISTR CODE: AG

PARTS LIST		AMPEX		DATA SYSTEMS DIVISION		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT	92739	ASSY DWG. SIZE	B	PL 1 2 5 7 4 7 3 - XX	REV	A2
REVISIONS												SHEET 1 OF 5		
LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER		MODEL		NEXT ASSEMBLY				
A	PROD RLSE	<i>J. A. Keller</i>	5-5-81	<i>J. A. Keller</i>	4/11/80	—		HBR-3000		CAT				
A1	PER ECR 30431	<i>J. A. Keller</i>	3-4-82	<i>J. A. Keller</i>	10-24-82	DRAWING TITLE		PRINTED WIRING BD ASSY, 7 SPEED DIRECT REPRODUCE AMPL						
A2	PER ECR 30748	<i>J. A. Keller</i>	6-25-82	<i>J. A. Keller</i>	20 NOV 82									
ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	D	1257472	01	PRINTED WIRING BD		1	1							
2														
3	D	1257470	01	SCHEMATIC DIAGRAM		REF	REF							
4	C	1256915	01	HANDLE		1	1							
5	B	1255587	01	COTTER PIN	TP1-5, G (6)	11	11							
6	B	103307	02	STANDOFF	REF: TP1-5, G (6)	11	11							
7														
8		064-149		CAP, FXD, 1.0 UF, 20%, 100V, CER	C36	1	1							
9		037-954		CAP, FXD, 22 UF, 20%, 15V, TA	C1, 26, 27, 32-35, 38, 39, 54, 55	11	11							
10		034-157		CAP, FXD, 2 PF, ±.5 PF, 500V, MICA	C2, 25	2	2							
11		030-963		CAP, FXD, 0.1 UF, 10%, 100V, CER	C3, 4, 12-14, 17, 20, 28-31, 37, 42-44, 46-48, 52, 57, 58	21	21							
12		034-161		CAP, FXD, 2000 PF, 5%, 500V, MICA	C5, 65	2	2							
13		034-747		CAP, FXD, 3600 PF, 5%, 500V, MICA	C6	1	1							
14		056-349		CAP, FXD, 870 PF, 1%, 500V, MICA	C7	1	1							
15		056-290		CAP, FXD, 430 PF, 1%, 500V, MICA	C8, 50	2	2							
16		034-935		CAP, FXD, 240 PF, 5%, 500V, MICA	C9	1	1							
17		034-938		CAP, FXD, 110 PF, 5%, 500V, MICA	C10	1	1							
18		034-182		CAP, FXD, 56 PF, 5%, 500V, MICA	C11	1	1							
19		034-370		CAP, FXD, 6800 PF, 5%, 300V, MICA	C15, 16, 18	3	3							

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1 2 5 7 4 7 3 - XX

SHEET 2 OF 5

REV  
A<sub>2</sub>

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
20		034-388		CAP, FXD, 3300 PF, 5%, 500V, MICA	C19	1	1							
21		034-199		CAP, FXD, 300 PF, 5%, 500V, MICA	C22	1	1							
22		034-185		CAP, FXD, 75 PF, 5%, 500V, MICA	C23	1	1							
23		034-291		CAP, FXD, 1600 PF, 5%, 500V, MICA	C24	1	1							
24		064-299		CAP, FXD, .015 UF, 20%, 100V, CER	C40	-	1							
25		064-312		CAP, FXD, 2.2 UF, 20%, 100V, CER	C41	-	1							
26		034-945		CAP, FXD, 12 PF, 5%, 500V, MICA	C45,67	2	2							
27		034-320		CAP, FXD, 750 PF, 5%, 300V, MICA	C21	1	1							
28		037-790		CAP, FXD, 2.2 UF, 20%, 20V, TA	C49,53	2	2							
29		037-957		CAP, FXD, 68 UF, 20%, 15V, TA	C56	1	1							
30		064-312		CAP,FXD, 2.2 UF, 20%, 100V, CER	C69	1	1							
31		037-931		CAP,FXD, 6.8 UF, 20%, 35V, TA	C51	1	1							
32														
33		034-206		CAP, FXD, 18 PF, 5%, 500V, MICA	C64	1	1							
34		034-207		CAP, FXD, 24 PF, 5%, 500V, MICA	C63	1	1							
35		034-208		CAP, FXD, 30 PF, 5%, 500V, MICA	C62	1	1							
36		034-942		CAP, FXD, 36 PF, 5%, 500V, MICA	C61	1	1							
37		034-969		CAP, FXD, 43 PF, 5%, 500V, MICA	C60	1	1							
38		034-941		CAP, FXD, 51 PF, 5%, 500V, MICA	C59	1	1							
39														
40		132-393		LAMP, L.E.D., RED	DS1,3	2	2							
41		132-397		LAMP, L.E.D., GRN	DS2	1	1							
42		132-400		LAMP, L.E.D., YEL	DS4	-	1							
43		034-269		CAP, FXD, 22 PF, 5%, 500V, MICA	C68	1	1							
44		037-958		CAP, FXD, 82 UF, 20%, 15V, TA	C70	1	1							

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1 2 5 7 4 7 3 - XX

SHEET 3 OF 5

REV

A2

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
45														
46		051-645		INDCTR, FXD, 1800 UH, 10%	L1	1	1							
47		540-069		INDCTR, FXD, 3900 UH, 10%	L2	1	1							
48		540-015		INDCTR, FXD, 1000 UH, 5%	L3	1	1							
49		540-007		INDCTR, FXD, 470 UH, 5%	L4	1	1							
50		540-071		INDCTR, FXD, 120 UH, 5%	L5	1	1							
51		540-003		INDCTR, FXD, 220 UH, 5%	L6	1	1							
52		051-299		INDCTR, VAR, 35-90 UH	L7	1	1							
53														
54		014-914		MTG PAD, IC, 8 PIN, TO-99	REF: U1	1	1							
55		013-599		DIO, SWITCH	CR1-5	5	5							
56		280-130		MTG PAD, XSTR, TO-18	REF: Q1-6	6	6							
57		014-505		XSTR, PNP	Q1, 4, 5	3	3							
58		014-506		XSTR, NPN	Q2, 3, 6	3	3							
59		076-045		RES, FXD, 75, 5%, 1/4W	R40	-	1							
60		066-665		RES, FXD, 1K, 5%, 1/4W	R42, 45	-	2							
61		066-826		RES, FXD, 2K, 5%, 1/4W	R41, 43, 44	-	3							
62		076-045		RES, FXD, 75, 5%, 1/4W	R2, 51, 52, 61	4	4							
63														
64		066-826		RES, FXD, 2K, 5%, 1/4W	R3, 26, 31, 32, 38, 39,	6	6							
65		066-668		RES, FXD, 4.7K, 5%, 1/4W	R4	1	1							
66		058-343		RES, VAR, 10K, 10%, 3/4W	R5-11, 16, 17, 19-22	13	13							
67		058-985		RES, VAR, 500K, 10%, 3/4W	R12	1	1							
68		058-693		RES, VAR, 200K, 10%, 3/4W	R13	1	1							
69		058-388		RES, VAR, 50K, 10%, 3/4W	R14	1	1							

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1 2 5 7 4 7 3 - XX

REV

A<sub>2</sub>

SHEET 4 OF 5

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
70		058-668		RES, VAR, 20K, 10%, 3/4W	R15	1	1							
71		058-342		RES, VAR, 5K, 10%, 3/4W	R18	1	1							
72		066-984		RES, FXD, 160 ,5%,1/4W	R23	1	1							
73		066-821		RES, FXD, 820 ,5%,1/4W	R24	1	1							
74		066-718		RES, FXD, 5.6K, 5%, 1/4W	R25	1	1							
75		066-865		RES, FXD, 12K, 5%, 1/4W	R27-30	4	4							
76		066-859		RES, FXD, 240 ,5%,1/4W	R33	1	1							
77		066-813		RES, FXD, 150, 5%, 1/4W	R34,63	2	2							
78						1	1							
79		066-830		RES, FXD, 10K, 5%, 1/4W	R36,57	2	2							
80		066-841		RES, FXD, 1.3K, 5%, 1/4W	R37	1	1							
81														
82		062-962		RES, FXD, 4.02K, 1%, 1/4W	R48	1	1							
83		066-652		RES, FXD, 470K, 5%, 1/4W	R49	1	1							
84		066-836		RES, FXD, 91 , 5%, 1/4W	R50	1	1							
85		066-454		RES, FXD, 1.91K, 1%, 1/4W	R53,56	2	2							
86		062-937		RES, FXD, 1.82K, 1%, 1/4W	R54	1	1							
87		062-847		RES, FXD, 100 ,1%, 1/4W	R55	1	1							
88		076-028		RES, FXD, 5.1 , 5%, 1/4W	R58,59	2	2							
89		066-863		RES, FXD, 3.6K, 5%, 1/4W	R60	1	1							
90		066-928		RES, FXD, 2.4K, 5%, 1/4W	R62,35	2	2							
91														
92		066-819		RES, FXD, 620 , 5%, 1/4W	R65	-	1							
93														
94		058-339		RES, VAR,500, 10%, 3/4W	R64	1	1							



DISTR CODE: *AF*

<b>PARTS LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b>		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE	<b>PL 1258155-02</b>		REV <b>C</b>
REVISIONS										SHEET 1 OF 2		
LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER			MODEL	NEXT ASSEMBLY		
A	PROD RELEASE			DRAWN <i>M. JORGENSEN</i>	<i>2/15/78</i>				<i>HBR-3000</i>	1261898		
C	ADDED -02 PER ECN30567	<i>MD</i>	<i>3-31-82</i>	CHECKED		DRAWING TITLE SYSTEM INSTALLATION/CABLE SET (14 CH)  HBR-3000						
				ENGRG								
				ENGRG <i>J. AIKEN</i>	<i>9/13/78</i>							
				MANAGER <i>M.A. BOOYE</i>								

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						<del>-01</del>	-02	-03	-04	-05	-06	-07	-08
1	C	1257039	01	BRACKET, CABLING SUPPORT			1						
2	B	1257068	01	HOLD DOWN, CABLE			2						
3	B	1257495	03	CABLE ASSY, RIBBON 40 POS 8 FT.			1						
4	B	1257495	04	CABLE ASSY, RIBBON 40 POS 9.5 FT.			1						
5	B	1257496	04	CABLE ASSY, RIBBON 10 POS 11.5 FT.			1						
6	B	1257496	05	CABLE ASSY, RIBBON 10 POS 12.5 FT.			1						
7		1261047	05	CABLE ASSY, 20 POS COAX 8 FT.			-						
8		1261047	07	CABLE ASSY, 20 POS COAX 9 FT.			5						
9		1261047	08	CABLE ASSY, 20 POS COAX 9.5 FT.			1						
10	C	1258085	13	CABLE BNC 10 FT			2						
11		1261047	09	CABLE ASSY, 20 POS COAX 10.0 FT.			1						
12	D	1255604	01	HEAD DRIVER ADAPTER			1						
13	D	1255606	01	PREAMP #2 ADAPTER			1						
14	C	1238324	03	LABEL, HEAD DRIVER CONTROLS			1						
15	C	1258465	02	LABEL SET, CABLE			1						
16	B	1267669	01	KIT, CABLE LABELS			1						
17	C	1259798	01	KIT, MULT, OUTLET STRIP			1						
18	D	1264075	01	FLAT CABLE CHANNEL ASSY			3						
19	D	1264075	02	FLAT CABLE CHANNEL ASSY			1						
20	B	1257495	05	CABLE ASSY, RIBBON 40 POS 10 FT.			1						

**PARTS LIST**

**AMPEX**

**DATA  
SYSTEMS  
DIVISION**

CODE IDENT **92739**

**PL 1258155-02**

SHEET 2 OF 2

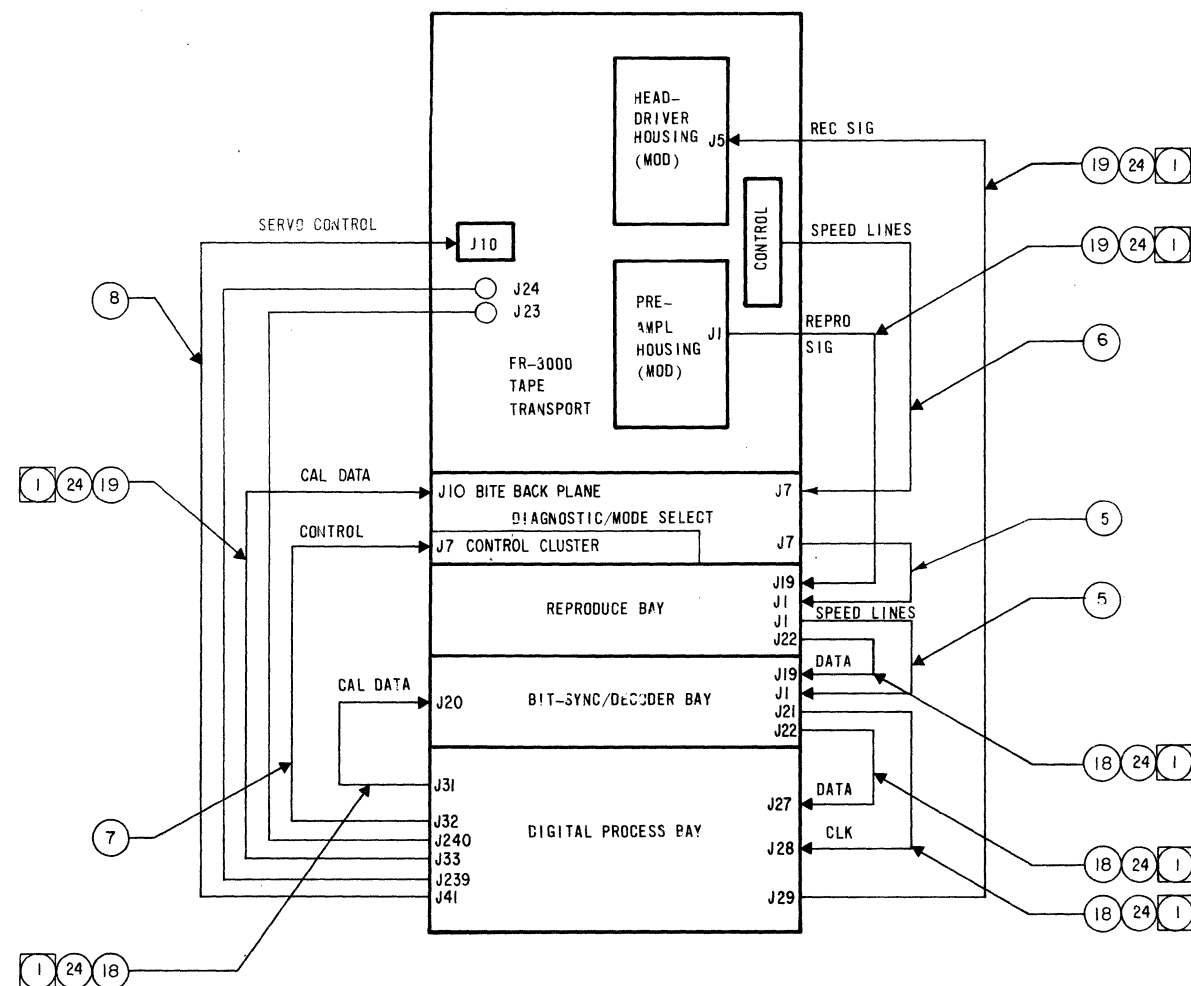
REV  
**C**

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21		302-557		CLAMP, FL CABLE .25 HG			4							
22		302-560		PAD, FOAM			4							
23		302-335		STRAP, CABLE .095 x 4.00 LG			10							
24		302-366		STRAP, CABLE .30 x 15.00 LG			20							
25		302-388		STRAP, CABLE .19 x 6.75 LG			10							
26		302-523		CLAMP CABLE			5							
27		471-071		SCR, 6-32 x .50 PNH			6							
28		501-009		WSHR #6 FL			11							
29		502-003		WSHR #6 S LK			11							
30		471-062		SCR 4-40 x 1/2 PNH			4							
31		501-008		WSHR #4 FL			4							
32		503-316		WSHR #4 FIBER			4							
33		493-005		NUT 4-40 HEX W/LK			4							
34		471-087		SCR 10-32 x 3/8 PNH			8							
35		501-070		WSHR #10 FL			8							
36		502-005		WSHR #10 SLK			8							
37		302-356		CLAMP, CABLE			1							
38		471-072		SCR 6-32 x 5/8 PNH			1							
39		496-005		NUT, 6-32 HEX W/LK			1							
40		600-117		SLVG, SHRINK BLK			1.5'							
41		1268798	01	LABELING & CABLING INSTRUCTIONS			REF							

INACTIVE SUPERSEDED BY -02



REV	DATE	DESCRIPTION	SIGNATURE AND DATE		
			DFT	CHK	ENGRG
A	-	PRODUCTION RELEASE	<i>K. Jones</i>		1
B	-	REVISED PER ECN 28066-1	<i>[Signature]</i>	7/14/80	<i>[Signature]</i>
C	-	REV PER ECN 30567	<i>[Signature]</i>	5-14-82	



NOTES:  
 1. PRIOR TO CABLE INSTALLATION, INSTALL APPROPRIATE LABEL ON BODY OF CONNECTOR AT EACH END OF CABLE:

J29	DPB	REC OUT
-----	-----	---------

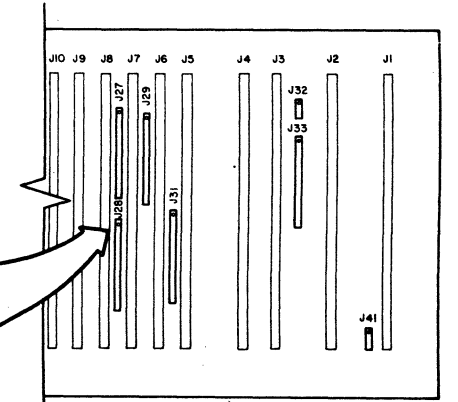
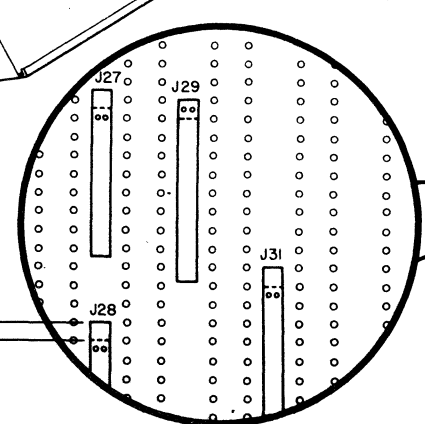
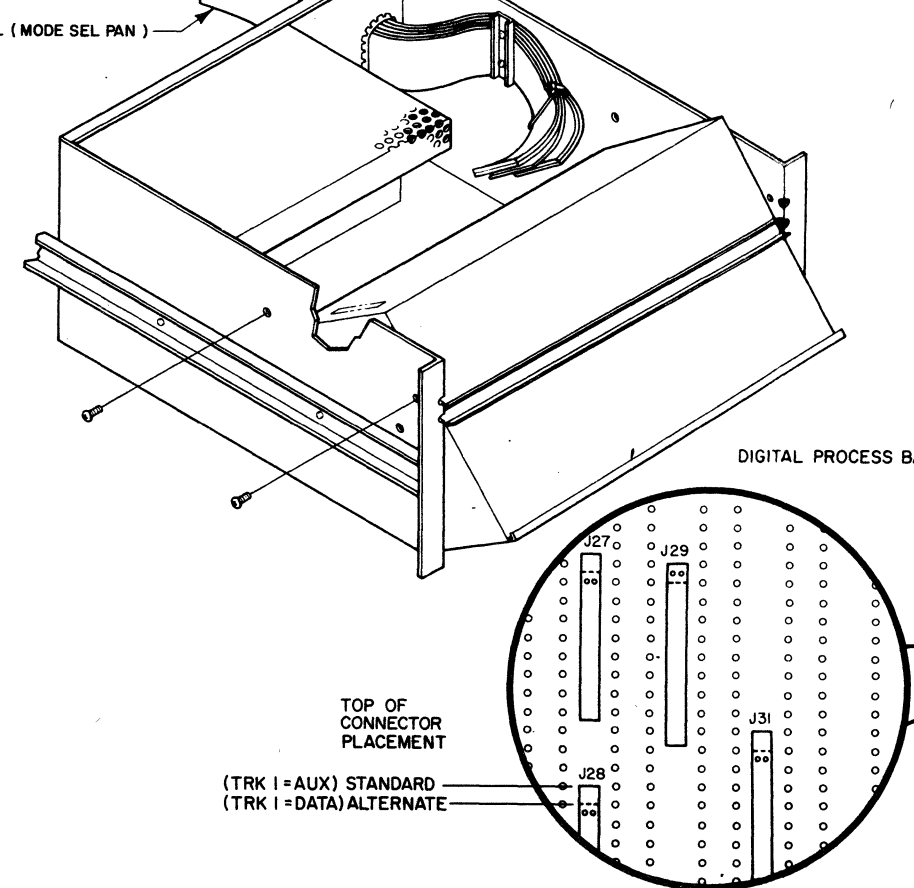
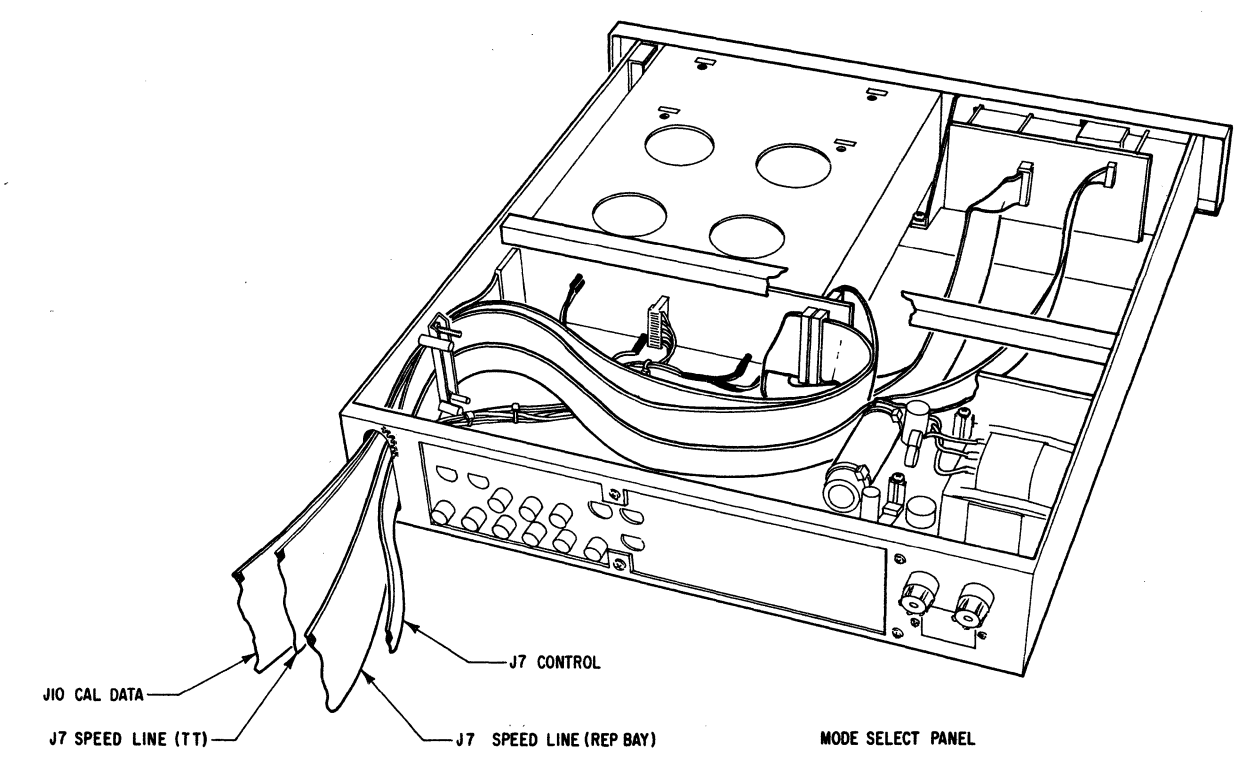
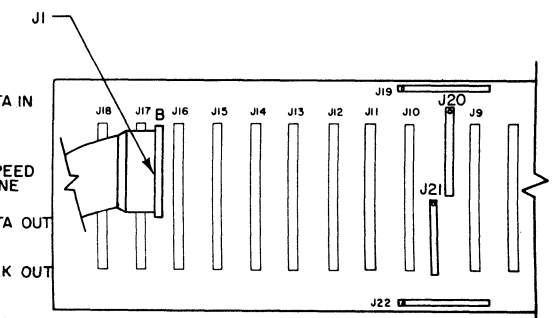
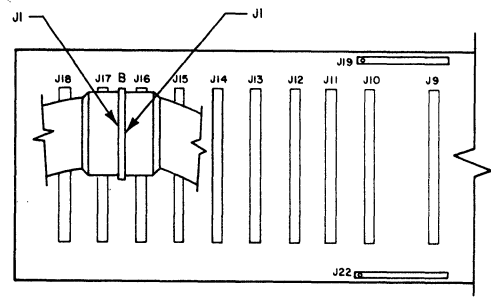
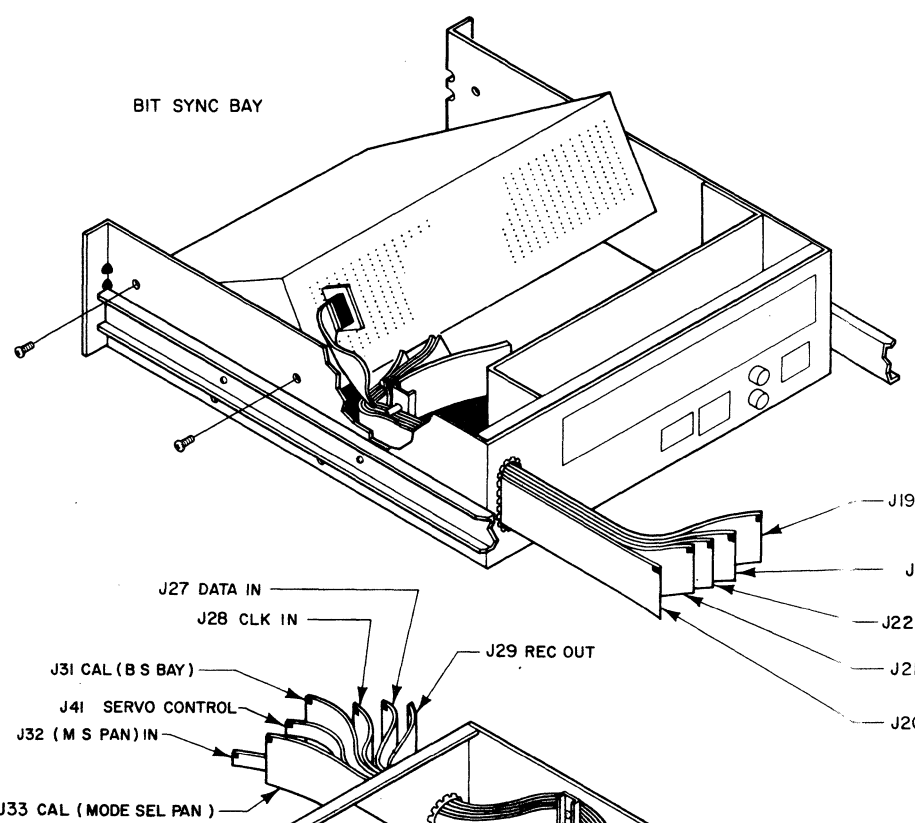
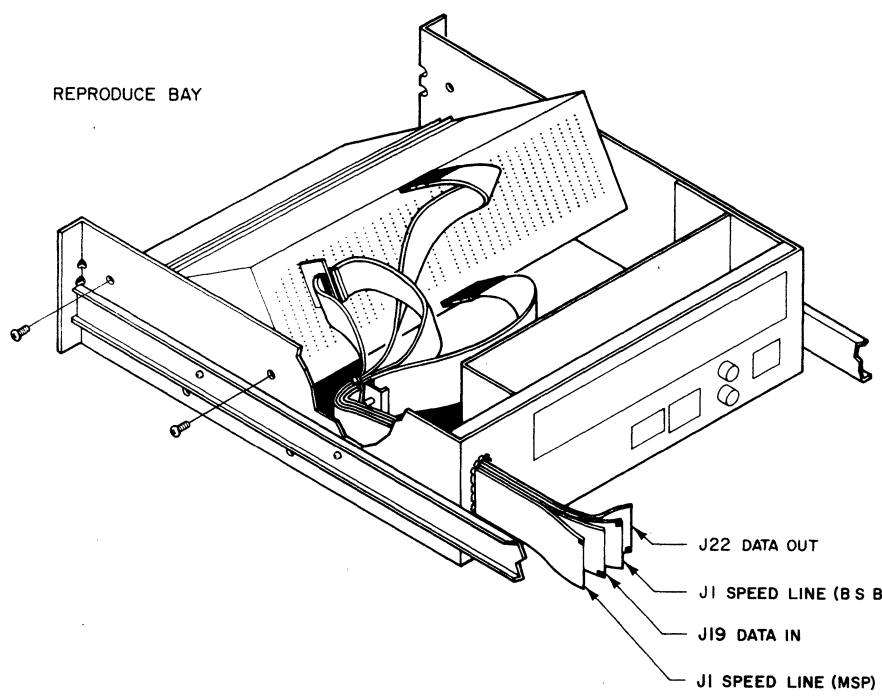
"J" NUMBER LOCATION FUNCTION

SEE SEPARATE PL

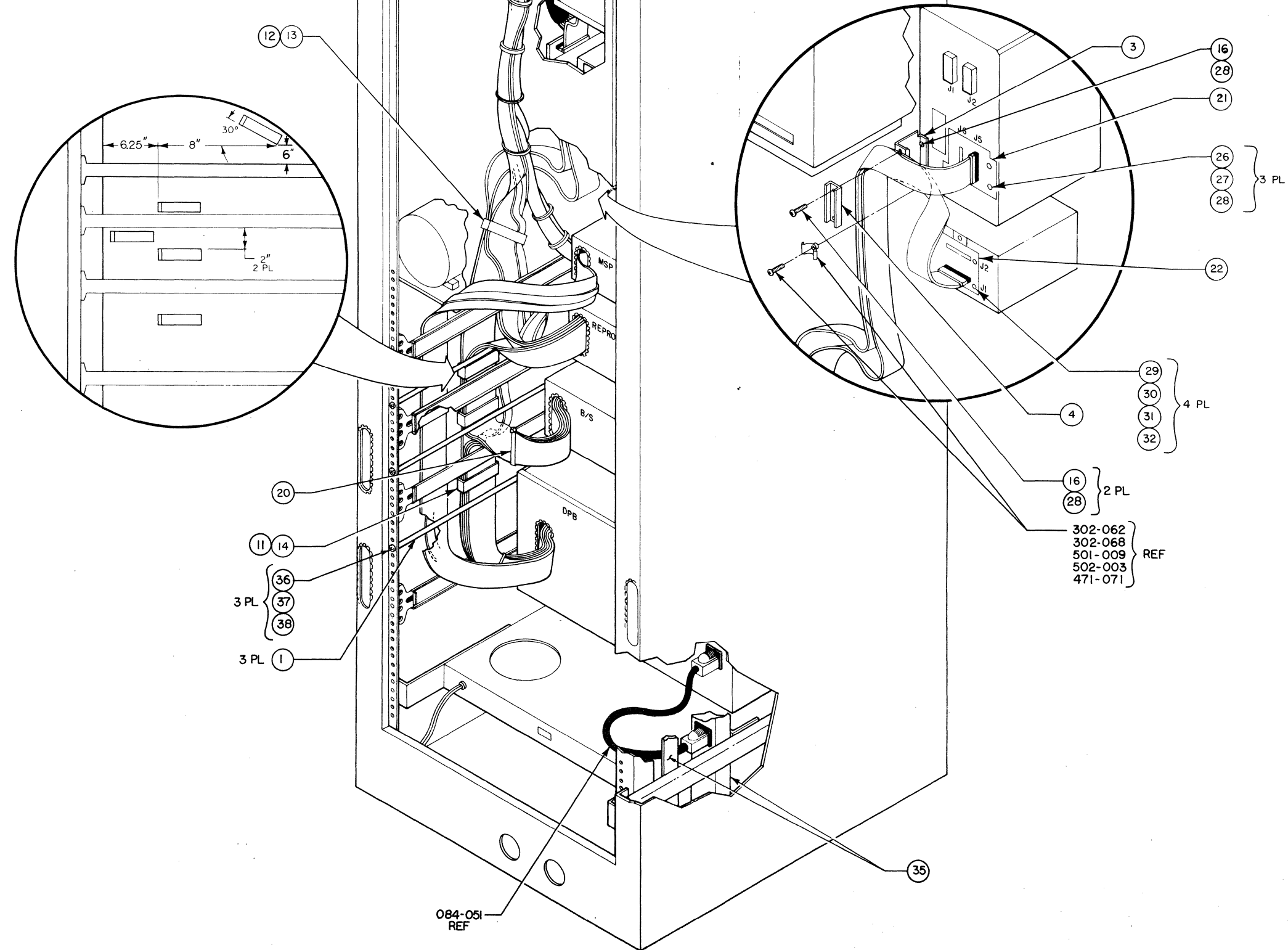
05	04	03	02	01	ITEM NO.	PART NUMBER	EQUIVALENT VENDOR OR MIL PART NUMBER (REF ONLY)	DESCRIPTION	FMC	LONG LEAD ITEM

UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE	
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		<i>K. Jones</i>		1/10/78	
TOL	2 PLC 3 PLC	ANG	CHK BY		
+			DFT APPD		
REMOVE BURRS AND SHARP EDGES	YES <input type="checkbox"/> NO <input type="checkbox"/>	ENGRG APPD	<i>[Signature]</i>		
DO NOT SCALE THIS PRINT		AUTH BY	<i>[Signature]</i>		
MATERIAL:					
FINISH:					
CAT. ITEM	NEXT ASSY	USED ON	IN MF PR		
1261898	HBR 3000				
APPLICATION		SIZE		CODE IDENT NO	
		D		92739	
		SCALE		1258155-02	
		SHEET		1 OF 3	

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGR
C		SEE SHEET ONE			



REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGR
C	-	SEE SHEET ONE	-	-	-



SIZE	CODE IDENT NO	1258155-02
<b>D</b>	<b>92739</b>	
SCALE 1/4		SHEET 3 OF 3

DISTR CODE: AF

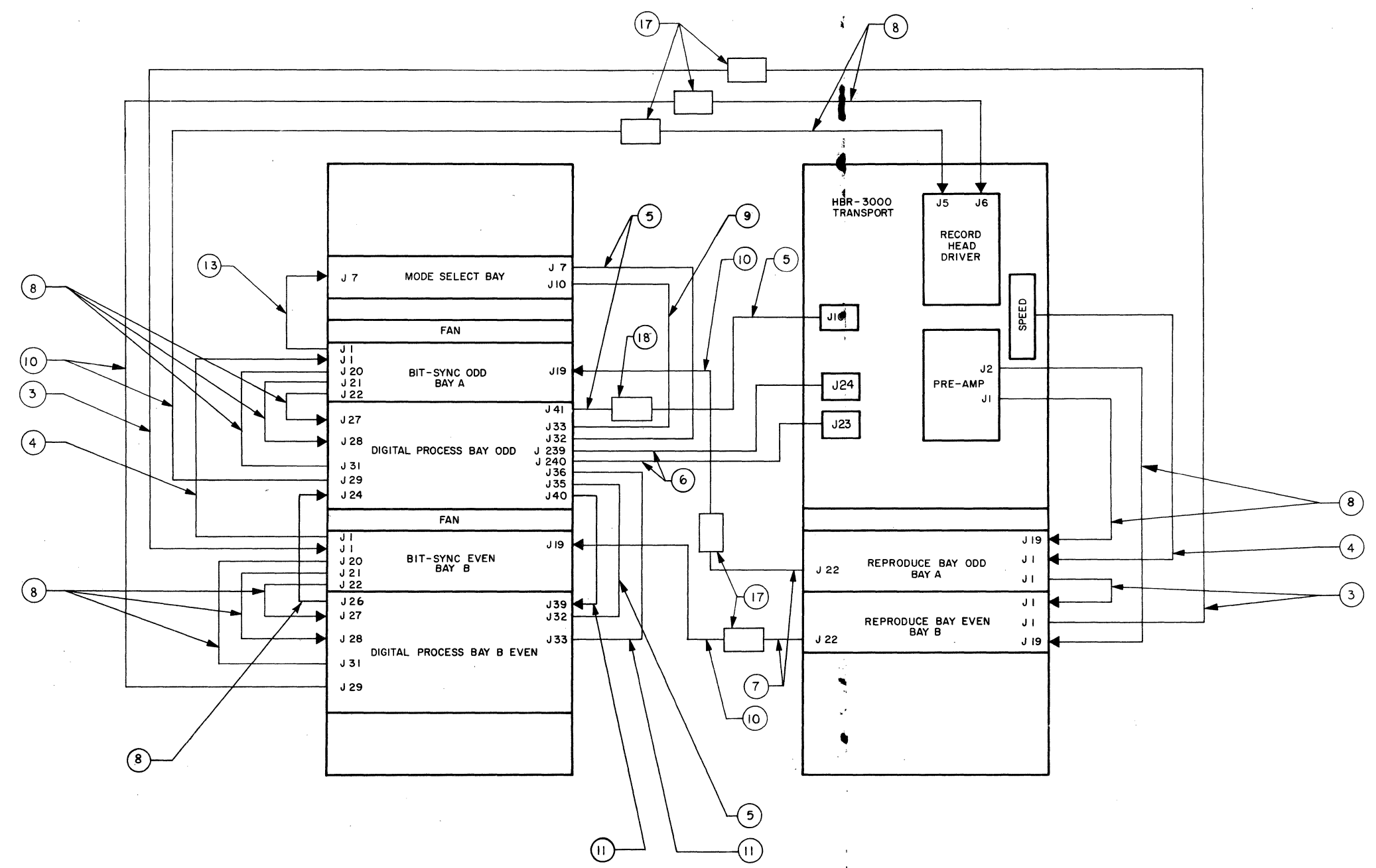
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REVISIONS										SHEET 1 OF 3			
LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER			MODEL HBR-3000		NEXT ASSEMBLY 1261899		
A	PROD. RELEASE	MAB	1-17-80	DRAWN M. Jorgensen	8-25-78	DRAWING TITLE <b>SYSTEM INSTALLATION/CABLE SET (28 TRK) HBR-3000</b>							
C	ADDED -02 PER ECN 30077	MAB	10-6-81	CHECKED ENGRG									
D	REV PER ECN 30203	MAB	3-5-82	ENGRG J. A. Aiken	9-13-78								
				MANAGER M. Booye	8-9-79								

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						-01	-02	-03	-04	-05	-06	-07	-08
1	C	1257039	01	BRACKET, CABLING SUPPORT			1						
2	B	1257068	01	HOLD DOWN, CABLE			2						
3	B	1257495	03	CABLE ASSY RIBBON 40 POS 8 FT			3						
4	B	1257495	04	CABLE ASSY, RIBBON 40 POS 9.5 FT			2						
5	B	1257496	04	CABLE ASSY, RIBBON 10 POS 11.5 FT			4						
6	C	1258085	15	CABLE ASSY, (75Ω) INTERCONN. SIGNAL			2						
7	C	1261047	05	CABLE, COAX ASSY 20 POS 8 FT			2						
8	C	1261047	07	CABLE, COAX ASSY 20 POS 9 FT			11						
9	C	1261047	08	CABLE, COAX ASSY 20 POS 9.5 FT			1						
10	C	1261047	09	CABLE, COAX ASSY 20 POS 10 FT			4						
11	C	1261047	10	CABLE, COAX ASSY 20 POS 10.5 FT			2						
12													
13	B	1257495	06	CABLE ASSY, RIBBON 40 POS 8.5 FT			1						
14	D	1255604	02	HEAD DRIVE ADAPTER			1						
15	D	1255606	02	PREAMP #2 ADAPTER			1						
16													
17	C	1257073	01	COUPLER RIBBON CABLE			5						
18	C	1257093	01	COUPLER RIBBON CABLE			1						
19	C	1259798	01	KIT, MULT. OUTLET STRIP			3						
20	B	1267669	01	KIT, CABLE LABELS			1						

PARTS LIST		AMPEX		DATA SYSTEMS DIVISION		CODE IDENT 92739	PL 1 2 5 8 1 5 6 - 0 2							REV D
ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21	C	1238324	02	LABEL, HEAD DRV			1							
22	C	1258465	02	LABEL SET, CABLE			1							
23	D	1264075	01	FLAT CABLE CHANNEL ASSY			6							
24	D	1264075	02	FLAT CABLE CHANNEL ASSY			1							
25														
26	D	1262249	03	CABINET ASSY			1							
27	D	1802939	01	LINE FILTER			1							
28														
29		302-335		STRAP, CABLE .095 x 4.00 LG			10							
30		302-366		STRAP, CABLE .30 x 15.00 LG			40							
31		302-388		STRAP, CABLE .19 x 6.75 LG			20							
32		302-523		CLAMP, CABLE			5							
33		471-078		SCR 10-32 x 3/8 PNH			14							
34		471-062		SCR 4-40 x 3/8 PNH			6							
35		471-071		SCR 6-32 x 1/2 PNH			6							
36		471-067		SCR 6-32 x 1/4 PNH			14							
37		493-005		NUT 4-40 HEX W/LK			4							
38		501-008		WSHR #4 FL			6							
39		501-009		WSHR #6 FL			19							
40		502-003		WSHR #6 S LK			17							
41		503-316		WSHR #4 FIBER			6							
42		501-070		WSHR #10 FL			14							
43		502-005		WSHR #10 S LK			14							
44		302-557		CLAMP, CABLE			4							
45		302-560		PAD, FOAM			4							



REVISION		SIGNATURE AND DATE		
NO.	DESCRIPTION	CHK	APPD	ENGRG
A	PRODUCTION RELEASE	<i>K. Kraus</i>		<i>W. J. ...</i>
B	REVISED PER ECN 28667	<i>H. ...</i>	<i>H. ...</i>	<i>W. J. ...</i>
C	REVISED PER ECN 30077	<i>H. ...</i>	<i>H. ...</i>	<i>W. J. ...</i>
D	REV PER ECN 30203	<i>H. ...</i>	<i>H. ...</i>	<i>W. J. ...</i>

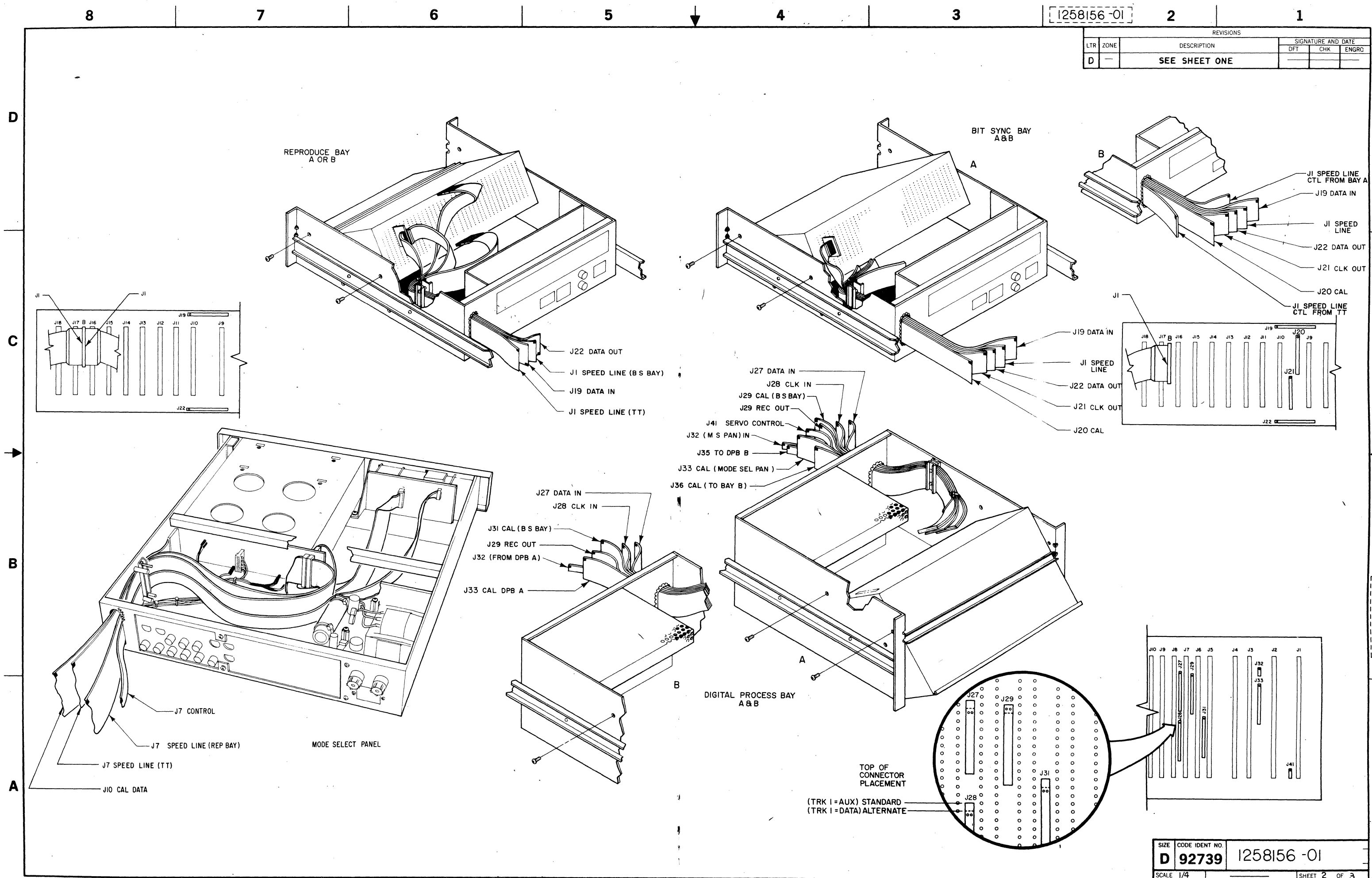


CABLING DIAGRAM

05	04	03	02	01	ITEM NO.	PART NUMBER	EQUIVALENT VENDOR OR MIL PART NUMBER (REF ONLY)	DESCRIPTION	FMC	LONG LEAD ITEM	
QUANTITY PER UNIT											
ASSY CONTROL NO.											
PARTS LIST											
NOTICE THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION. PROVIDED HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.						SIGNATURE DRAWN BY <i>K. Kraus</i> 7/20/78		DATE 7/20/78		HEADQUARTERS Redwood City, California 94063	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.						CHECK BY DFT APPD ENGRG APPD		REMOVE BURRS AND SHARP EDGES YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		<b>AMPEX</b> SYSTEM INSTALLATION CABLE SET HBR 3000 (28TR)	
DO NOT SCALE THIS PRINT						AUTH BY <i>H. ...</i> 8/1/78		MATERIAL		SIZE CODE IDENT NO <b>D 92739</b> 1258156-02	
APPLICATION CAT. ITEM NEXT ASSY USED ON IN MF PR CODE						FINISH		SCALE		SHEET 1 OF 3	

1258156-01

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK
D		SEE SHEET ONE		





8

7

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1258156-02

2

1

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
		SEE SHEET ONE			

C

D

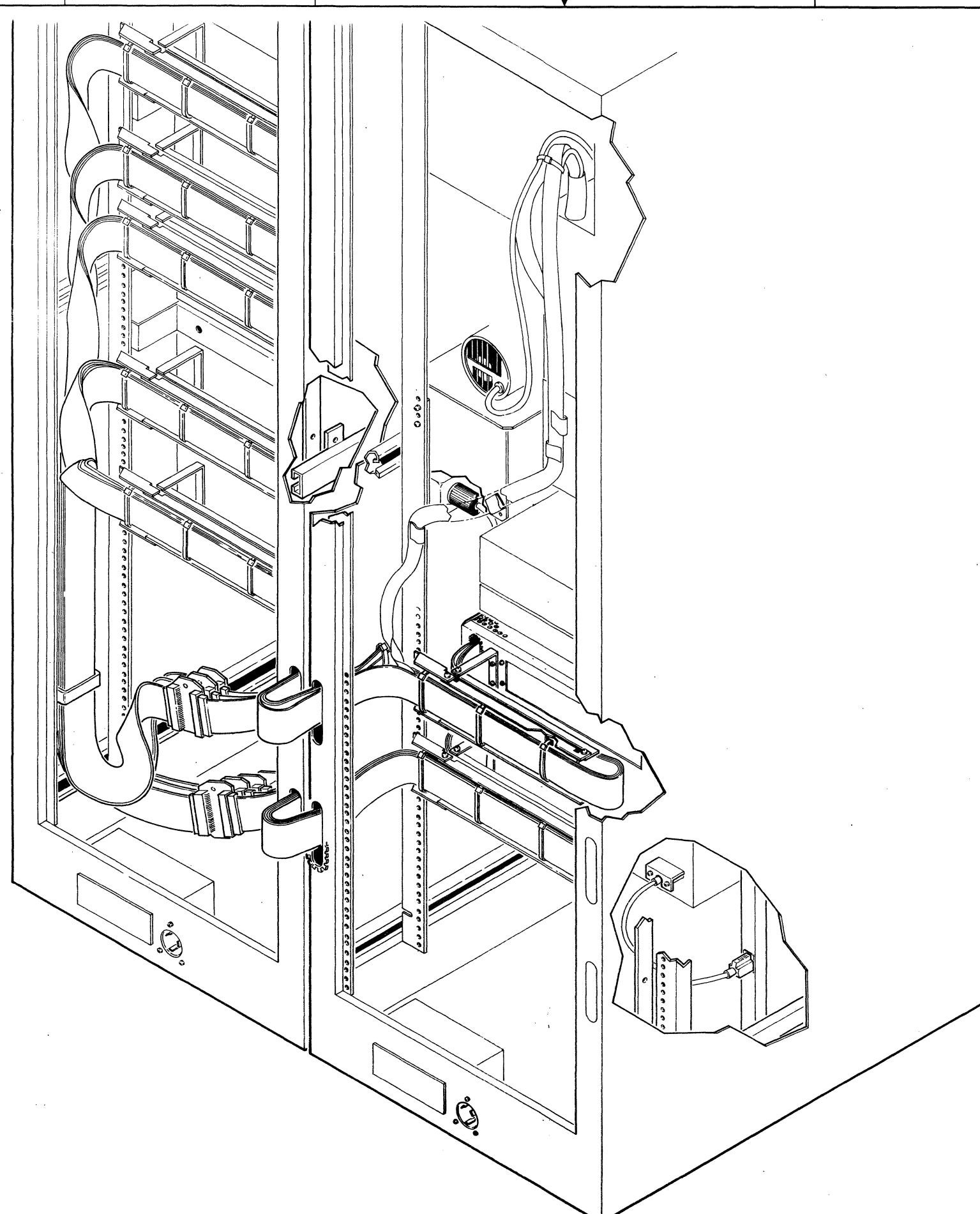
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C

B

C

A



D

C

B

A

1258156-02

SIZE	CODE IDENT NO.	1258156-02
D	92739	
SCALE	1:1	SHEET 3 OF 3

8

7

6

5

4

3

2

1

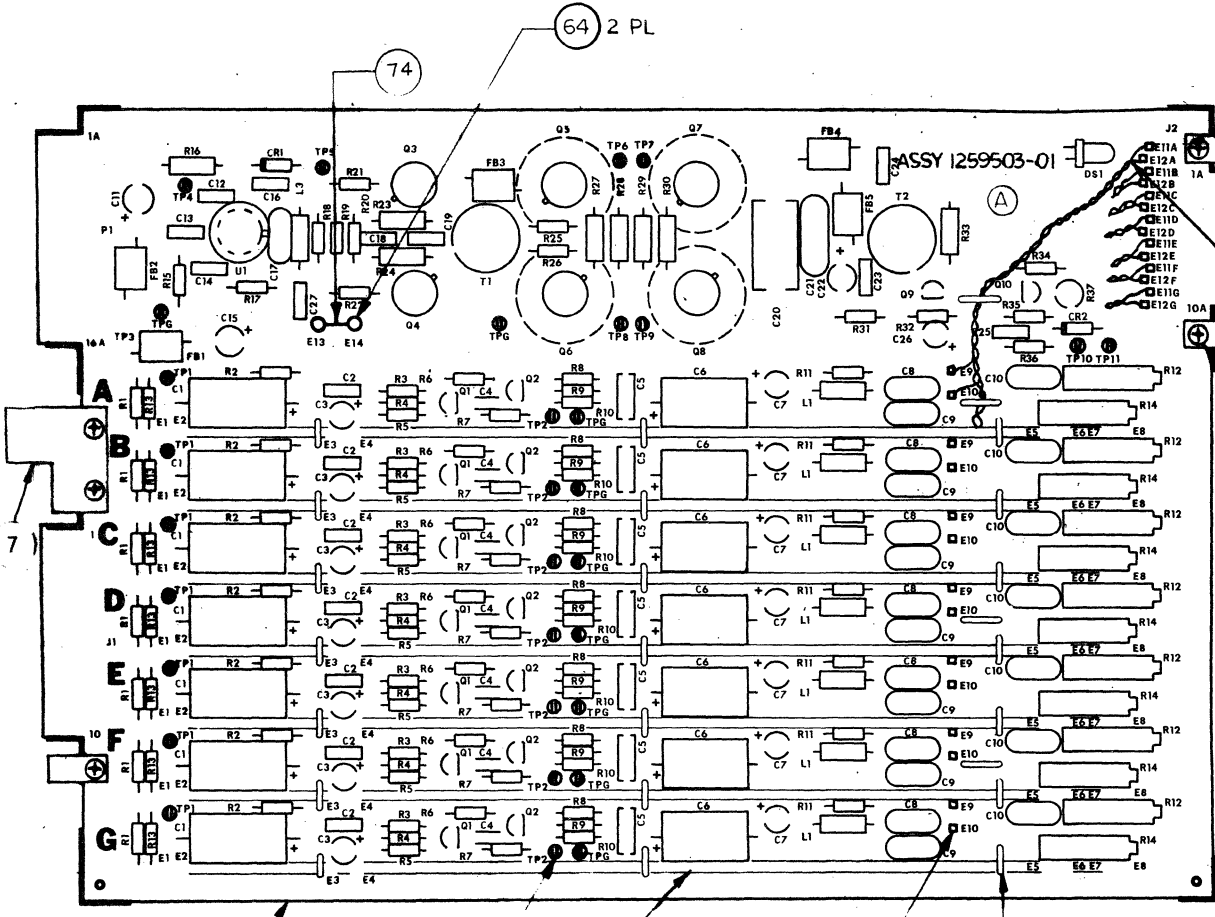
[259503-01]

DISTR CODE: AG

NOTICE

THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.

REVISIONS				
LTR	DESCRIPTION	SIGNATURE AND DATE		
		DFT	CHK	ENGRG
A	PROD RELEASE	<i>R. Hamilton</i> 10/13/80	<i>B. Wahl</i> 8-10-81	<i>Don R. To</i> 8-10-81



76 7 PL TYPICAL ROUTING A THRU G  
WHT : FROM E9 TO E11  
BLK : FROM E10 TO E12

- 4. MARK ASSEMBLY REVISION LEVEL, PER MIL-STD-130.
- 3. ASSEMBLE PER AMPEX STANDARD HC2-2.
- 2. REFERENCE SCHEMATIC 1259500-01.
- 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.

NOTES: UNLESS OTHERWISE SPECIFIED

**PARTS LIST**

DRAWN BY	<i>R. Hamilton</i>	10/13/80	ENGRG APPD	
CHK BY	<i>B. Wahl</i>	8/10/81	AUTH BY	
DFT APPD				

1 32 PL 5  
32 PL 6  
75 14 PL TYPICAL ROUTING A THRU G  
COND FROM E1 TO E8  
SHLD FROM E2 TO E7  
COND FROM E3 TO E6  
SHLD FROM E4 TO E5

28 PL 63  
70 25 PL

<b>AMPEX</b>		HEADQUARTERS Redwood City, California 94063	
<b>PRINTED WIRING BD ASSY RECORD HEAD DRIVER</b>			
NEXT ASSY		SIZE	CODE IDENT NO
HBR-3000		B	92739
USED ON		1259503-01	
APPLICATION		SCALE	SHEET
		I X I	1 OF 1

<b>PARTS LIST</b>		<b>AMPEX</b>		<b>DATA SYSTEMS DIVISION</b>		401 BROADWAY REDWOOD CITY, CALIF. 94063		CODE IDENT <b>92739</b>	ASSY DWG. SIZE <b>B</b>	<b>PL 1259503-01</b>		REV <b>A</b>
REVISIONS										SHEET <b>1</b> OF <b>4</b>		
LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER			MODEL	NEXT ASSEMBLY		
<b>A</b>	PROD REL	<i>John Dab</i>	<i>8-10-81</i>	<i>R. Sampson</i>	<i>12/13/80</i>				HBR-3000			
				CHECKED		DRAWING TITLE <b>PRINTED WIRING BD ASSY RECORD HEAD DRIVER</b>						
				ENGRG								
				ENGRG <i>M. SWYRYD</i>	<i>2/20/81</i>							
				MANAGER <i>Richard A. Vetter</i>	<i>9/17/81</i>							

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1	D	1259502	01	PRINTED WIRING BD		1								
2														
3	D	1259500	01	SCHEMATIC		REF								
4														
5	B	1255587	01	COTTER PIN	TP1A-G, TP2A-G TP3-11, TPG (9)	32								
6	B	103307	02	STAND OFF	TP1A-G, TP2A-G TP3-11, TPG (9)	32								
7	C	1254590	01	BLOCK, CONN MTG	REF: J1	1								
8	B	1253333	01	CONN, SUPPORT	REF: J1,2	3								
9	B	1263747	01	XFORMER, INTERSTAGE	T1	1								
10	B	1263748	01	XFORMER, OUTPUT	T2	1								
11														
12		063-298		CAP, 260 UF, -10 + 75%, 15V, AL	C1A-G	7								
13		030-966		CAP, .01 UF, 10%, 200V, CER	C2A-G, 12-14, 16, 18 19, 23-25, 27	17								
14		037-954		CAP, 22 UF, 20%, 15V, TA	C3A-G, C7A-G 11, 15	16								
15		030-829		CAP, 10 PF, 10%, 200V, CER	C4A-G	7								
16		055-167		CAP, .0033 PF, 5%, 50V MY	C5A-G	7								
17		063-255		CAP, 300 UF, -10 + 100%, 6V, AL	C6A-G	7								
18		034-222		CAP, 100 PF, 1%, 500V, MICA	C8A-G	7								
19		034-225		CAP, 220 PF, 5%, 500V, MICA	C9A-G	7								
20		034-259		CAP, 56 PF, 1%, 500V, MICA	C10A-G	7								





**PARTS LIST**

**AMPEX**

**DATA  
SYSTEMS  
DIVISION**

CODE IDENT **92739**

**PL 1259503 - 01**

REV

SHEET **4** OF **4**

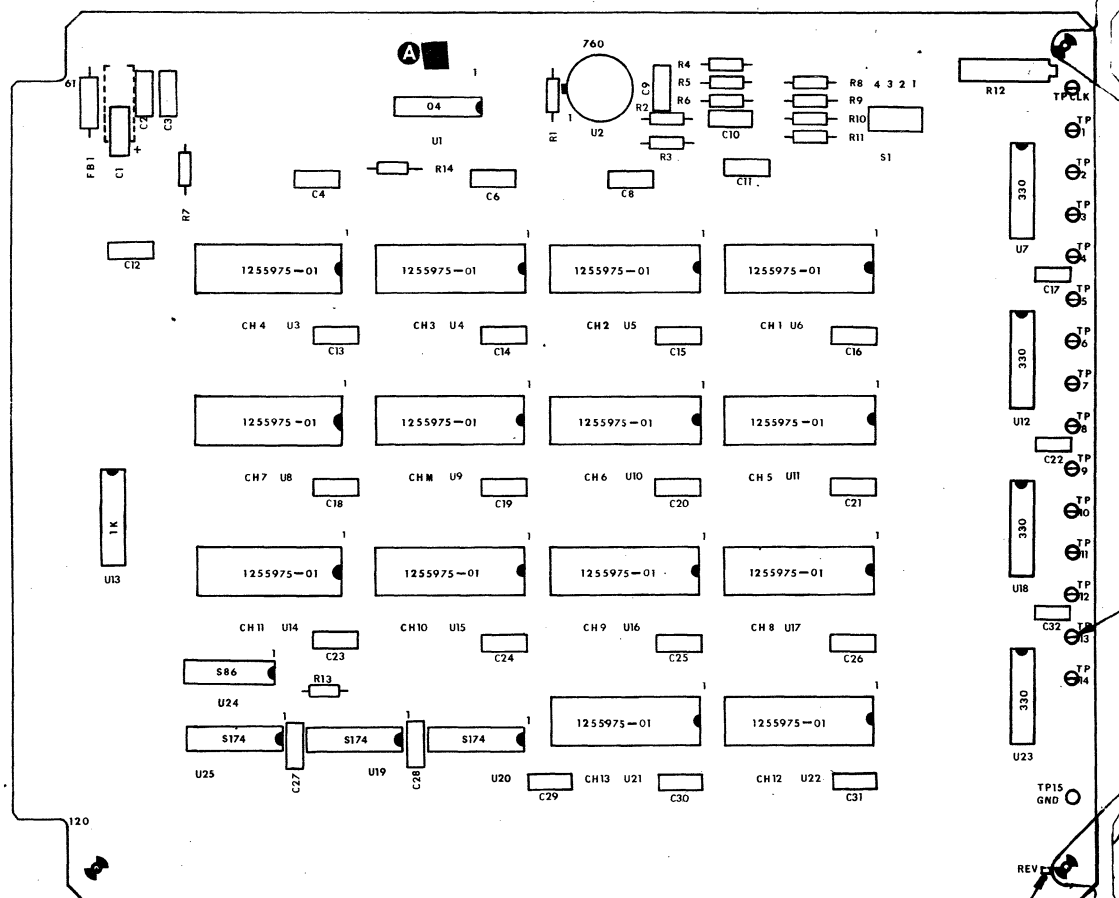
**A**

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
71		471-061		SCR, PHD, 4-40 x .312		5								
72		502-008		WSHR, S LK, #4		5								
73														
74		615-090		WIRE, BARE, 24G		0.2'								
75		616-515		CABLE, COAX, 50Ω		8.5'								
76		616-618		WIRE, TW PR, 30G		4.5'								
77		087-388		HEAT SINK COMPOUND	REF: Q5-8	AR								

1259673-01

DISTR CODE: AG

NOTICE  
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF AMPLEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.



REVISIONS				
LTR	DESCRIPTION	SIGNATURE AND DATE		
		DFT	CHK	ENGRG
A	REV PER ECR 29781-1 PRODUCTION RELEASE	<i>C. B. ...</i> 7-31-81	<i>M. D.</i>	<i>H. Wall</i> 7-31-81
B	REV PER ECN 30095-1	<i>H. ...</i> 10-7-81		<i>H. Wall</i> 10-28-81
C	REV PER ECN 30527	<i>H. ...</i> 3-18-82		<i>H. Wall</i> 4-23-82

- 4. MARK ASSEMBLY REVISION LEVEL, PER MIL-STD-130.
- 3. ASSEMBLE PER AMPLEX STANDARD HC2-2.
- 2. REFERENCE SCHEMATIC 1259670-01.
- 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.

NOTES: UNLESS OTHERWISE SPECIFIED

■ PARTS LIST

DRAWN BY	<i>R. J. ...</i>	1/5/81	ENGRG APPD	
CHK BY			AUTH BY	<i>H. K. ...</i>
DFT APPD				

		<b>AMPEX</b>		HEADQUARTERS Redwood City, California 94063	
		<b>PRINTED WIRING BD ASSY</b>			
		ENCODER NO. 1			
CAT	HBR3000	SIZE	CODE IDENT NO	1259673-01	
NEXT ASSY	USED ON	B	92739		
APPLICATION		SCALE	1 X 1	SHEET	1 OF 1

DIST CODE: AG

PARTS LIST		AMPEX		DATA PRODUCTS DIVISION		401 BROADWAY REDWOOD CITY, CALIF. 94063		ASSY DWG SIZE B		PL 1259673-01		REV C	
REVISIONS				SIGNATURES		DATE		CODE IDENT		CONTRACT NUMBER		NEXT ASSEMBLY CAT	
A	REV PER ECR 29657-1 PROD RELEASE			CFu	H. Dahl	12/21/80	09150	92739	DRAWING TITLE PRINTED WIRING BD ASSY ENCODER NO. 1				
B	REV PER ECN 30095-1			H. Dahl	10-22-80								
C	REV PER ECN 30527			H. Dahl	3-23-81								
					MANAGER	G. A. Vellet	12/28/81						
ITEM NO	DWG SIZE	PART / DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY							
						-01	-02	-03	-04	-05	-06	-07	-08
1	D	1259672	01	PRINTED WIRING BD		1							
2													
3	D	1259670	01	SCHEMATIC		REV B							
4	B	1255587	01	COTTER PIN	TP CLK, TP1-15	16							
5	D	1255975	01	IC, M <sup>2</sup> HYBRID	U3-6, 8-11, 14-17, 21, 22	REF							
6	B	103307	02	STANDOFF, .125 LONG	(REF) TP CLK, TP1-15	16							
7													
8		037-764		CAP, 33 UF, 10%, 10V, TA	C1	1							
8		037-740		CAP, 33 UF, 10%, 10V, TA	(ALTERNATE ITEM 8)								
9		030-966		CAP, .01 UF, 10%, 200V, CER	C2-4, 6, 9, 11-32	27							
10		064-316		CAP, 2.2 UF, 20%, 50V, CER	C8	1							
11		034-941		CAP, 51 PF, 5%, 500V, MICA	C10	1							
12													
13													
14		051-770		CHOKE, FERRITE	FB1	1							
15													
16		066-849		RES, FXD, 100K, 5%, 1/4W	R1	1							
17		066-665		RES, FXD, 1K, 5%, 1/4W	R2, 3, 5-7, 9-11, 13, 14	10							
18		066-824		RES, FXD, 1.5K, 5%, 1/4W	R4.8	2							
19		058-340		RES, VAR, 1K, 10%, 3/4W	R12	1							







4

3

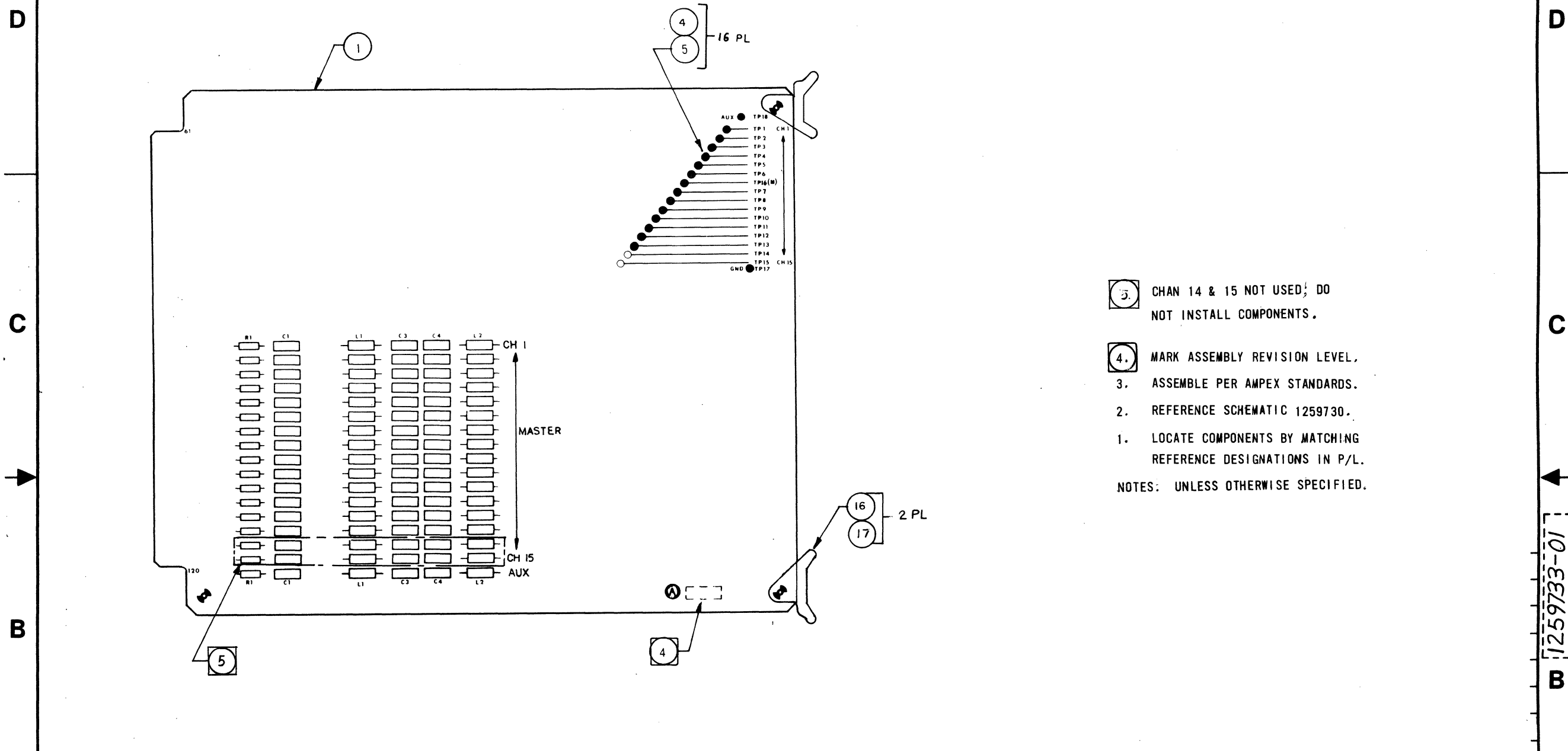
2

1259733-01

DISTR CODE: AG

1

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	-	PRODUCTION RELEASE	<i>[Signature]</i> 2-3-81	<i>[Signature]</i> 4-6-81	<i>[Signature]</i> 81



- 3. CHAN 14 & 15 NOT USED; DO NOT INSTALL COMPONENTS.
  - 4. MARK ASSEMBLY REVISION LEVEL.
    - 3. ASSEMBLE PER AMPEX STANDARDS.
    - 2. REFERENCE SCHEMATIC 1259730.
    - 1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.
- NOTES: UNLESS OTHERWISE SPECIFIED.

1259733-01

QUANTITY PER UNIT		ITEM NO.	PART NUMBER	EQUIVALENT VENDOR OR MIL PART NUMBER (REF ONLY)	DESCRIPTION	FMC	LONG LEAD ITEM		
-05	-04							-03	-02
ASSY CONTROL NO.		PARTS LIST							
NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE			
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED. IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DRAWN BY <i>[Signature]</i>		2-3-81			
		TOL		CHK BY <i>[Signature]</i>		4/6/81			
		+ 2 PLC 3 PLC		DFT APPD		ENGRG APPD		8-10-81	
		REMOVE BURRS AND SHARP EDGES		AUTH BY <i>[Signature]</i>		2/4/81			
		YES <input type="checkbox"/> NO <input type="checkbox"/>		DO NOT SCALE THIS PRINT					
MATERIAL:		FINISH:		SIZE		CODE IDENT NO.			
				C		92739			
APPLICATION		1255989 HBR		SCALE 1/1		CPA 9429-21A277			
CAT. ITEM		NEXT ASSY		USED ON		IN MF PR CODE			

**AMPEX**  
 HEADQUARTERS  
 Redwood City,  
 California 94063

**PRINTED WIRING BD ASSY,  
 FILTER, 3.3 MHz, 75 OHMS**

1259733-01  
 SHEET 1 OF 1

4

3

2

1

DISTR CODE: AH

<b>PARTS LIST</b>	<b>AMPEX</b>	<b>DATA SYSTEMS DIVISION</b>	401 BROADWAY REDWOOD CITY, CALIF. 94063	CODE IDENT <b>92739</b>	ASSY DWG. SIZE <b>D</b>	<b>PL 1261898-02</b>	REV <b>G</b>
REVISIONS						SHEET <b>1</b> OF <b>2</b>	

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE	CONTRACT NUMBER	MODEL	NEXT ASSEMBLY
A	PROD RELEASE			DRAWN <i>M. JORGENSEN</i>	<i>8/1/79</i>		HBR-3000	CAT
F	ADD -02 PER ECN 29592-1	<i>A Dahl</i>	<i>12-10-81</i>	CHECKED		DRAWING TITLE <b>HBR 3000, 14 CH SYSTEM</b>		
			<i>12-3-81</i>	ENGRG				
G	REV PER ECN 30557	<i>A Dahl</i>	<i>12-3-82</i>	ENGRG				
				MANAGER <i>M.A. BOOYE</i>	<i>8/9/79</i>			

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1		1254678	01	PWA, PRE-AMP NO. 1			8							
2		1256905	03	REPRODUCE TRAY ASSY			1							
3														
4		1256898	03	BIT SYNC TRAY ASSY (A) BAY			1							
5		1256003	01	PWA, MASTER CONTROL			1							
6		1256899	03	DIGITAL PROCESS TRAY ASSY (A) BAY			1							
7		1256343	01	PWA, PARA OR SER SELECT			1							
8		1257353	03	PWA, SYNC INSERTER			1							
9		1259733	01	PWA, FILTER			1							
10		1803064	02	PWA, MASTER DESKEW			1							
11		1259673	01	PWA, ENCODER NO. 1			1							
12		1803073	03	PWA, CALIBRATOR NO. 1			1							
13		1803077	01	PWA, CALIBRATOR NO. 2			1							
14		1258155	01	SYSTEM INST. CABLE SET			1							
15		1258207	02	HOUSING ASSY, PREAMP NO. 2			1							
16		1259503	01	PWA, HD DRIVER			2							
17		1258377	03	HD. DRIVER HOUSING ASSY 13.6 MHZ			1							
18		1802846	06	PWA, PRE-AMP NO. 2			2							
19		1261479	01	RECORD HD ASSY			1							
20		1261485	01	REPRO HD ASSY			1							

INA CTIVE SUPERSEDED BY -02

## PARTS LIST

AMPEX

DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

PL 1261898-02

SHEET 2 OF 2

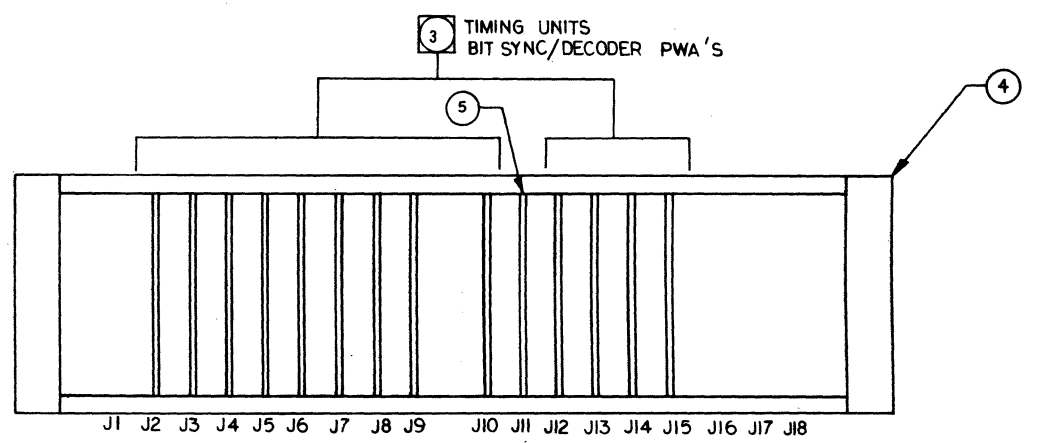
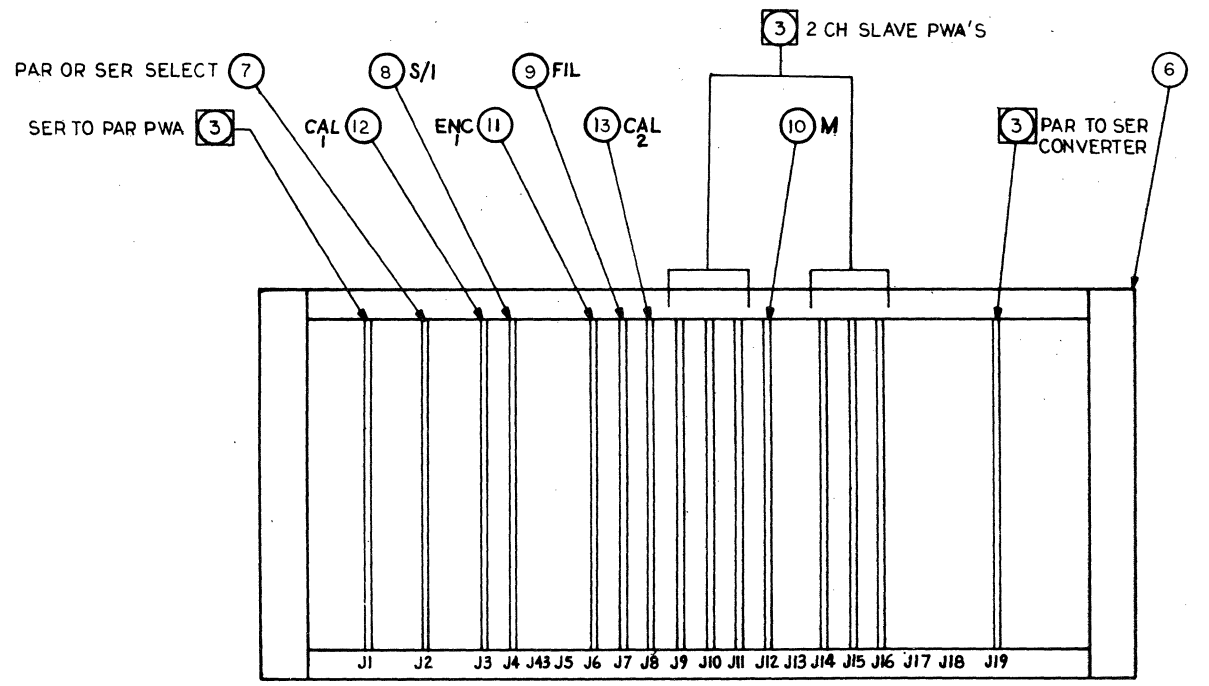
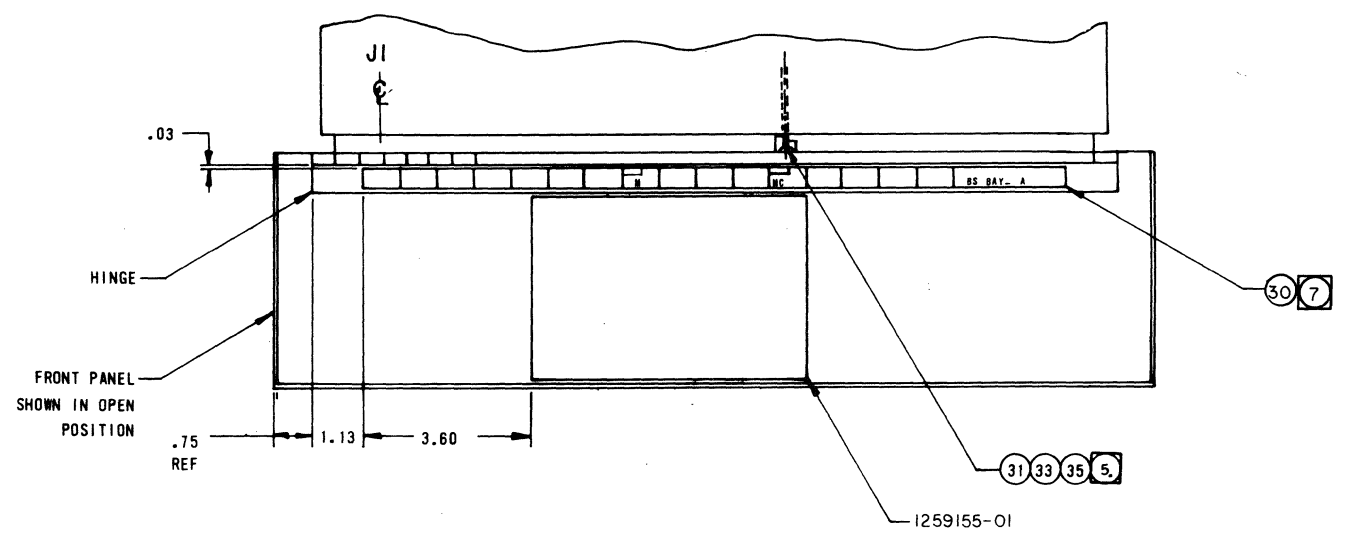
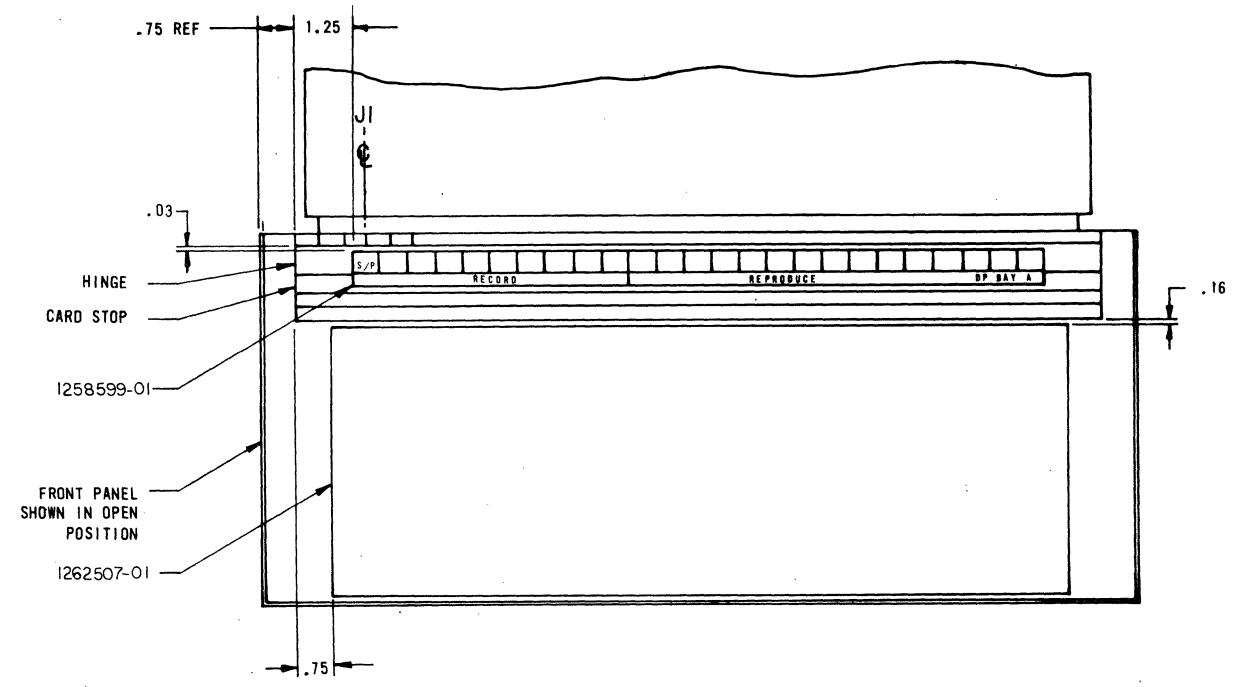
REV

G

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21		1802821	05	TAPE SECT ASSY			1							
22		1261968	01	FILLER PANEL			1							
23		1261968	02	FILLER PANEL			1							
24		1812528	01	FAN ASSY			1							
25														
26														
27														
28														
29		1258595	02	LABEL,14 TRACK REPRO BAY	6		1							
30		1258595	04	LABEL, 14 TRACK REPRO BAY	7		1							
31		1258677	01	CHANNEL MARKER 1-14	5		2							
32														
33		1258775	01	MODULE COLOR MARKER MAG	5		1							
34		1258775	02	MODULE COLOR MARKER BLU	5		1							
35		1258775	03	MODULE COLOR MARKER BLK	5		1							
36		1262015	01	MANUAL, OPER. HBR-3000			1							
37		1802854	03	MANUAL, MAINT. FR3000			1							
38		1802902	03	MANUAL, ACC FR3000			1							
39		1262016	01	MANUAL, DIG. HBR			1							
40		1251520	01	NAMEPLATE, SYSTEM IDENT.	11		1							
41		750-354		TAPE, 799,1 X 14			1							
42		102-034		REEL, EMPTY, 1 X 14			1							
43		1258525	XX	MODE SELECT PANEL			REF							
44		1802824	XX	FOOTAGE COUNTER ASSY			REF							



REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK
G	-	SEE SHEET ONE		



DIGITAL PROCESS (A) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

BIT SYNC (A) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

DISTR CODE: AH

**PARTS LIST**

**AMPEX**

**DATA SYSTEMS DIVISION**

401 BROADWAY  
REDWOOD CITY,  
CALIF. 94063

CODE IDENT **92739**

ASSY DWG. SIZE  
**D**

**PL 1261899-02**

SHEET **1** OF **2**

REV **G**

REVISIONS

LTR	DESCRIPTION	APPD	DATE	SIGNATURES	DATE
A	PROD RELEASE			DRAWN <i>M. JORGENSEN</i>	<i>8/1/79</i>
E	ADDED -02 PER ECN 29593-1	<i>M. JORGENSEN</i>	<i>9-11-81</i>	CHECKED	
F	REV PER ECN 30412	<i>M. JORGENSEN</i>	<i>5-2-82</i>	ENGRG	
G	REV PER ECN 30556	<i>M. JORGENSEN</i>	<i>9-23-82</i>	MANAGER <i>M.A. BOOYE</i>	<i>8/9/79</i>

CONTRACT NUMBER

MODEL  
HBR-3000

NEXT ASSEMBLY  
CAT

DRAWING TITLE

HBR-3000, 28 CH SYSTEM

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
1		1254678	01	PWA, PRE-AMP #1			16							
2		1256905	03	REPRODUCE TRAY ASSY			2							
3														
4		1256898	03	BIT SYNC TRAY ASSY (A) BAY			1							
5		1256003	01	PWA, MASTER CONTROL			2							
6		1256898	04	BIT SYNC TRAY ASSY (B) BAY			1							
7														
8		1256899	03	DIGITAL PROCESS TRAY ASSY (A) BAY			1							
9		1256343	01	PWA, PARA OR SER SELECT			2							
10		1259673	01	PWA, ENCODER NO. 1			2							
11		1257353	03	PWA, SYNC INSERTER			2							
12		1259733	01	PWA, FILTER			2							
13		1803064	02	PWA, MASTER DESKEW			1							
14		1803073	03	PWA, CALIBRATOR NO. 1			2							
15		1803077	01	PWA, CALIBRATOR NO. 2			2							
16		1256899	04	DIGITAL PROCESS TRAY ASSY (B) BAY			1							
17		1802995	02	PWA, SLAVE MASTER DESKEW			1							
18														
19		1258156	02	SYSTEM INST. CABLE SET			1							
20		1258207	01	HOUSING ASSY, PREAMP NO. 2			1							

INACTIVE SUPERSEDED BY -02

⑩



## PARTS LIST

AMPEX

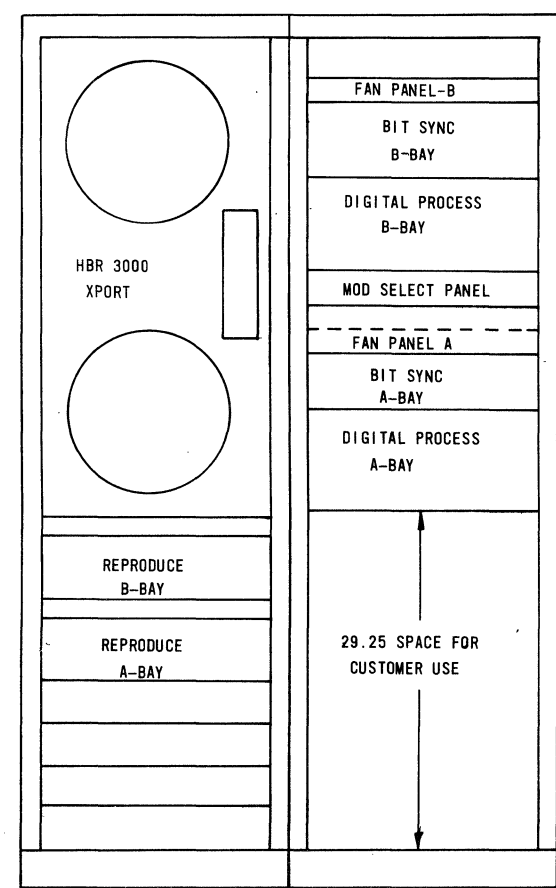
DATA  
SYSTEMS  
DIVISION

CODE IDENT 92739

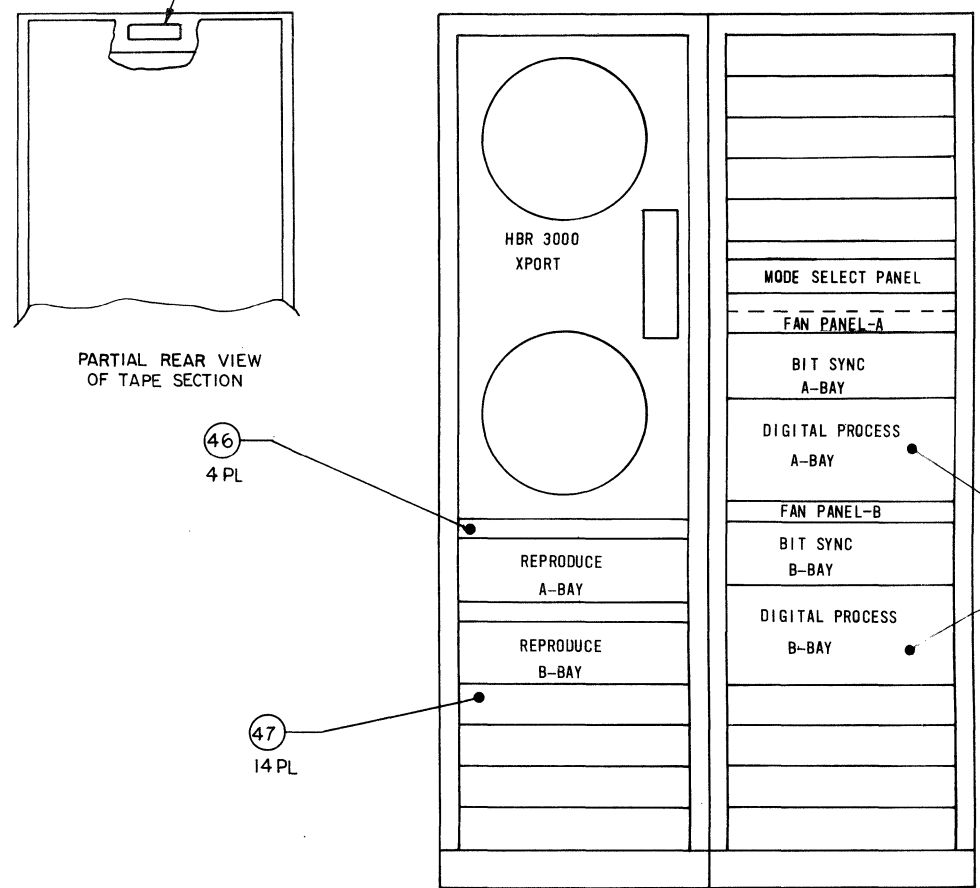
PL 1261899-02  
SHEET 2 OF 2REV  
G

ITEM NO	DWG SIZE	PART/DRAWING NUMBER	-XX	DESCRIPTION	REFERENCE	QUANTITY REQUIRED PER ASSEMBLY								
						-01	-02	-03	-04	-05	-06	-07	-08	
21		1259503	01	PWA, HEAD DRIVER			4							
22		1258377	03	HD DRIVER HOUSING ASSY 13.6 MHZ			1							
23		1802846	06	PWA, REPRO PRE-AMP NO. 2			4							
24		1261845	01	RECORD HD ASSY			1							
25		1261846	01	REPRO HD ASSY			1							
26		1802821	05	TAPE SECT ASSY			1							
27														
28		1812528	01	FAN ASSY			2							
29		1261968	01	FILLER PANEL			4							
30		1261968	02	FILLER PANEL			14							
31		1258677	01	CHANNEL MARKER 1-14		5	2							
32		1258677	02	CHANNEL MARKER 15-28		5	2							
33		1258775	01	MODULE COLOR MARKER MAG		5	1							
34		1258775	02	MODULE COLOR MARKER BLU		5	1							
35		1258775	03	MODULE COLOR MARKER BLK		5	1							
36		1262015	01	MANUAL, OPER HBR-3000			1							
37		1802854	03	MANUAL, MAINT FR-3000			1							
38		1802902	03	MANUAL, ACC. FR-3000			1							
39		1262016	01	MANUAL, DIG-HBR			1							
40		1251520	01	NAMEPLATE, SYSTEM IDENT.		9	1							
41		750-354		TAPE, 799, 1 X 14			1							
42		102-034		REEL, EMPTY, 1 X 14			1							
43														
44		1258525	XX	MODE SELECT PANEL			REF							
45		1802824	XX	FOOTAGE COUNTER ASSY			REF							

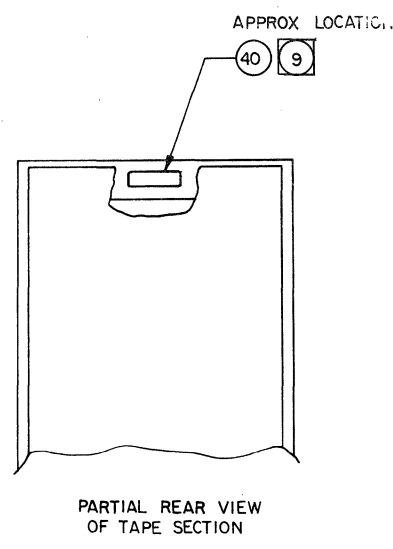
REVISIONS					
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE		
			DFT	CHK	ENGRG
A	-	PRODUCTION RELEASE	E. M. 11-2-79	E.J. DAHL 11-8-79	M.A.B. 12-9-79
E	-	ADDED -02 PER ECN 29593-1	H. Sano 6-28-81	H. Dahl 4-11-81	Nov Dahl 4-11-81
F	-	REV PER ECN 30412	H. Sano 2-26-82	H. Sano 5-4-82	H. Sano 3-8-82
G	-	REV PER ECN 30556	H. Sano 4-5-82	H. Sano 4-8-82	H. Sano 4-22-82



ALTERNATE SYSTEM CONFIGURATION



STANDARD SYSTEM CONFIGURATION



PARTIAL REAR VIEW OF TAPE SECTION

NOTES: UNLESS OTHERWISE SPECIFIED, THE FOLLOWING INSTRUCTION SHALL BE PERFORMED AT FINAL SYSTEMS TEST AS DIRECTED BY SALES ORDER.

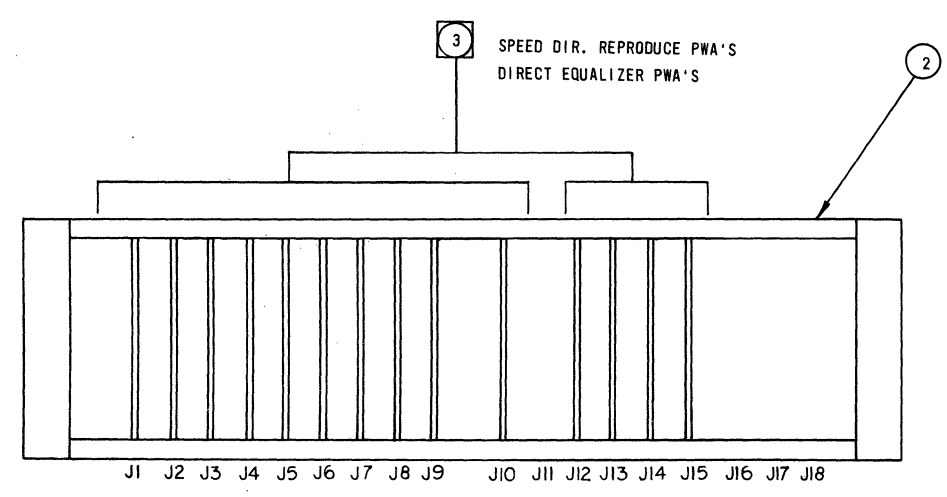
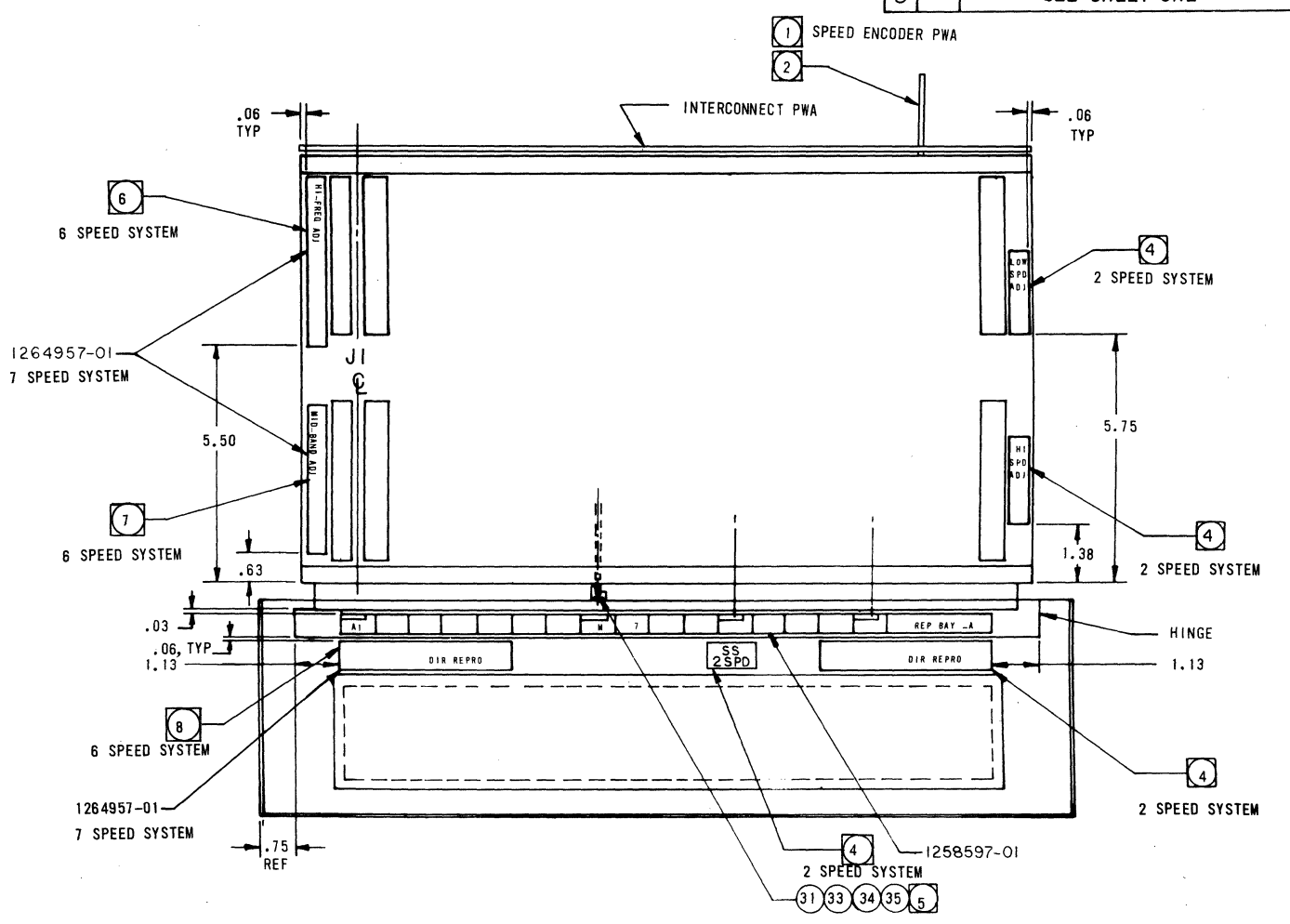
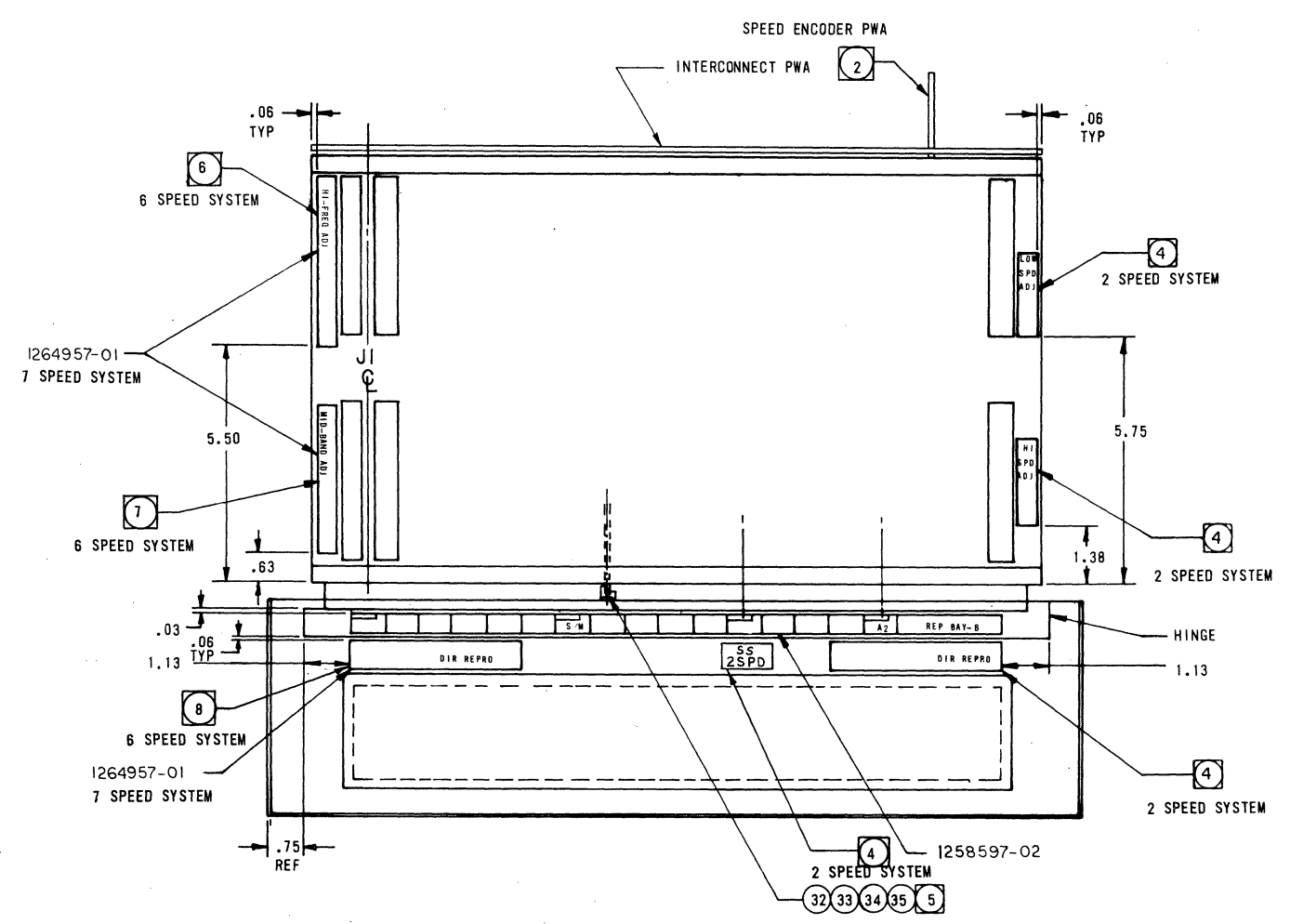
- 1. INSTALL JUMPER E22-E23.
- 2. REMOVE JUMPER E20-E21 WHEN 2 SPEED SYSTEM IS PROVIDED.
- 3. PWA'S TO BE PROVIDED AS DIRECTED BY SALES ORDER.
- 4. APPLY LABELS (1262515) WHEN 2 SPEED SYSTEM IS PROVIDED.
- 5. APPLY APPROPRIATE CHANNEL MARKERS ITEM 31, 32 AND COLORED MODULE MARKERS ITEM 33, 34 OR 35 TO PWA HANDLES. COLORED MARKERS ARE FOR CHANNELS A1, A2, M, MC, S/M, & SS; NUMERICAL MARKERS ARE FOR ALL CHANNELS. COLORED MARKERS ON PWA HANDLES ARE TO CORRESPOND TO COLORS ON THE PANEL LABEL.
- 6. APPLY LABEL (1262517) "MID-BAND ADJ" AT THIS LOCATION FOR 6 SPEED SYSTEM.
- 7. APPLY LABEL (1262517) "HI-FREQ ADJ" AT THIS LOCATION FOR 6 SPEED SYSTEM.
- 8. APPLY LABEL (1262517) "DIR. REPRO 6 SPEED" FOR 6 SPEED SYSTEM.
- 9. MARK MODEL, SYSTEM, SERIAL NO'S & ELECTRICAL DATA PER MIL-STD-130.
- 10. SEE SHEET 3 TABLE 1 FOR DIGITAL PROCESS BAY INTERNAL CABLING INSTRUCTIONS. NOTE: THIS CABLING MUST BE ACCOMPLISHED PRIOR TO INSTALLING ANY CABLES PROVIDED IN THE SYSTEM INSTALLATION CABLE SET (ITEM 19) 1258156.

SEE SEPARATE PARTS LIST

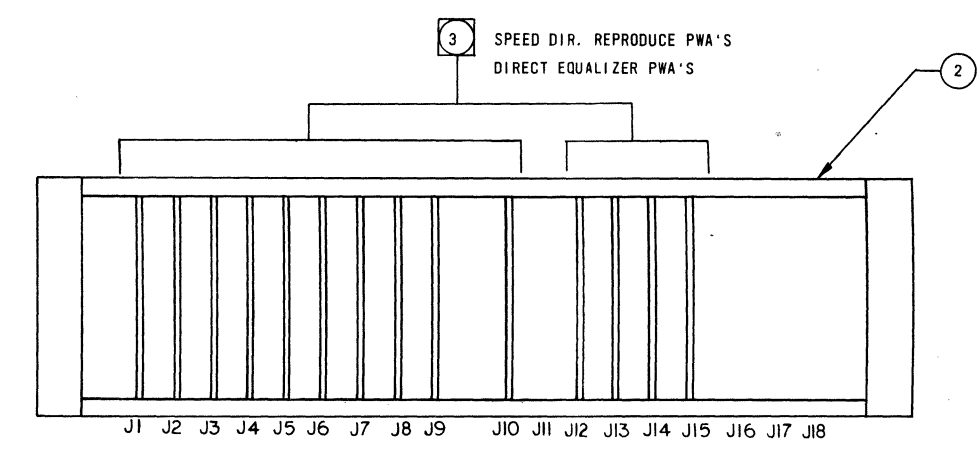
QUANTITY PER VERSION		PART NUMBER	DESCRIPTION
-01			
PARTS LIST			
NOTICE		UNLESS OTHERWISE SPECIFIED	
THIS DRAWING SHALL NOT BE DUPLICATED, USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH PROVIDED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF AMPEX CORPORATION. PROVIDED, HOWEVER, THAT IF THIS DRAWING IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, OR TO A GOVERNMENT CONTRACTOR, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DRAWING AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.		DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED (OR PLATED) FINISHES.	
DRAWN BY E.MAGPANTAY 11-2-79		SIGNATURE DATE	
CHK BY		E.J. DAHL 11-8-79	
DFT APPD		M.A. BOOYE 12-9-79	
ENGRG APPD		AUTH BY	
MATERIAL:		FINISH:	
CAT HBR		SIZE CODE IDENT NO.	
NEXT ASSY USED ON		D 92739 1261899-02	
APPLICATION		SCALE SHEET 1 OF 5	

1261899-02

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGR
G	-	SEE SHEET ONE	-	-	-



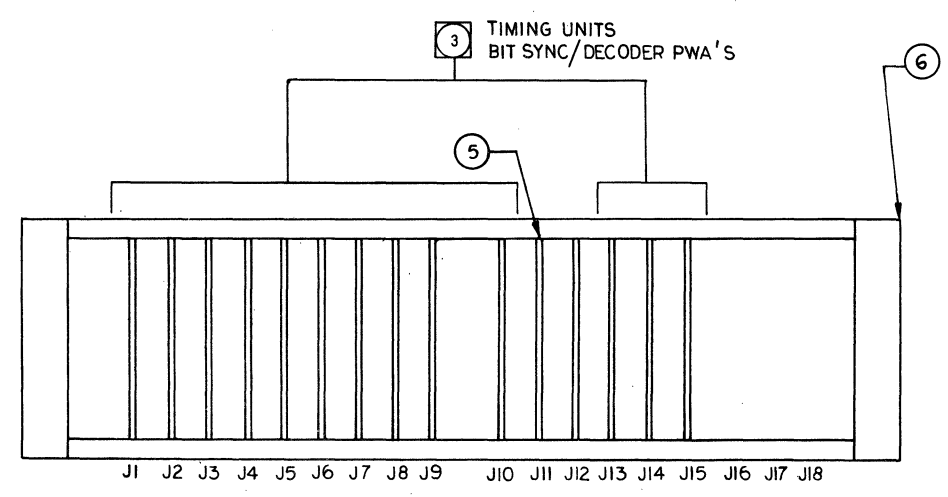
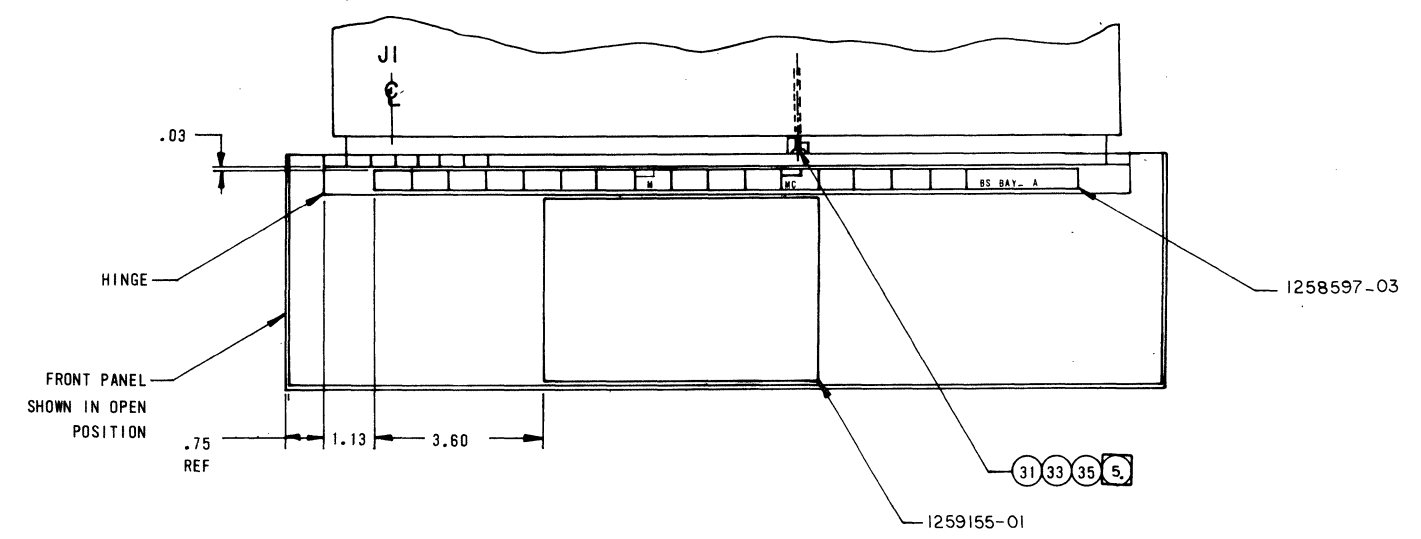
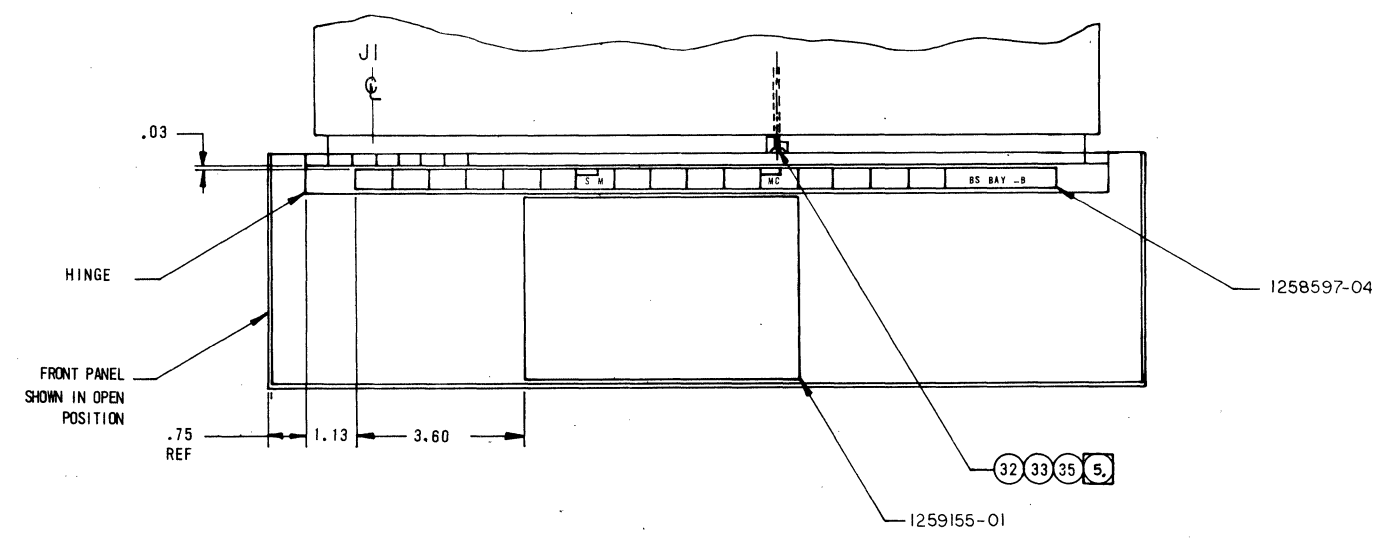
REPRODUCE (B) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)



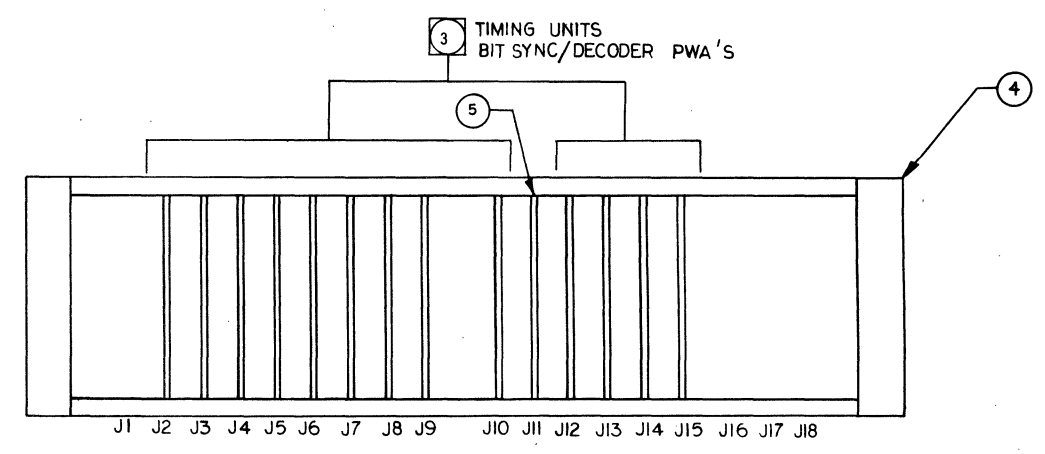
REPRODUCE (A) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

SIZE	CODE IDENT NO.	1261899 - 02
D	92739	
SCALE		SHEET 2 OF 5

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGR
G	-	SEE SHEET ONE	-	-	-

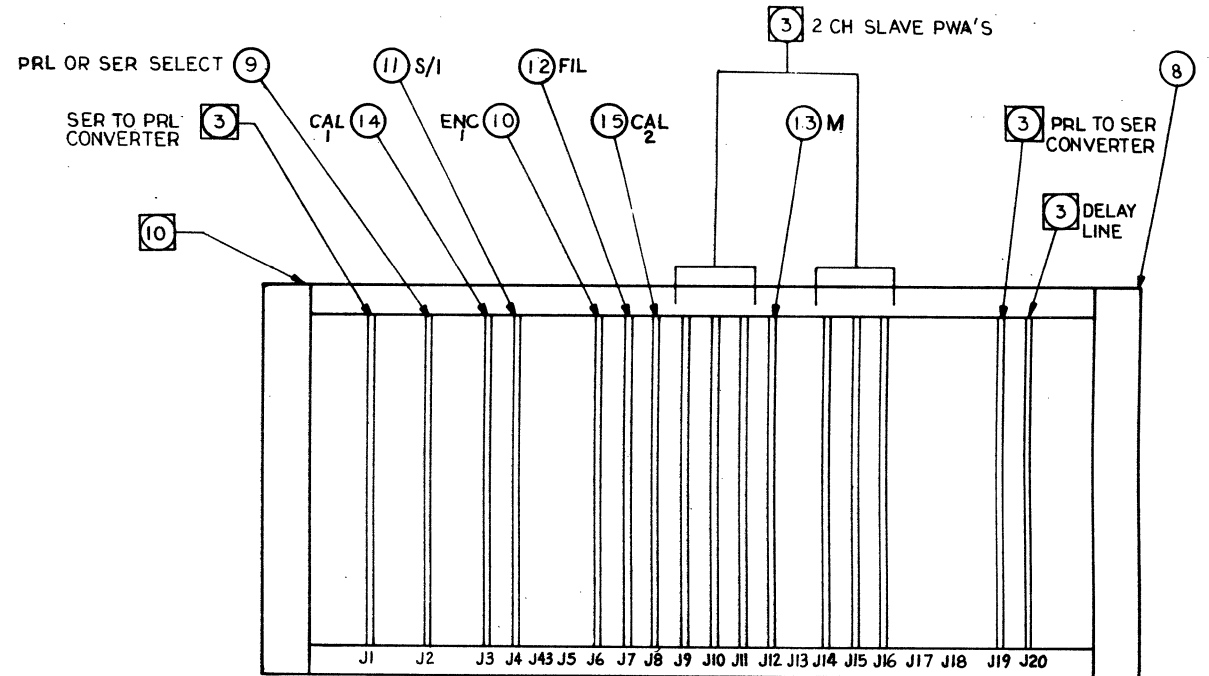
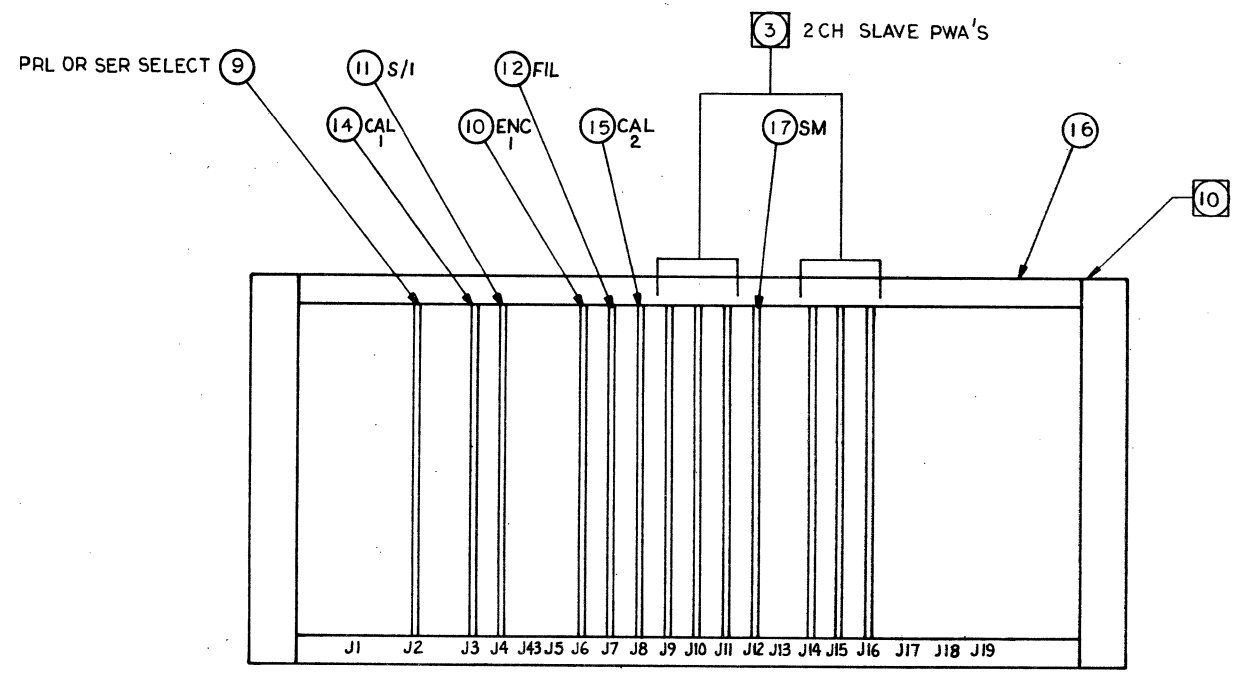
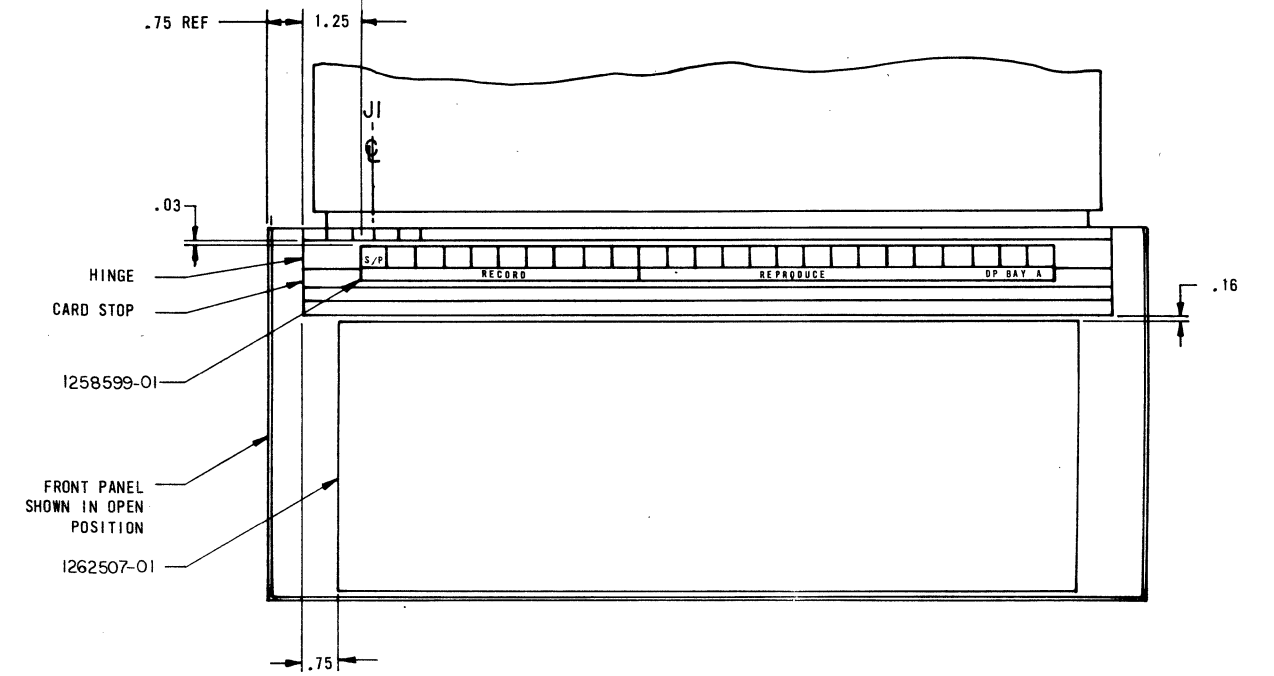
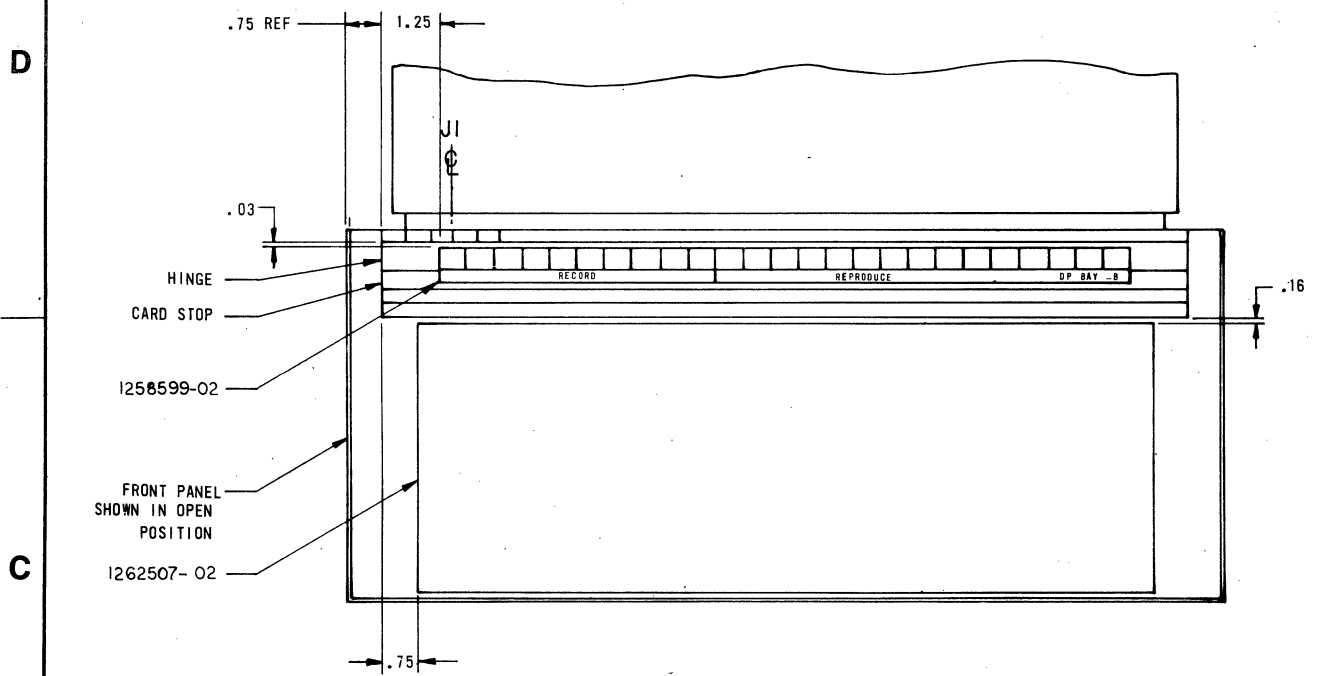


BIT SYNC (B) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)



BIT SYNC (A) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

LTR		ZONE		REVISIONS		SIGNATURE AND DATE		
DESCRIPTION				DFT	CHK	ENGR		
SEE SHEET ONE								



DIGITAL PROCESS (B) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

DIGITAL PROCESS (A) BAY  
FRONT VIEW OF BAY ASSY  
(FRONT PANEL NOT SHOWN)

1261899-02

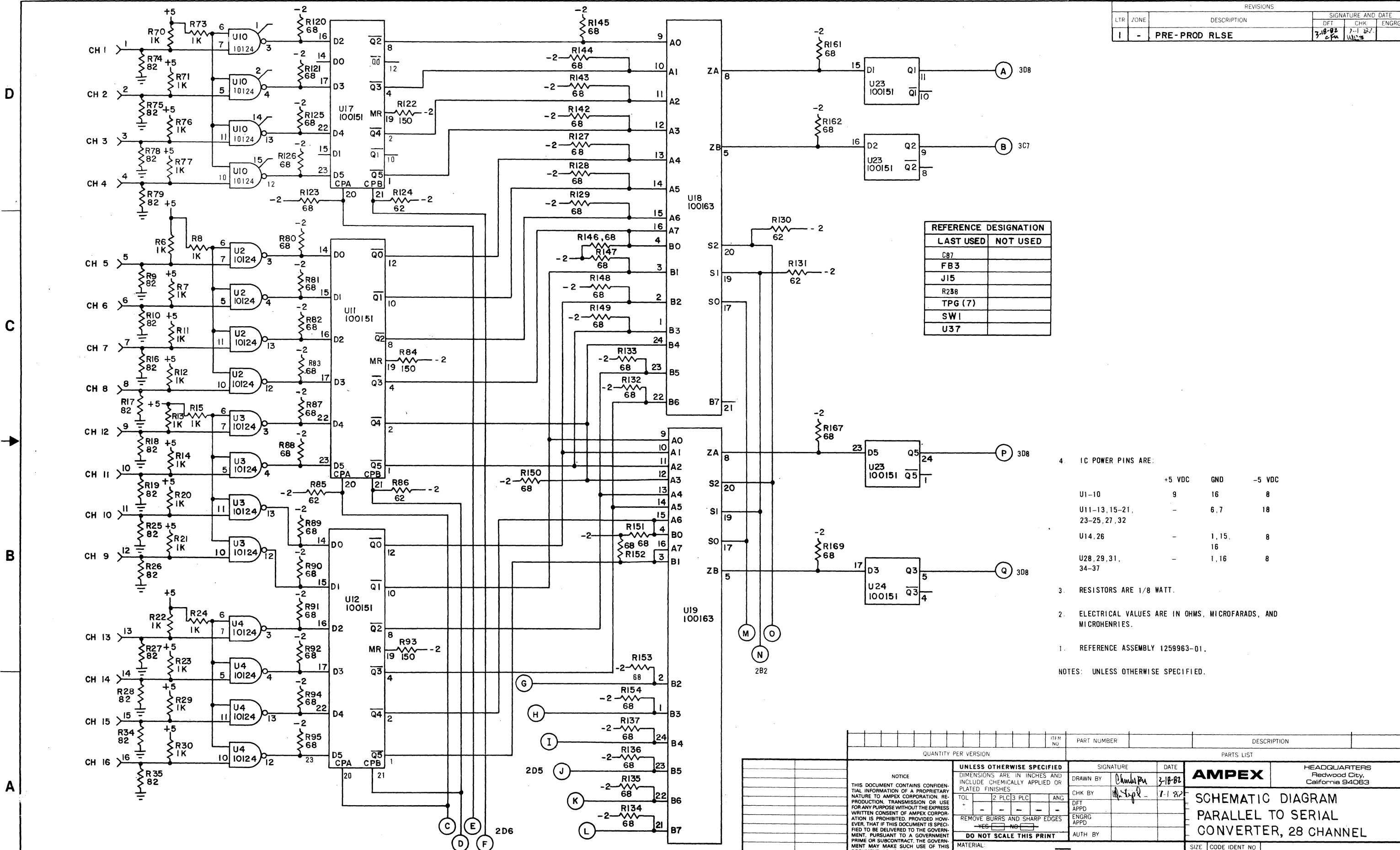
REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK ENGR
G	-	SEE SHEET ONE	-	-

TABLE I

DIGITAL PROCESS BAY CABLING INSTRUCTIONS

CABLE REQ'D	FUNCTION	"FROM" REF DESIG TERMINAL	TYPE OF SYSTEM AS DIRECTED BY SALES ORDER		
			SER WORD DO-4, DO-7	SER STREAM/PRL WORD DO-1, DO-2, DO-3, DO-5, DO-6, DO-8, DO-9	
			"TO" REF DESIG TERMINAL		
1267868-01 COAX/PUSH ON 3 REQ'D (ASSEMBLED IN "A BAY")	SER TEST DATA	J3-34/94 (INTERCONNECT PWA)	J19-41/101 (INTERCONNECT PWA)	LEAVE PUSH-ONS CONNECTED IN PLACE AT REF DESIG J46-2/22, J46-3/23, J20-53/113	
	SER TEST CLOCK	J3-35/95 (INTERCONNECT PWA)	J20-32/92 (INTERCONNECT PWA)		
	SER CLOCK	J1-53/L (INTERCONNECT PWA)	J20-53/113 (INTERCONNECT PWA)		
PART OF 1257488 REAR PANEL BNC CABLE ASSY  (ASSEMBLED IN BAYS)	"A" BAY	WORD DATA/CLK INPUT	J203 THRU J216 (REAR PANEL BNC)	J43 (INTERCONNECT PWA)	J38 (INTERCONNECT PWA)
		WORD DATA/CLK OUTPUT	J219 THRU J232 (REAR PANEL BNC)	J46 (INTERCONNECT PWA)	J25 (INTERCONNECT PWA)
	"B" BAY	WORD DATA/CLK INPUT	J203 THRU J216 (REAR PANEL BNC)	NOT APPLICABLE	J38 (INTERCONNECT PWA)
		WORD DATA/CLK OUTPUT	J219 THRU J232 (REAR PANEL BNC)	NOT APPLICABLE	J25 (INTERCONNECT PWA)
1257425-01 2 REQ'D PER BAY (ASSEMBLED IN BAYS AT J217 & J218)	"A" BAY	SER STREAM DATA IN	J201 (REAR PANEL BNC)	NOT APPLICABLE	LEAVE PUSH-ONS CONNECTED IN PLACE AT REF DESIG J43-9/27, J43-16/37 J46-7/26, J46-8/29 (INTERCONNECT PWA)
		SER STREAM CLK IN	J202 (REAR PANEL BNC)	DISCONNECT AND TIE BACK PUSH-ONS	
		SER STREAM DATA OUT	J217 (REAR PANEL BNC)		
		SER STREAM CLK OUT	J218 (REAR PANEL BNC)		
1257425-06 2 REQ'D PER BAY (ASSEMBLED IN BAYS AT J201 & J202)	"B" BAY	SER STREAM DATA IN	J201 (REAR PANEL BNC)	NOT APPLICABLE	LEAVE PUSH-ONS CONNECTED IN PLACE AT REF DESIG J43-9/27, J43-16/37 J46-7/26, J46-8/29 (INTERCONNECT PWA)
		SER STREAM CLK IN	J202 (REAR PANEL BNC)		
		SER STREAM DATA OUT	J217 (REAR PANEL BNC)		
		SER STREAM CLK OUT	J218 (REAR PANEL BNC)		

REVISIONS		SIGNATURE AND DATE			
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	PRE-PROD RLSE	3-18-82	2/2	W/S



REFERENCE DESIGNATION	
LAST USED	NOT USED
C87	
FB3	
J15	
R238	
TPG (7)	
SW1	
U37	

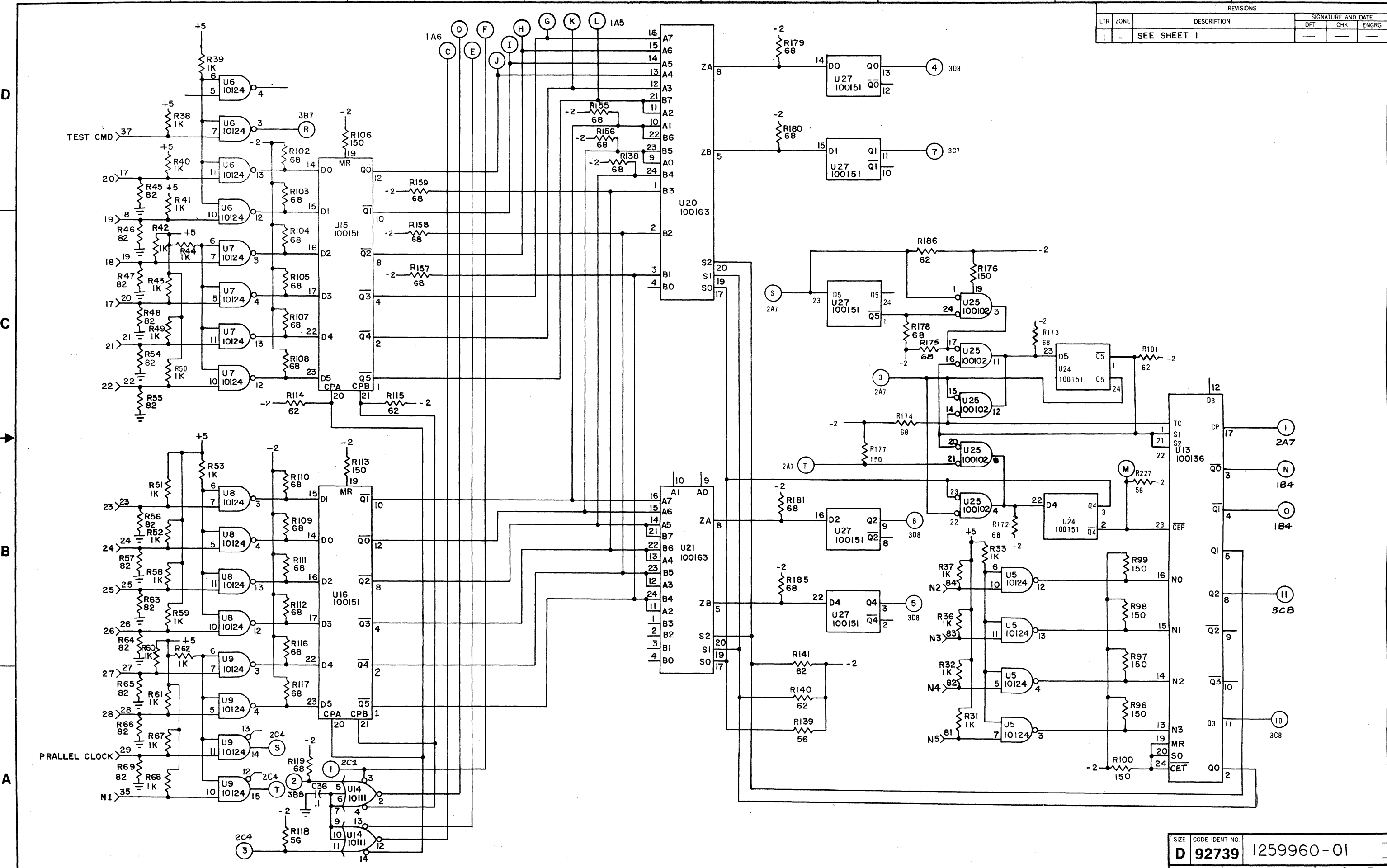
- 4 IC POWER PINS ARE:
- |                              | +5 VDC | GND       | -5 VDC |
|------------------------------|--------|-----------|--------|
| U1-10                        | 9      | 16        | 8      |
| U11-13, 15-21, 23-25, 27, 32 | -      | 6, 7      | 18     |
| U14, 26                      | -      | 1, 15, 16 | 8      |
| U28, 29, 31, 34-37           | -      | 1, 16     | 8      |
3. RESISTORS ARE 1/8 WATT.
2. ELECTRICAL VALUES ARE IN OHMS, MICROFARADS, AND MICROHENRIES.
1. REFERENCE ASSEMBLY 1259963-01.
- NOTES: UNLESS OTHERWISE SPECIFIED.

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION

<p>NOTICE</p> <p>THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF A PROPRIETARY NATURE TO AMPEX CORPORATION. REPRODUCTION, TRANSMISSION OR USE FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF AMPEX CORPORATION IS PROHIBITED. PROVIDED HOWEVER, THAT IF THIS DOCUMENT IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DOCUMENT AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.</p>	<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES</p> <p>TOL: 2 PLC 3 PLC ANG</p> <p>REMOVE BURRS AND SHARP EDGES</p> <p>YES NO</p> <p>DO NOT SCALE THIS PRINT</p>		<p>SIGNATURE</p> <p>DATE</p>	<p>HEADQUARTERS</p> <p>Redwood City, California 94063</p>
	<p>MATERIAL:</p> <p>FINISH:</p>		<p>DRAWN BY: <i>Chanda Pu</i> 3-18-82</p> <p>CHK BY: <i>W/S</i> 7-1-82</p> <p>DFT APPD</p> <p>ENGRG APPD</p> <p>AUTH BY</p>	<p><b>AMPEX</b></p>
	<p>1259963 HBR</p> <p>NEXT ASSY USED ON</p> <p>APPLICATION</p>		<p><b>SCHMATIC DIAGRAM</b></p> <p><b>PARALLEL TO SERIAL</b></p> <p><b>CONVERTER, 28 CHANNEL</b></p>	
	<p>SIZE: CODE IDENT NO</p> <p><b>D 92739</b> 1259960-01</p> <p>SCALE</p>		<p>SHEET 1 OF 3</p>	

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	CHK
1	-	SEE SHEET 1	-	-

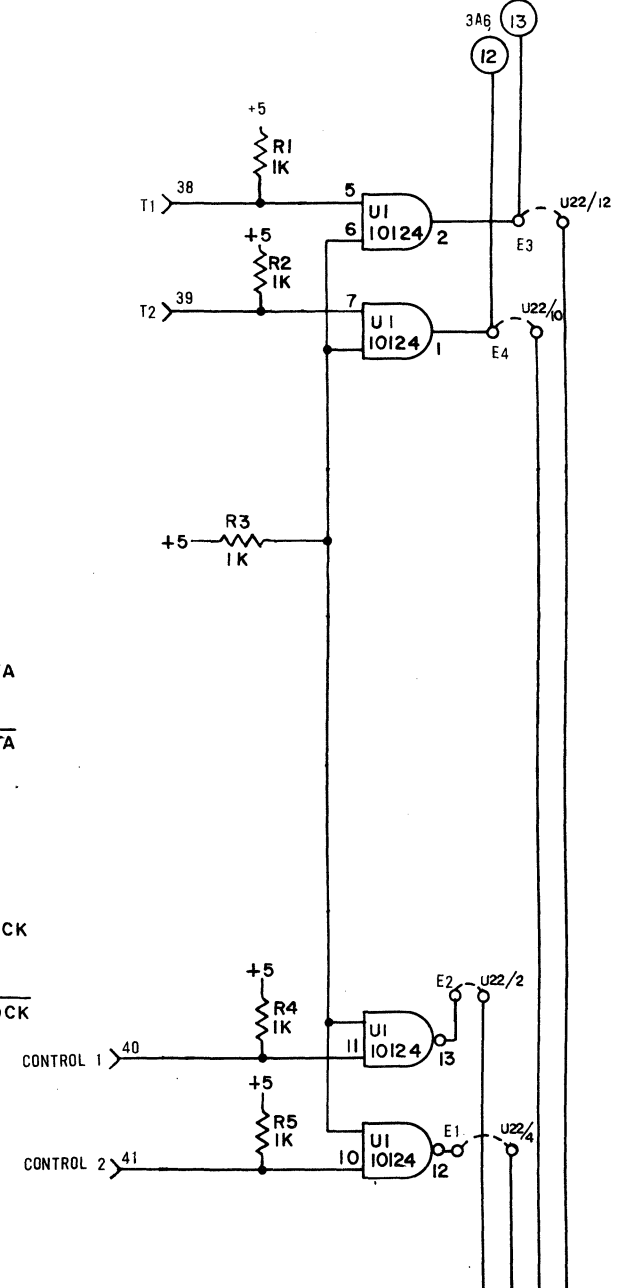
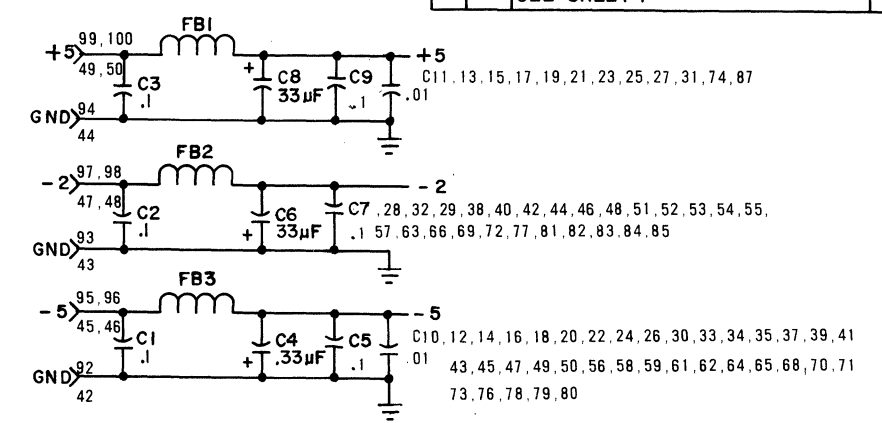
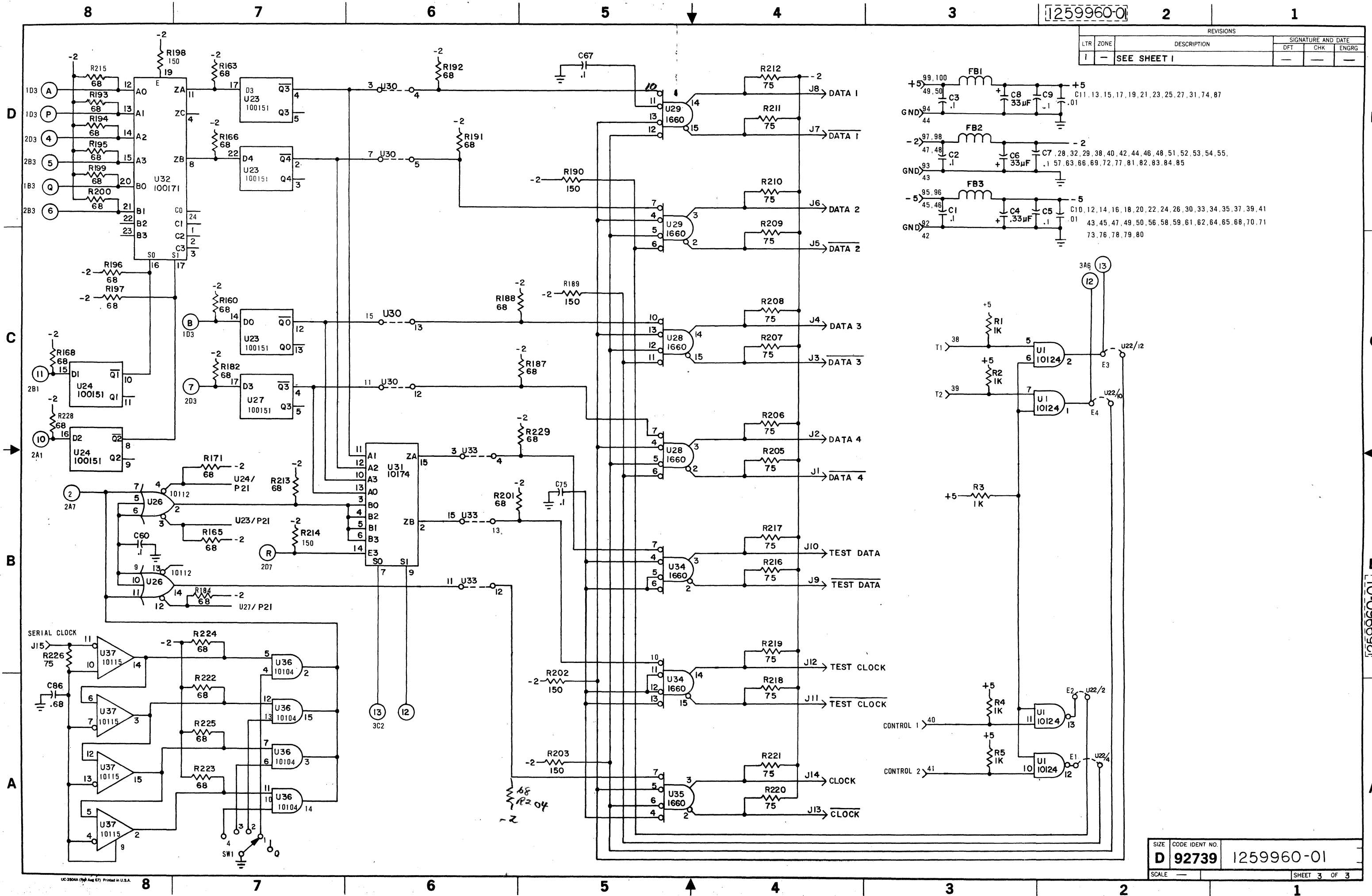


SIZE	CODE IDENT NO.	1259960-01
<b>D</b>	<b>92739</b>	
SCALE	SHEET 2 OF 3	



1259960-01

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
I	-	SEE SHEET I	-	-	-



4

3

2

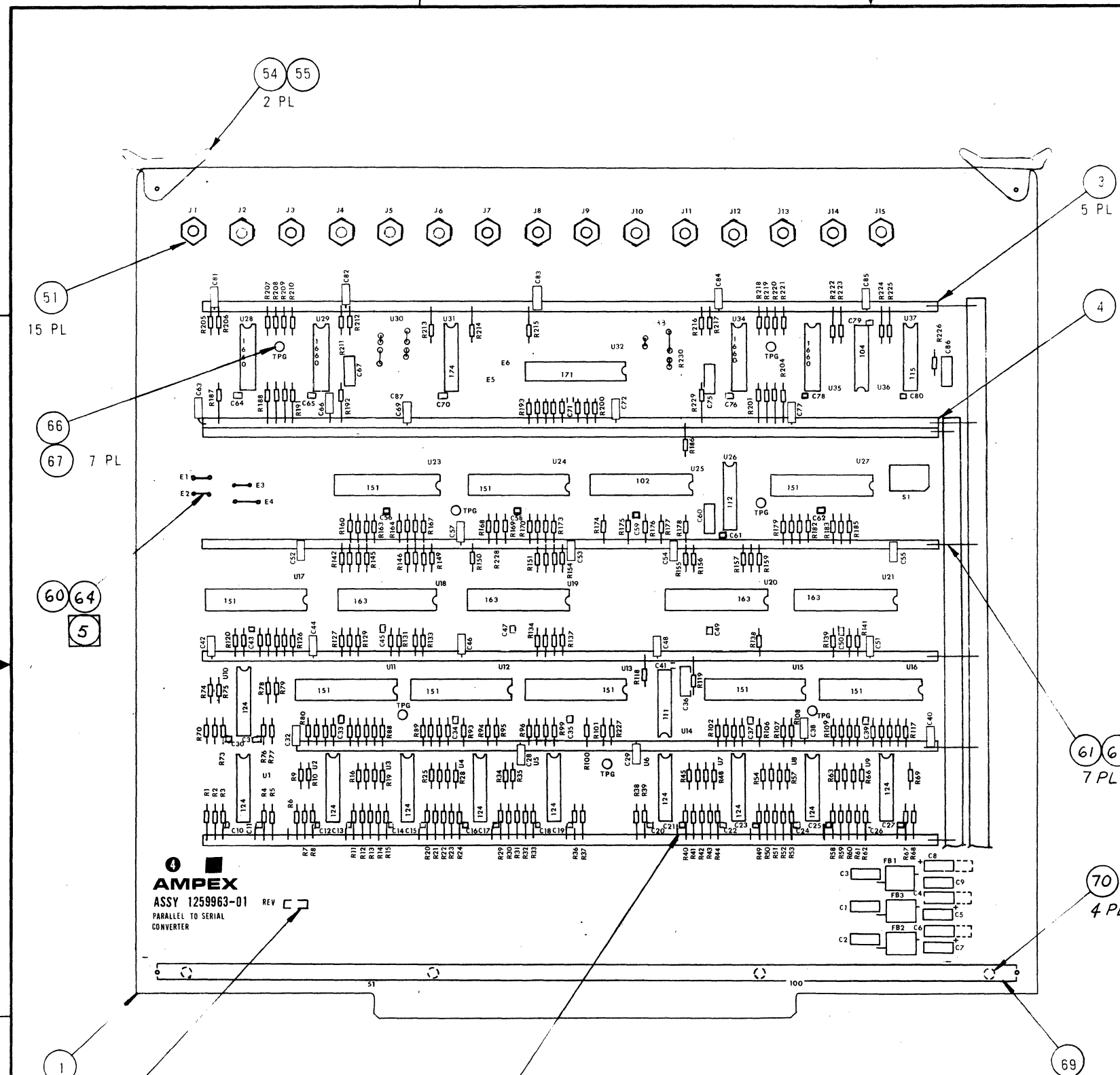
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1259963-XX

DISTR CODE:

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REVISIONS			SIGNATURE AND DATE		
TR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
4	-	PRE-PROD RLSE	b-5-82 c.m.	7-1-82 WES	



**AMPEX**  
 ASSY 1259963-01 REV  
 PARALLEL TO SERIAL  
 CONVERTER

- 5 INSTALL JUMPERS BETWEEN
- E1 — U22 PIN 4
  - E2 — U22 PIN 2
  - E3 — U22 PIN 12
  - E4 — U22 PIN 10
  - U30 PIN 3 — U30 PIN 4
  - U30 PIN 5 — U30 PIN 7
  - U30 PIN 11 — U30 PIN 12
  - U30 PIN 13 — U30 PIN 15
  - U33 PIN 3 — U33 PIN 4
  - U33 PIN 11 — U33 PIN 12
  - U33 PIN 13 — U33 PIN 15

- 4 MARK ASSEMBLY REVISION LEVEL PER MIL-STD-130.
3. ASSEMBLE PER AMPEX STANDARD HC2-2.
  2. REFERENCE SCHEMATIC 1259960-01.
  1. LOCATE COMPONENTS BY MATCHING REFERENCE DESIGNATIONS IN P/L.

NOTES: UNLESS OTHERWISE SPECIFIED

☐ PARTS LIST

SIGNATURE		DATE		<b>AMPEX</b>	HEADQUARTERS Redwood City, California 94063
DRAWN BY <i>Shale/Fu</i>		6-4-82			
CHK BY <i>W. Steph</i>		7-1-82		<b>PRINTED WIRING BD ASSY PARALLEL TO SERIAL CONVERTER, 28 CHANNEL</b>	
DFT APPD					
ENGRG APPD					
AUTH BY				SIZE CODE IDENT NO	
1267955 HBR				<b>C 92739</b>	
NEXT ASSY USED ON				1259963-XX	
APPLICATION				SCALE 1 X 1	
				SHEET 1 OF 1	

DATE	REV	BY	CHK	APPD	ENGRG
PRE-PROD RELEASE			6-APR-68 CFM		

D

C

B

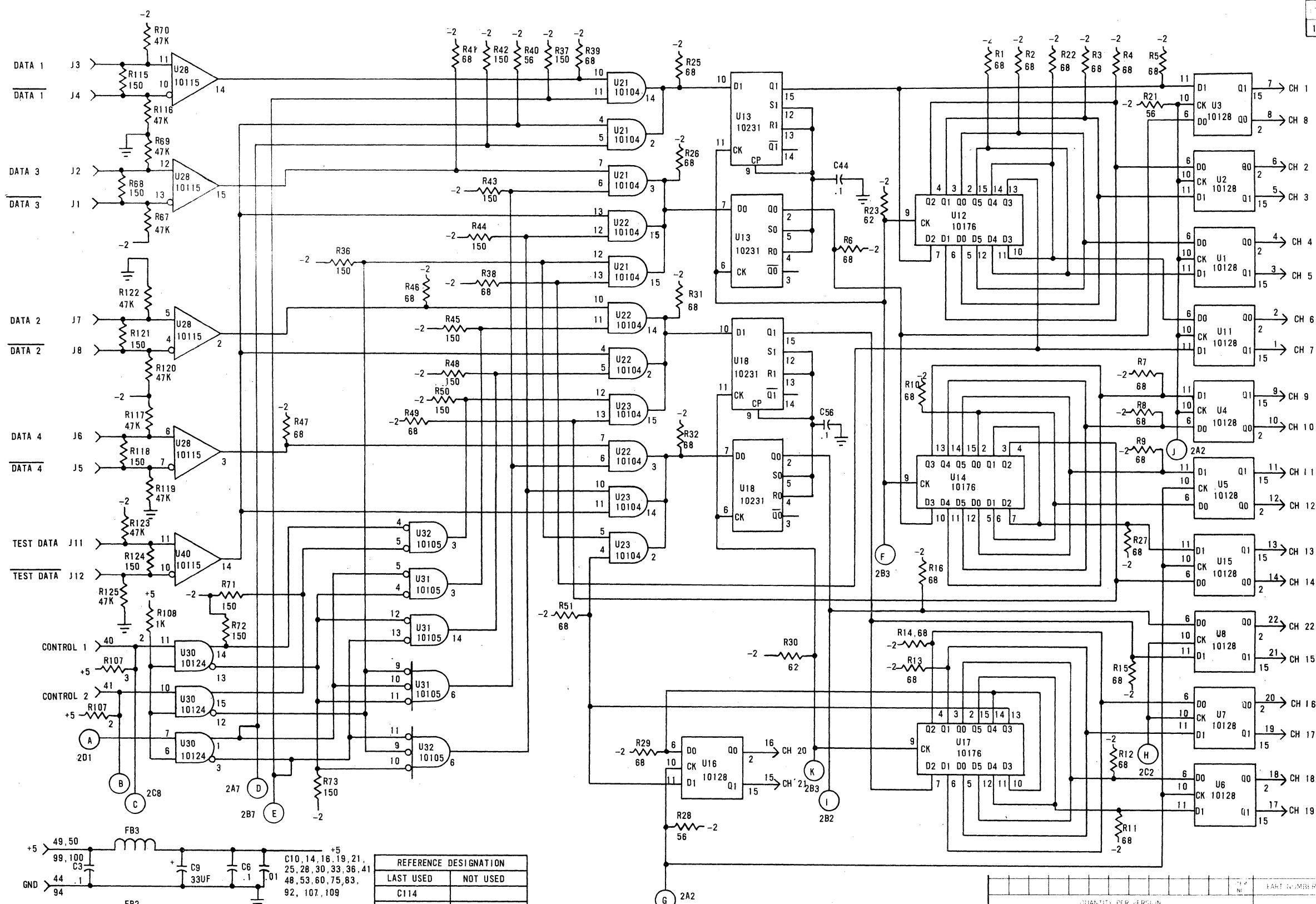
A

D

C

B

A

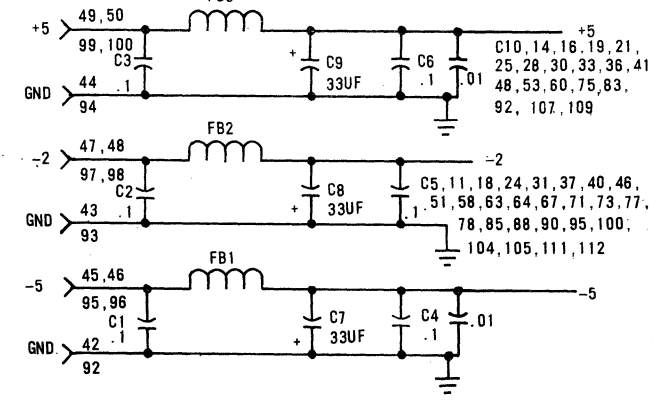


5. IC'S U1-11, 15, 16, 20, 36 PINS 3, 5, 7, 12 ARE BY-PASSED TO GROUND BY .1UF CAPACITORS C13, 23, 27, 35, 39, 50, 52, 62

4. IC POWER PINS ARE:

IC#	+5VDC	GND	-5VDC
U1-11, 15, 16, 20, 36	14	1, 16, 9	8
U12-14, 17-19, 21-23, 28, 31-33, 37-40, 42	-	1, 16	8
U24	-	1, 15, 16	8
U25, 26, 34, 35	-	6, 7	18
U27, 43, 44, 30	9	16	8
U45	14	7	-

3. RESISTORS ARE 1/8 WATT.
2. ELECTRICAL VALUES ARE IN OHMS, MICROFARADS, AND MICROHENRIES.
1. REFERENCE ASSEMBLY 1261103-01.
- NOTES: UNLESS OTHERWISE SPECIFIED.



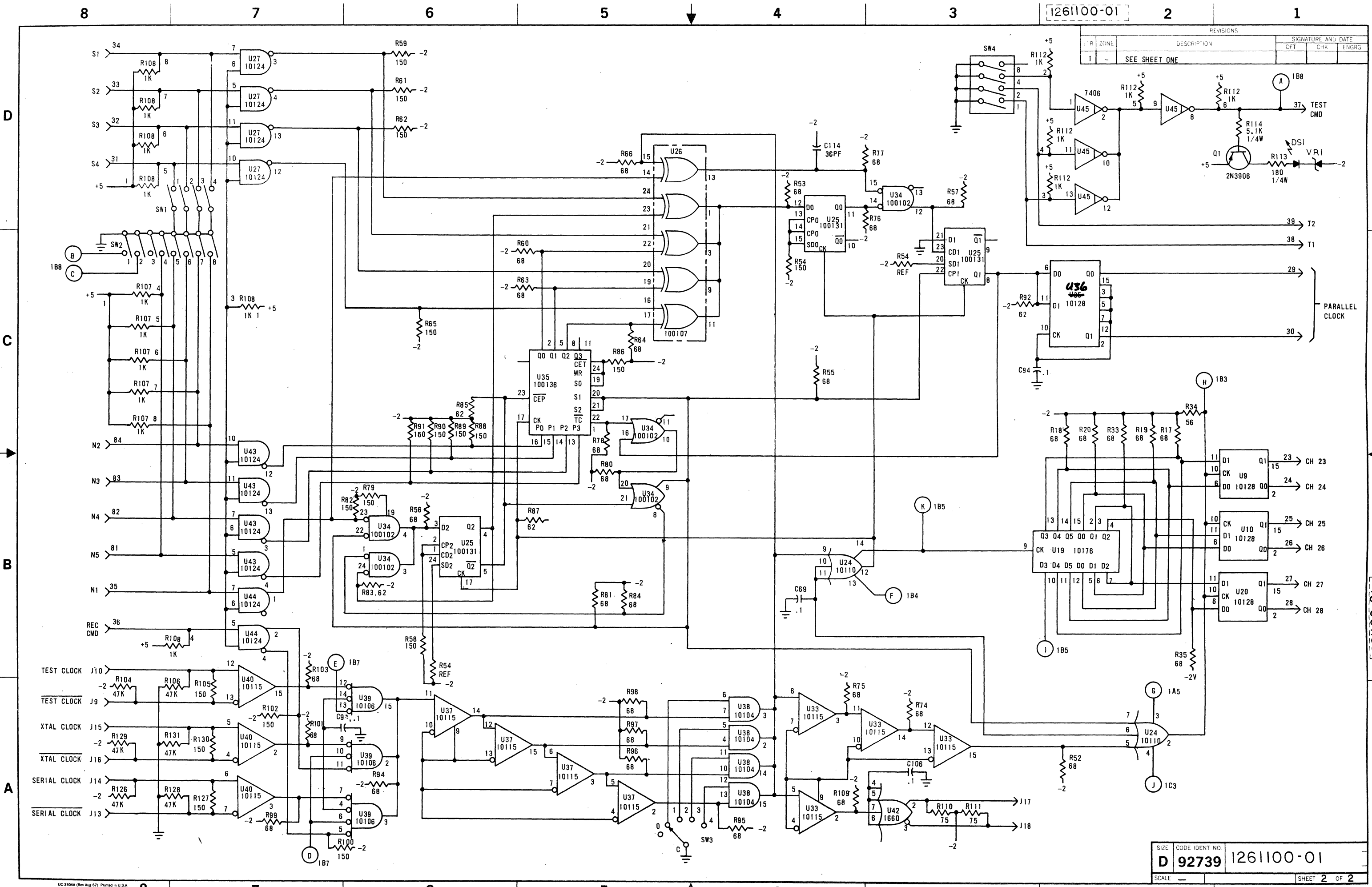
REFERENCE DESIGNATION	
LAST USED	NOT USED
C14	
FB3	
DS1	
SW4	
TPG(6)	
R131	24, 93
Q1	
U45	
J18	

NOTE: -5V DECOUPLER CAPS ARE:  
 C12, 15, 17, 20, 22, 26, 29, 32, 34, 38, 42, 43, 45, 47, 49, 54, 55, 57, 59, 61, 65, 66, 68, 70, 72, 74, 76, 80, 82, 84, 86, 87, 89, 91, 93, 96, 97, 99, 102, 113, 108, 110.

QUANTITY PER VERSION	PART NUMBER	DESCRIPTION
<p>NOTICE: THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF A PROPRIETARY NATURE TO AMPLEX CORPORATION. REPRODUCTION, TRANSMISSION OR USE FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN CONSENT OF AMPLEX CORPORATION IS PROHIBITED. PROVIDED HOWEVER THAT IF THIS DOCUMENT IS SPECIFIED TO BE DELIVERED TO THE GOVERNMENT, PURSUANT TO A GOVERNMENT PRIME OR SUBCONTRACT, THE GOVERNMENT MAY MAKE SUCH USE OF THIS DOCUMENT AS IS PERMITTED BY THE APPLICABLE "DATA" CLAUSE SET FORTH IN SUCH CONTRACT OR SUBCONTRACT.</p>		
<p>UNLESS OTHERWISE SPECIFIED</p> <p>DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES</p> <p>REMOVE BURRS AND SHARP EDGES</p> <p>DO NOT SCALE THIS PRINT</p>	<p>SIGNATURE</p> <p>DATE</p> <p>CHK BY</p> <p>DFT APPD</p> <p>ENGRG APPD</p> <p>AUTH BY</p>	<p>HEADQUARTERS</p> <p>Redwood City, California 94063</p> <p><b>AMPEX</b></p> <p><b>SCHEMATIC DIAGRAM</b></p> <p><b>SERIAL/PARALLEL CONVERTER, 28 CHANNEL</b></p>
<p>1261103 HBR</p> <p>NEXT ASSY USED ON</p> <p>APPLICATION</p>	<p>SCALE</p> <p>SHEET 1 OF 2</p>	<p>SIZE CODE IDENT NO</p> <p><b>D 92739 1261100-01</b></p>

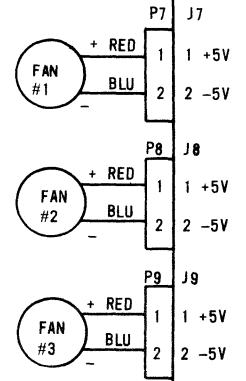
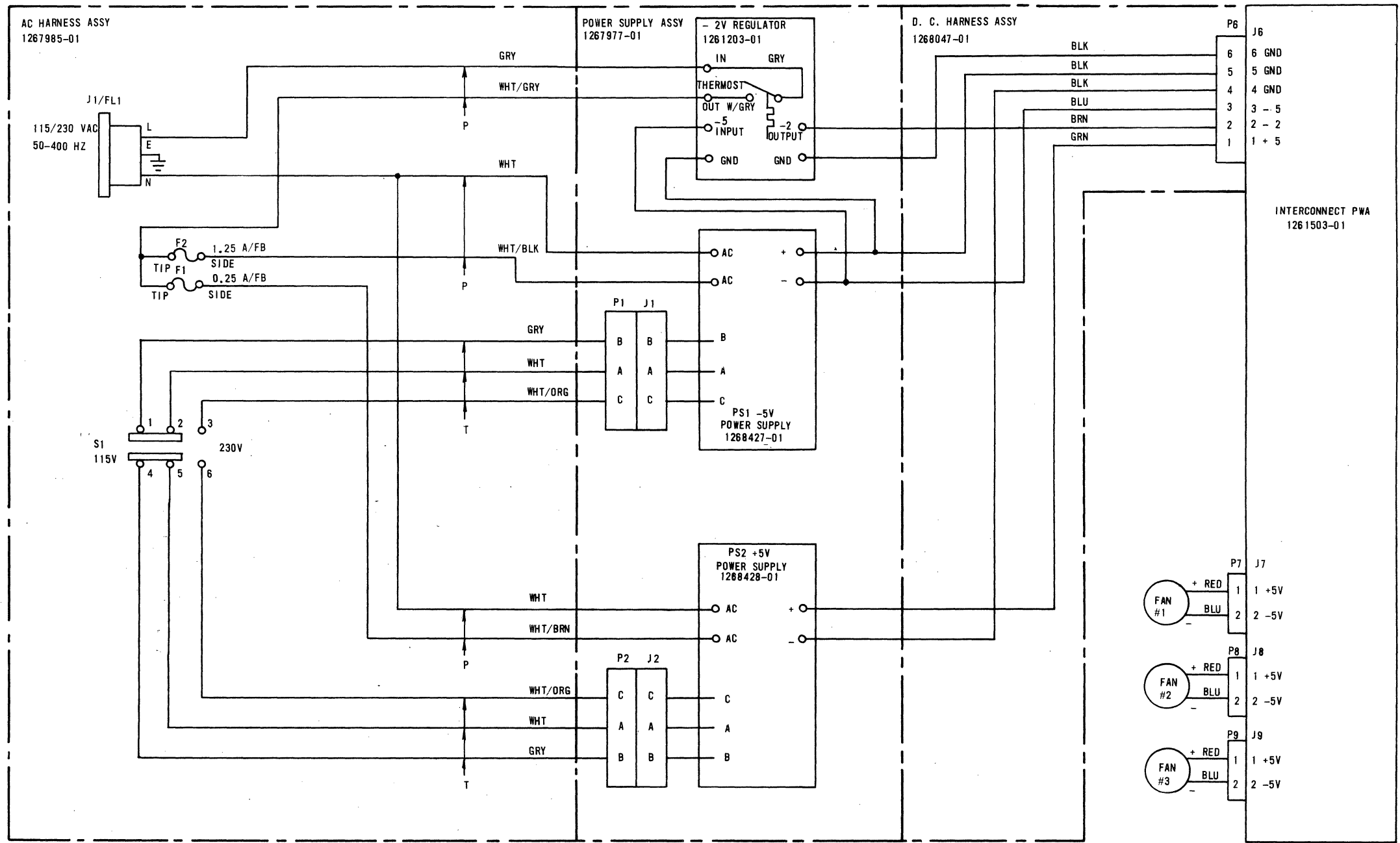
1261100-01

REVISIONS			SIGNATURE AND DATE		
NO.	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	SEE SHEET ONE			



UC-3504A (Rev Aug 67) Printed in U.S.A.

REVISIONS				SIGNATURE AND DATE	
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1		PRE-PROD REL	7/8/82 CR	6/22/82 NRS	



ITEM NO.	QUANTITY PER VERSION	PART NUMBER	DESCRIPTION

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	<p>MATERIAL:</p> <p>FINISH:</p>	<p>HEADQUARTERS</p> <p>Redwood City, California 94063</p>	
	<p>SIZE</p> <p>D 92739</p>	<p>SCHEMATIC DIAGRAM, POWER CONNECTION SERIAL DATA CONVERTER BAY</p>	
	<p>CODE IDENT NO</p> <p>1268259-01</p>	<p>SCALE</p> <p>SHEET 1 OF 1</p>	

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
1	-	CUSTOM RELEASE	H. Das 6.2.82	W. Sigel 7/1/82	

NOTES:

1.0 GENERAL:

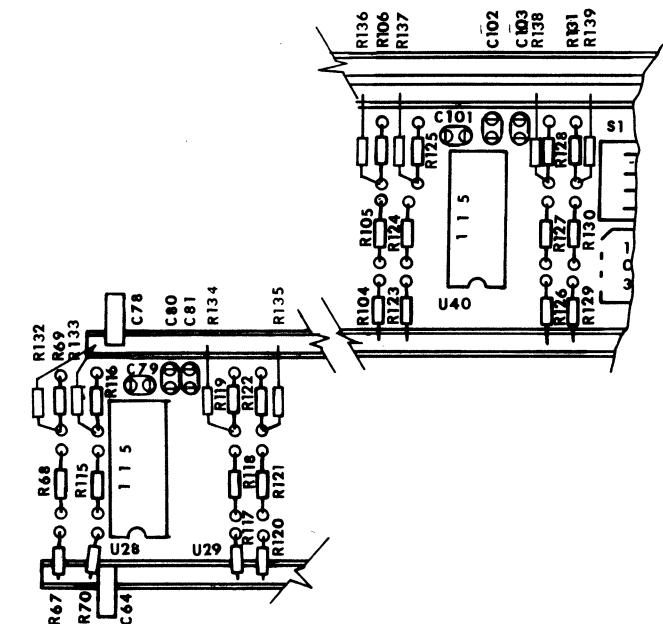
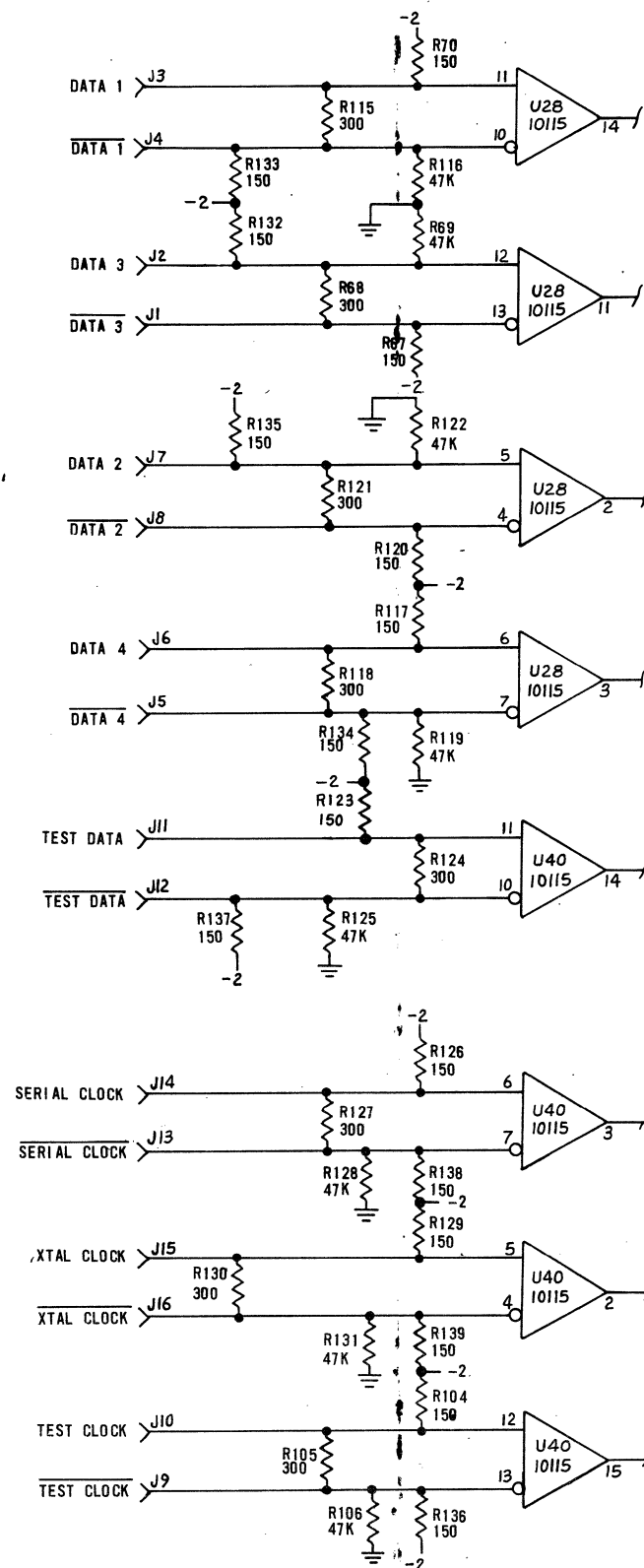
THIS MODIFICATION PROVIDES A PULL DOWN TO -2.0 VOLTS AT THE INPUTS OF THE DIFFERENTIAL LINE RECEIVERS WHILE MAINTAINING THE 75Ω TERMINATION IMPEDANCE.

2.0 MODIFICATION INSTRUCTIONS:

- 2.1 REMOVE 47KΩ RESISTORS R67, 70, 104, 117, 120, 123, 126, 129; REPLACE WITH 150Ω RESISTORS (ITEM 1).
- 2.2 REMOVE 150Ω RESISTORS R68, 105, 115, 118, 121, 124, 127, 130; REPLACE WITH 300Ω RESISTORS (ITEM 2).
- 2.3 ADD R132-139, 150Ω (ITEM 1) AS SHOWN IN DETAIL 1.

3.0 IDENTIFICATION INSTRUCTIONS:

- 3.1 MODIFICATION NO. IS 1269019-01.
- 3.2 MARK MOD. NO. NEAR EXISTING I.D.



DETAIL 1

QTY	REV	PART NUMBER	DESCRIPTION
1	3	1261103-01	SERIAL TO PARALLEL CONVERTER
8	2	049-716	RES, FXD, 300, 5%, 1/8W
16	1	049-062	RES, FXD, 150, 5%, 1/8W
-01			

UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE	
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.		DRAWN BY H. Das		6.2.82	
TOL		CHK BY W. Sigel		7/1/82	
2 PLC 3 PLC ANG		DFT APPD			
REMOVE BURRS AND SHARP EDGES		ENGRG APPD			
YES <input type="checkbox"/> NO <input type="checkbox"/>		AUTH BY			
DO NOT SCALE THIS PRINT					
MATERIAL		SIZE		CODE IDENT NO	
FINISH		D 92739		1269019-01	
APPLICATION		SCALE		SHEET 1 OF 1	

REVISIONS				
LTR	ZONE	DESCRIPTION	SIGNATURE AND DATE	
			DFT	ENGRG
1	-	CUSTOM RELEASE	<i>[Signature]</i> 5.6.82	<i>[Signature]</i> 5.10.82

NOTES

1.0 GENERAL

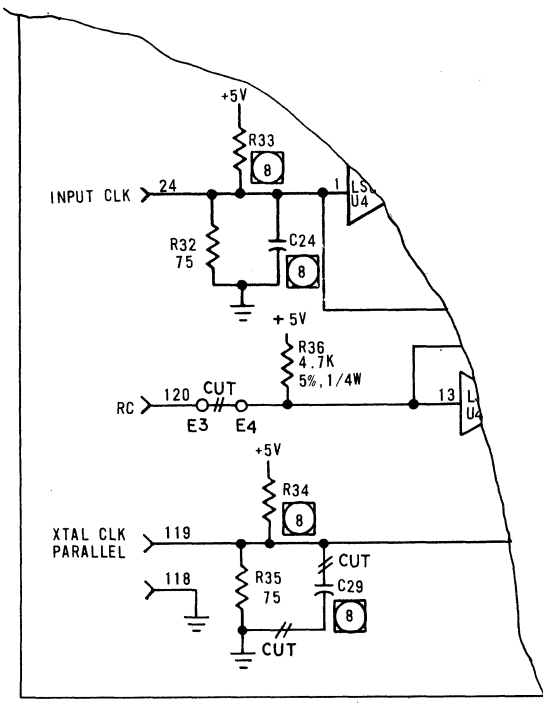
- 1.1 THIS MODIFICATION PROVIDES COMPATABILITY WITH PARALLEL DATA INPUTS WHICH ARE PRODUCED BY THE (100 MB/S) SERIAL DATA CONVERTER BAY.
- 1.2 THE RECORD COMMAND JUMPER (E3-E4) IS NOT REQUIRED WHEN (100 MB/S) SERIAL DATA CONVERTER BAY IS USED.
- 1.3 MODIFICATION IS REQUIRED FOR BAY A AND BAY B OF A 28 TRACK SYSTEM.

2.0 MODIFICATION

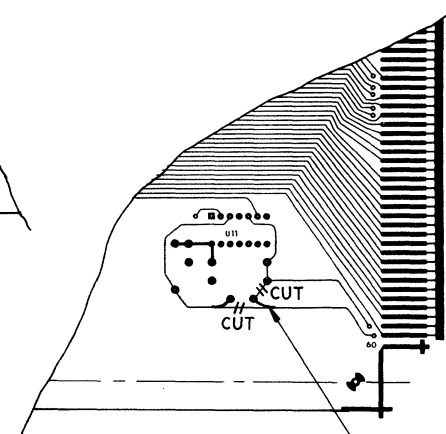
- 2.1 CUT GROUND PLANE AND CIRCUIT TRACE AWAY FROM C29 PADS ON PWB.
- 2.2 CUT TRACE RUNNING FROM PIN 120 TO R36 PAD IN VACINITY OF C29 PER DETAIL.
- 2.3 INSTALL WIREWRAP PINS IN (FORMER) C29 PADS.
- 2.4 SOLDER WIREWRAP PINS TO TRACES ON BOTTOM SIDE OF PWB PER DETAIL AND SCHEMATIC.
- 2.5 TRIM WIREWRAP PINS ON BOTTOM SIDE - LEAVE TOP SIDE FOR FUTURE WIREWRAP.

3.0 MARKING

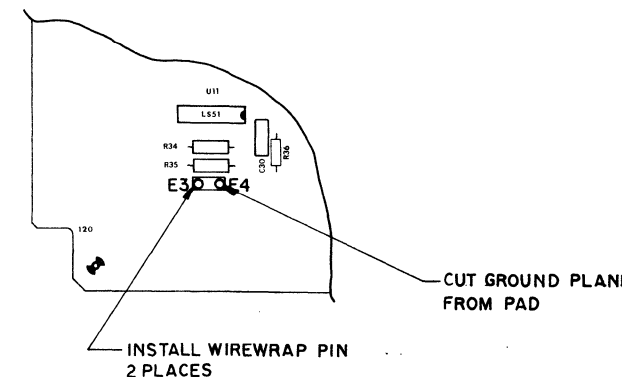
- 3.1 REMOVE OR COVER C29 SILKSCREEN.
- 3.2 MARK E3 AND E4 PER DETAIL.
- 3.3 MARK "MOD PER 1268985-01" NEAR EXISTING PART NUMBER.



CHANGE SCHEMATIC  
REF 1256340



SOLDER WIRE  
2 PLACES



CUT GROUND PLANE  
FROM PAD

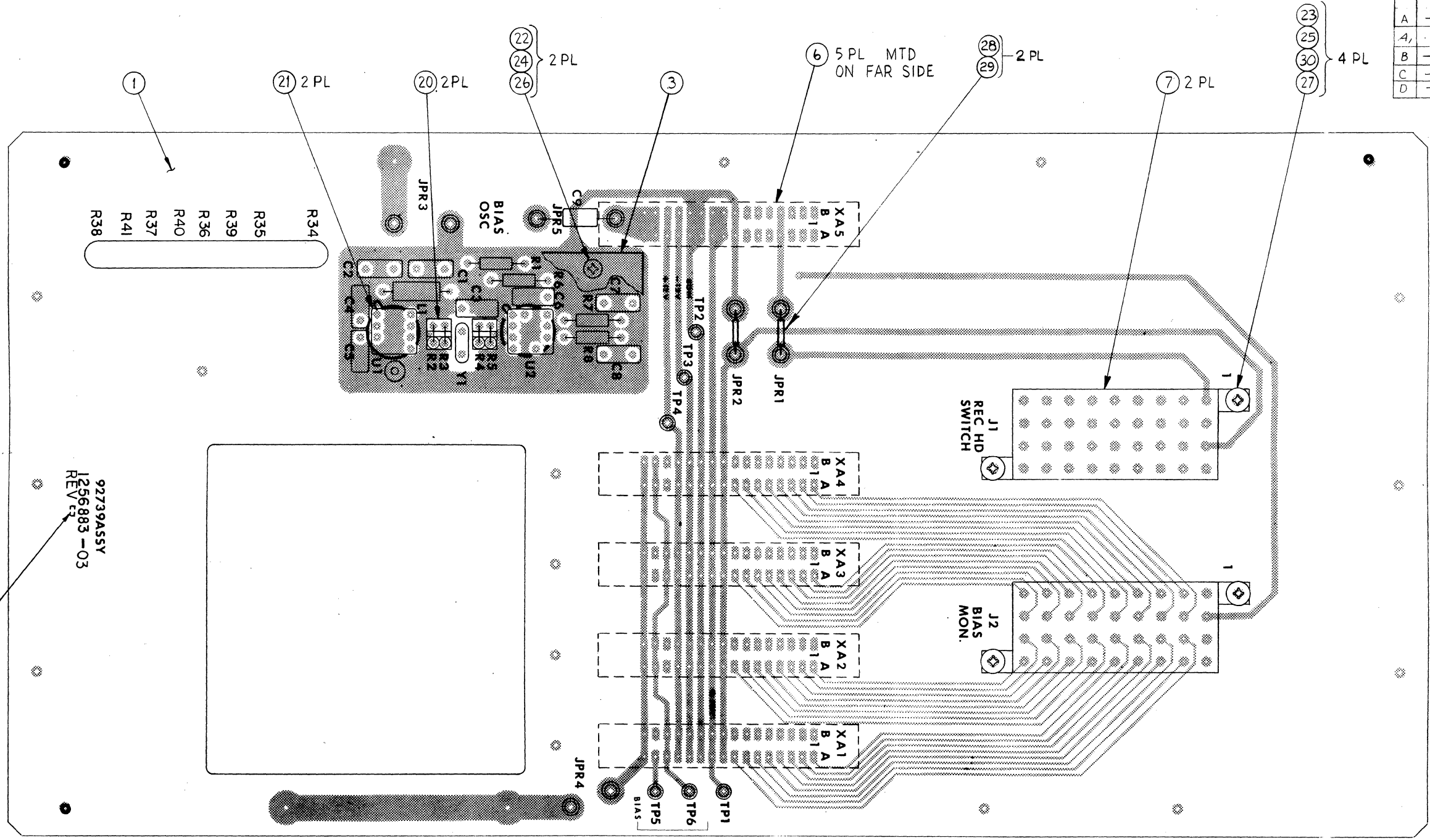
INSTALL WIREWRAP PIN  
2 PLACES

MODIFICATION  
DETAIL

AR	ITEM NO	PART NUMBER	DESCRIPTION
3	615-026		WIRE 22 AWG, SOLID BARE
2	187-326		POST STRIP, 20 PINS (ONLY 2 PINS REQ'D)
1	1256343-01		PARALLEL OR SER SELECT PWA

NOTICE		UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE	
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TOL		PLC3 PLC		CHK BY		DFT APPD	
REMOVE BURRS AND SHARP EDGES		YES <input type="checkbox"/> NO <input type="checkbox"/>		ENGRG APPD		<i>[Signature]</i>	
DO NOT SCALE THIS PRINT		MATERIAL		AUTH BY		<i>[Signature]</i>	
MOD HBR-3000		FINISH		SIZE		CODE IDENT NO	
NEXT ASSY USED ON				D 92739		1268985-01	
APPLICATION				SCALE		CPA 9429-511976 SHEET 1 OF 1	

A	—	PROD RI SE			
A1	—	REVISED PER ECR 29466			
B	—	ADDED -02 PER ECN 29517-1			
C	—	REV PER ECN 29817-1			
D	—	REV PER ECN 30541-1			



92739ASSY  
 1256883-03  
 REV E3

- NOTES:  
 1. ASSY NO. IS 1256883-03.  
 2. MARK ASSY REVISION LETTER WHERE SHOWN.

SEE SEPARATE LIST OF MATERIALS

QTY	04	03	02	01	ITEM	PART NUMBER	FOR PLANT VENDOR OR MIL PART NUMBER (REF ONLY)	DESCRIPTION	ENG	LONG LEAD ITEM
ASSY CONTROL NO						PARTS LIST				

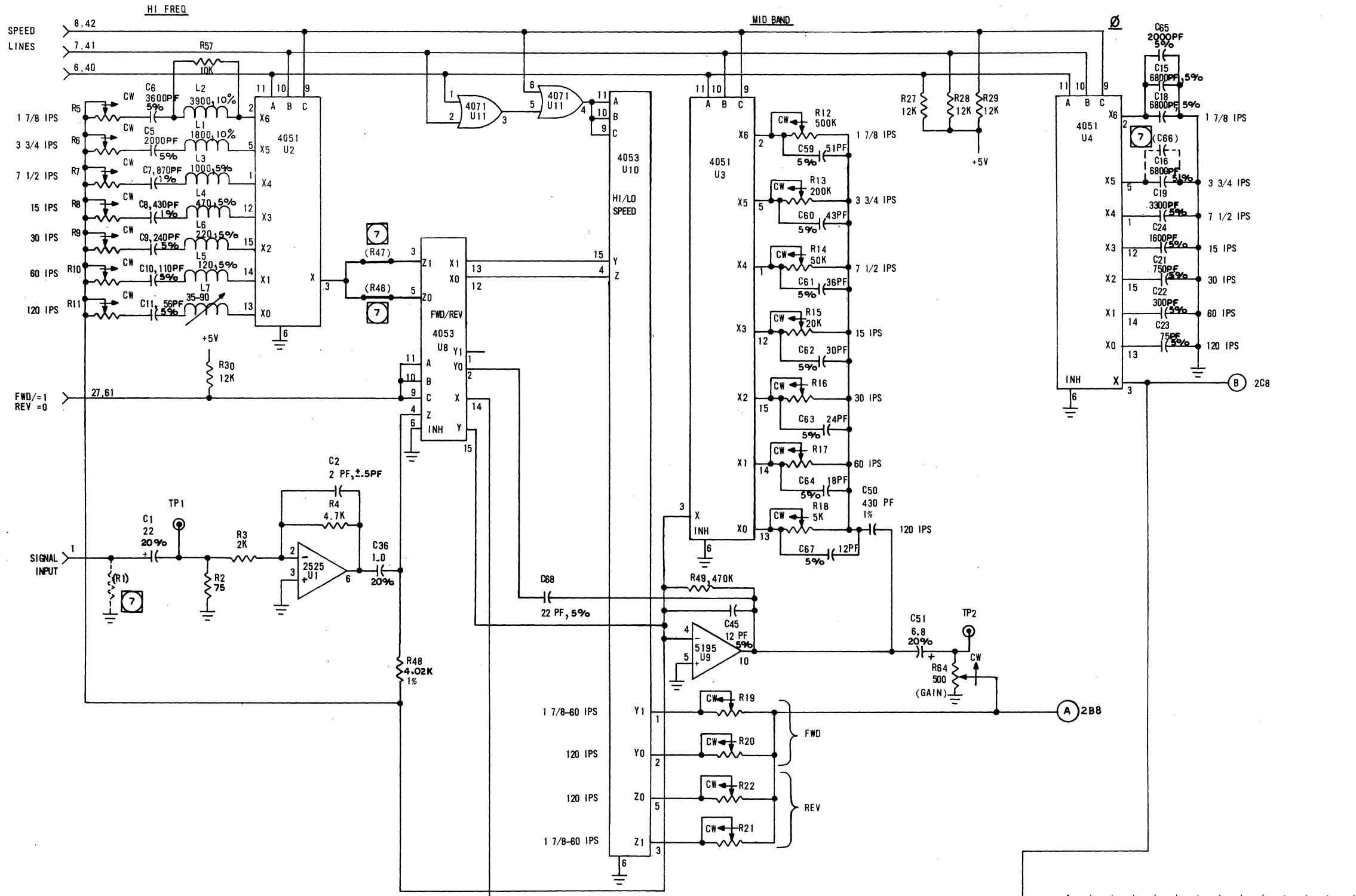
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND FINISHES ARE CHEMICALLY APPLIED PLATE FINISHES.			SIGNATURE DRAWN BY: <i>R. Lamm</i> 4/1/78 CHK BY: <i>Sebur</i> 4/20/78 ENGR: <i>M. Meyer</i> 4/10/78 AUTH: <i>[Signature]</i> 4/10/78		HEADQUARTERS Redwood City, California 94063	
REMOVE BURRS AND SHARP EDGES. DO NOT SCALE THIS PRINT			PRINTED WIRING ASSY INTERCONNECT AND BIAS OSCILLATOR			
MATERIAL FINISH			SIZE CODE IDENT NO <b>D 92739</b> 1256883-03,		SHEET 1 OF 1	

1258377	1258377	HBR3000			
CAT ITEM	NEXT ASSY	USED ON	IN MF PR	CODE	APPLICATION

1256883-03



REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	—	PROD RLSE	<i>Paula</i>	<i>Paula</i>	<i>Paula</i>
			4-17-80	12-18-80	5-5-81



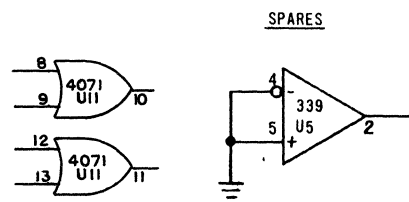
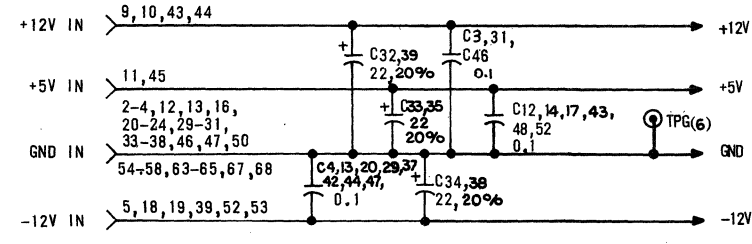
REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C70	C66
CR5	
DS4	
L7	
Q6	
R65	R1,46,47
S1	
TP5,TP6	
U11	
E2	

7. C66, R1,46 & 47 ARE NOT USED ON THIS VERSION.

6. IC POWER PINS ARE: GND=7,8, +5VDC=14,16 EXCEPT FOR:

IC TYPE	GND	+5VDC	+12VDC	-12VDC
2525	-	-	7	4
4051	6,8	16	-	7
339	-	-	3	12
0026	4	6	-	-
72510	1	-	8	4
5195	-	-	11	6

- VARIABLE RESISTORS ARE 10K, 10%, 3/4W.
  - RESISTORS ARE ±5%, 1/4 WATT.
  - CAPACITORS ARE ±10%, 15 VDC OR GREATER.
  - ELECTRICAL VALUES ARE IN OHMS, MICROFARADS AND MICROHENRIES.
  - REFERENCE ASSEMBLY 1257473.
- NOTES: UNLESS OTHERWISE SPECIFIED.



QUANTITY PER VERSION		ITEM No.	PART NUMBER	DESCRIPTION

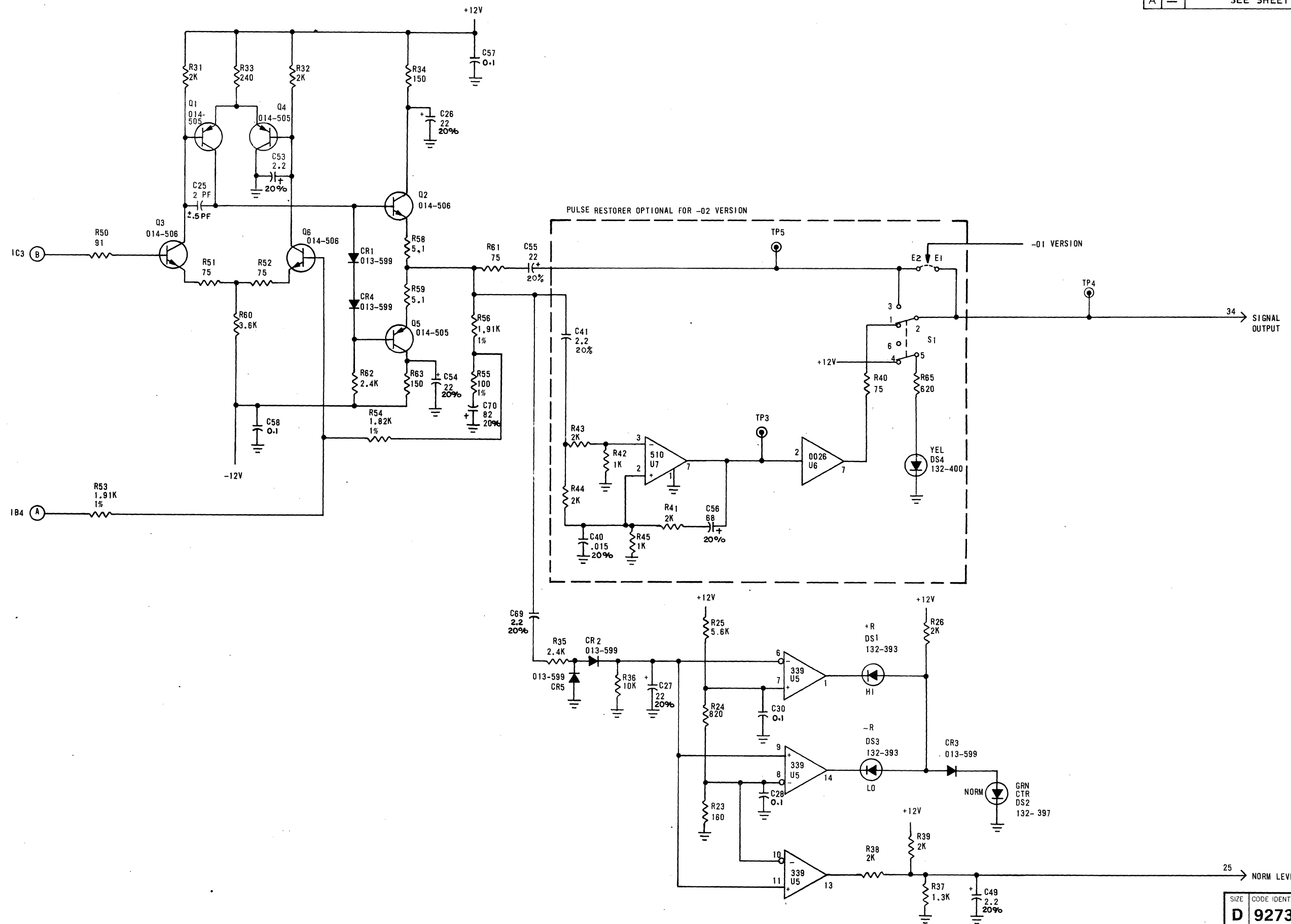
  

UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED FINISHES		<i>Paula</i>		4-17-80
TOL	2 PLC 3 PLC	CHK BY	<i>Paula</i>	12-18-80
		DFT APPD		
		ENGRG APPD	<i>Paula</i>	10-24-80
		AUTH BY	<i>Paula</i>	20NOV-80
DO NOT SCALE THIS PRINT				
MATERIAL				
FINISH:				

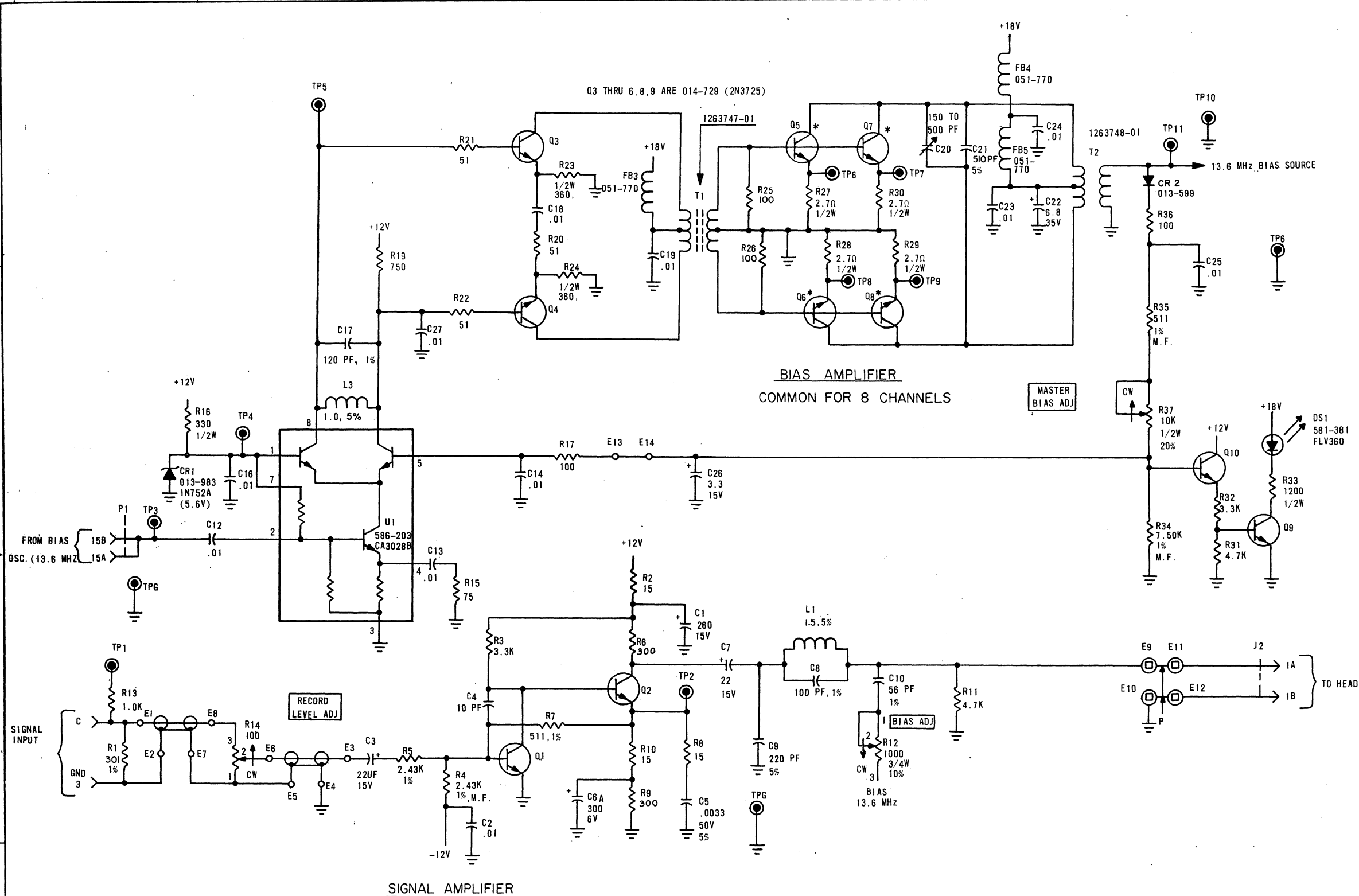
  

1257473	HBR 3000	SIZE	CODE IDENT NO
NEXT ASSY	USED ON	D	92739 1257470-01
APPLICATION		SCALE	SHEET 1 OF 2

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	-	SEE SHEET ONE	-	-	-



REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	-	PROD RELEASE	P. Barry	A. Dahl	10-2-80



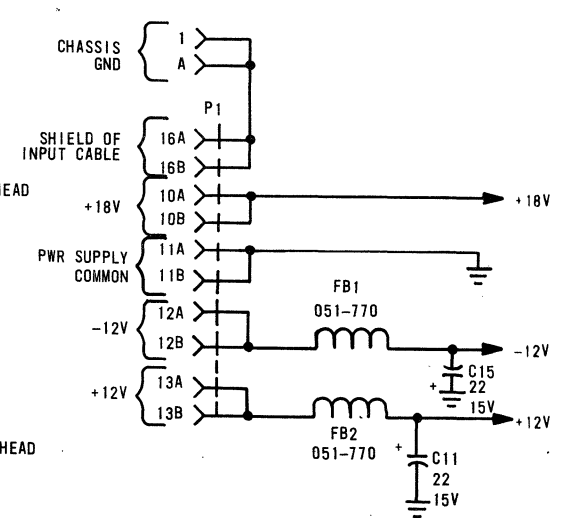
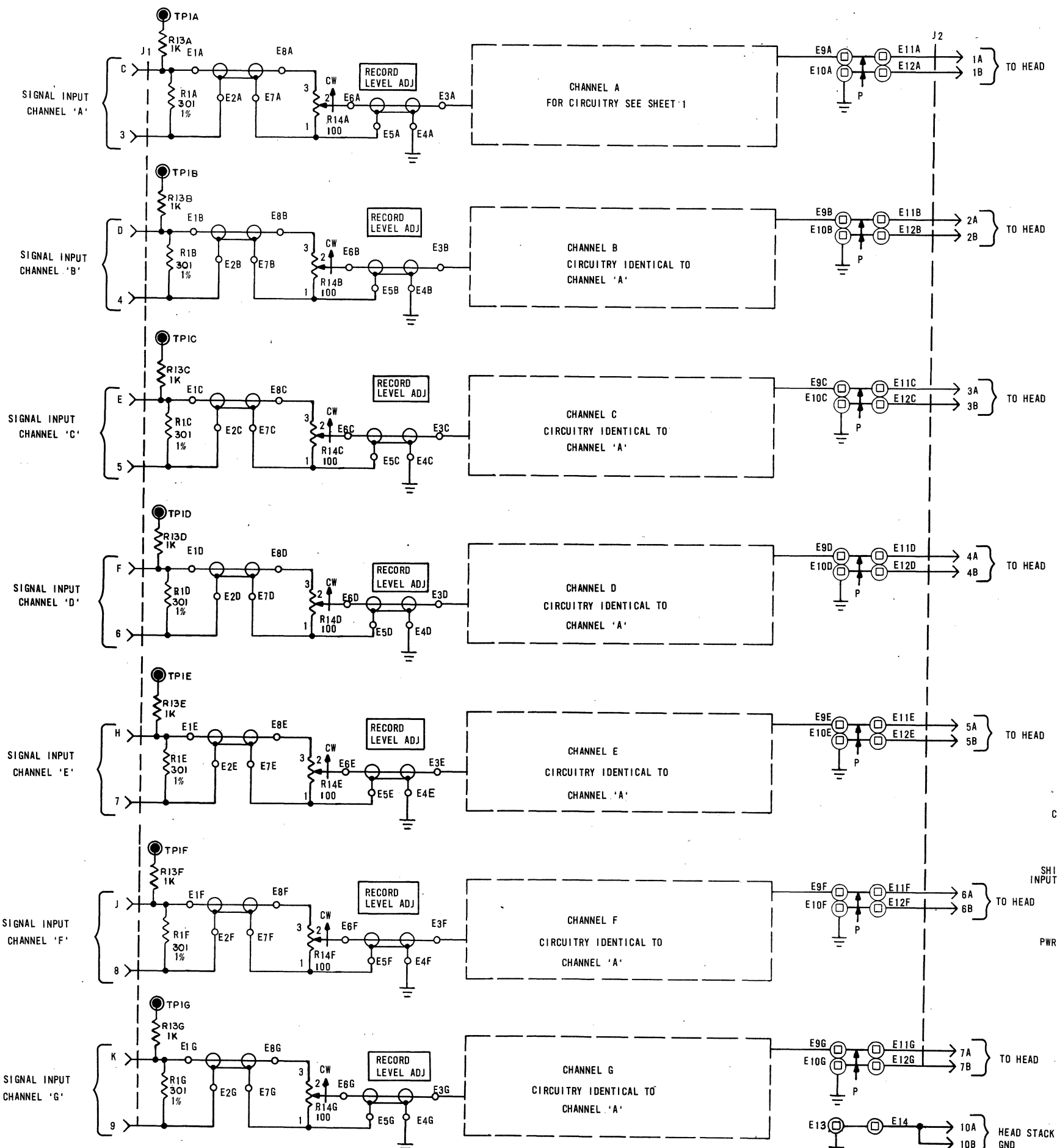
- 6. \*DENOTES HEAT DISSIPATOR ATTACHED.
  - 5. ⊠ DESIGNATES WIREWRAP TERMINALS.
  - 4. RESISTORS ARE ±5%, 1/4W.
  - 3. NPN TRANSISTORS ARE 2N3904. (580-647)
  - 2. ELECTRICAL VALUES ARE IN OHMS, MICROFARADS & MICROHENRIES.
  - 1. REFERENCE ASSEMBLY 1259503-01.
- NOTES: UNLESS OTHERWISE SPECIFIED.

SIGNAL AMPLIFIER  
TYPICAL CHANNELS  
A THRU G

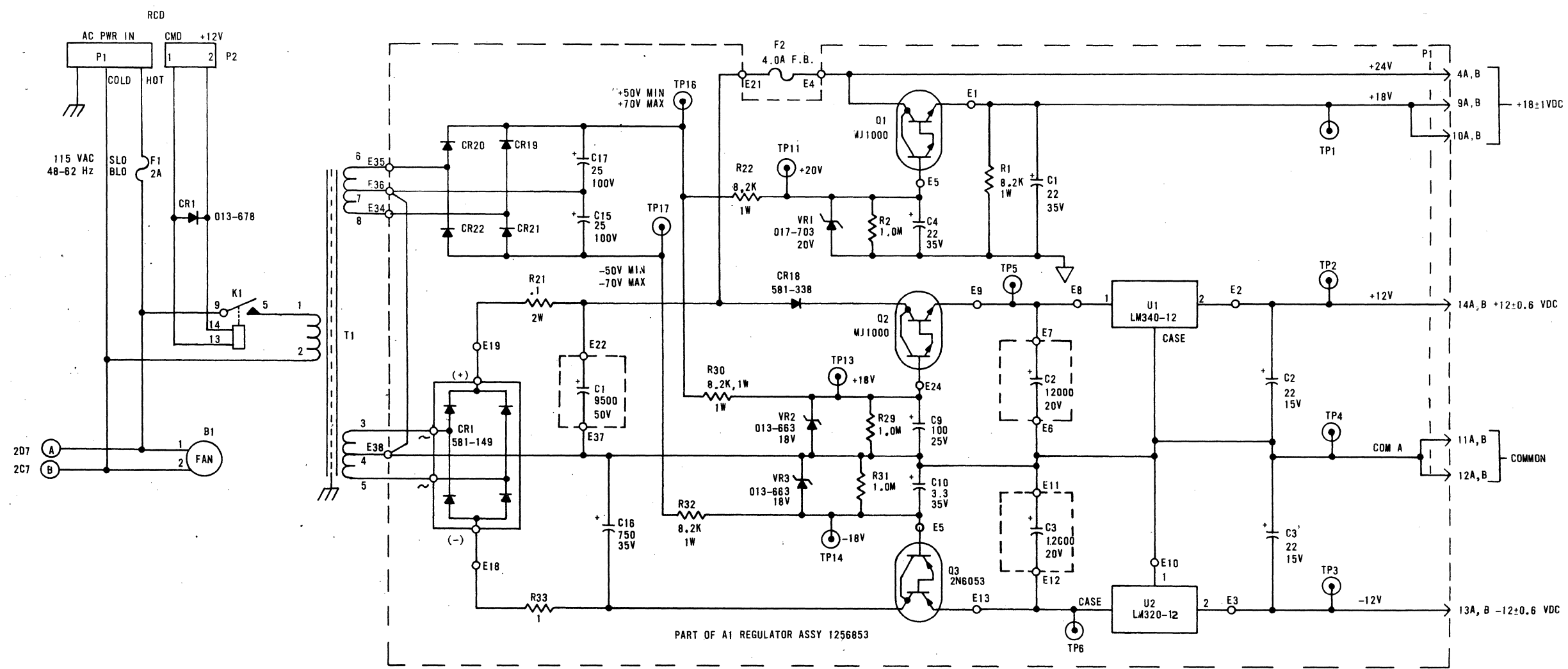
REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C27	L2
CR2	R18
DS1	
E14	
FB5	
J2	
L3	
P1	
Q10	
R37	
T2	
TP11	
U1	

QUANTITY PER VERSION		ITEM NO.	PART NUMBER	DESCRIPTION
PARTS LIST				
UNLESS OTHERWISE SPECIFIED		SIGNATURE	DATE	HEADQUARTERS Redwood City, California 94063
DIMENSIONS ARE IN INCHES AND ANGLES CHEMICALLY APPLIED OR PLATED FINISHES		DRAWN BY	10-2-80	
REMOVE BURRS AND SHARP EDGES		CHK BY	8/10/81	SCHEMATIC RECORD HEAD DRIVER
YES <input type="checkbox"/> NO <input type="checkbox"/>		DFT APPD	8/10/81	
DO NOT SCALE THIS PRINT		ENGRG APPD	2/26/81	SIZE CODE IDENT NO D 92739 1259500-01
MATERIAL		AUTH BY		
FINISH				SCALE NONE SHEET 1 OF 2

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A		SEE SHEET ONE			



REVISIONS			SIGNATURE AND DATE		
LTZ	ZONE	DESCRIPTION	DFT	CHK	ENGRG
A	-	PRODUCTION RELEASE	H. Dao	J. D. Dahl	10/16/81
B	-	REV PER ECN 29817-2	H. Dao	J. D. Dahl	6/19/81
C	-	ADDED -02 PER ECN 30541-7	H. Dao	J. D. Dahl	4/14/82



TO A2 ASSEMBLY  
CONNECTOR XA5

A2 ASSY 1256883		A1 ASSY 1256853	
REFERENCE DESIGNATIONS		REFERENCE DESIGNATIONS	
LAST USED	NOT USED	LAST USED	NOT USED
C9		C38	
R8		CR22	
L1		VR3	
JPR 5		Q7	
TP 6		R41	
V1		TP17	
XA 5		U6	
J2			
U2			

QUANTITY PER VERSION	PART NUMBER	DESCRIPTION

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CONSENT OF AMPLEX CORPORATION. PROVIDE  
HOWEVER THAT IF THIS DRAWING IS  
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TRACTOR, PURSUANT TO A GOVERNMENT  
PRIME OR SUBCONTRACT, THE GOVERN-  
MENT MAY MAKE SUCH USE OF THIS DRAW-  
ING AS IS PERMITTED BY THE APPLICABLE  
"DATA" CLAUSE SET FORTH IN SUCH CON-  
TRACT OR SUBCONTRACT

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES AND  
INCLUDE CHEMICALLY APPLIED  
PLATED FINISHES  
TOL \* 2 PLC3 PLC AN  
REMOVE BURRS AND SHARP EDGES  
YES  NO   
DO NOT SCALE THIS PRINT  
MATERIAL:  
FINISH:

SIGNATURE  
DATE  
DRAWN BY: H. Dao 2-26-81  
CHK BY: J. D. Dahl 5-26-81  
DFT APPD: [Signature] 5-26-81  
ENGRG APPD: [Signature] 5-26-81  
AUTH BY: H. A. Vello 5-26-81

**AMPEX** HEADQUARTERS  
Redwood City,  
California 94063

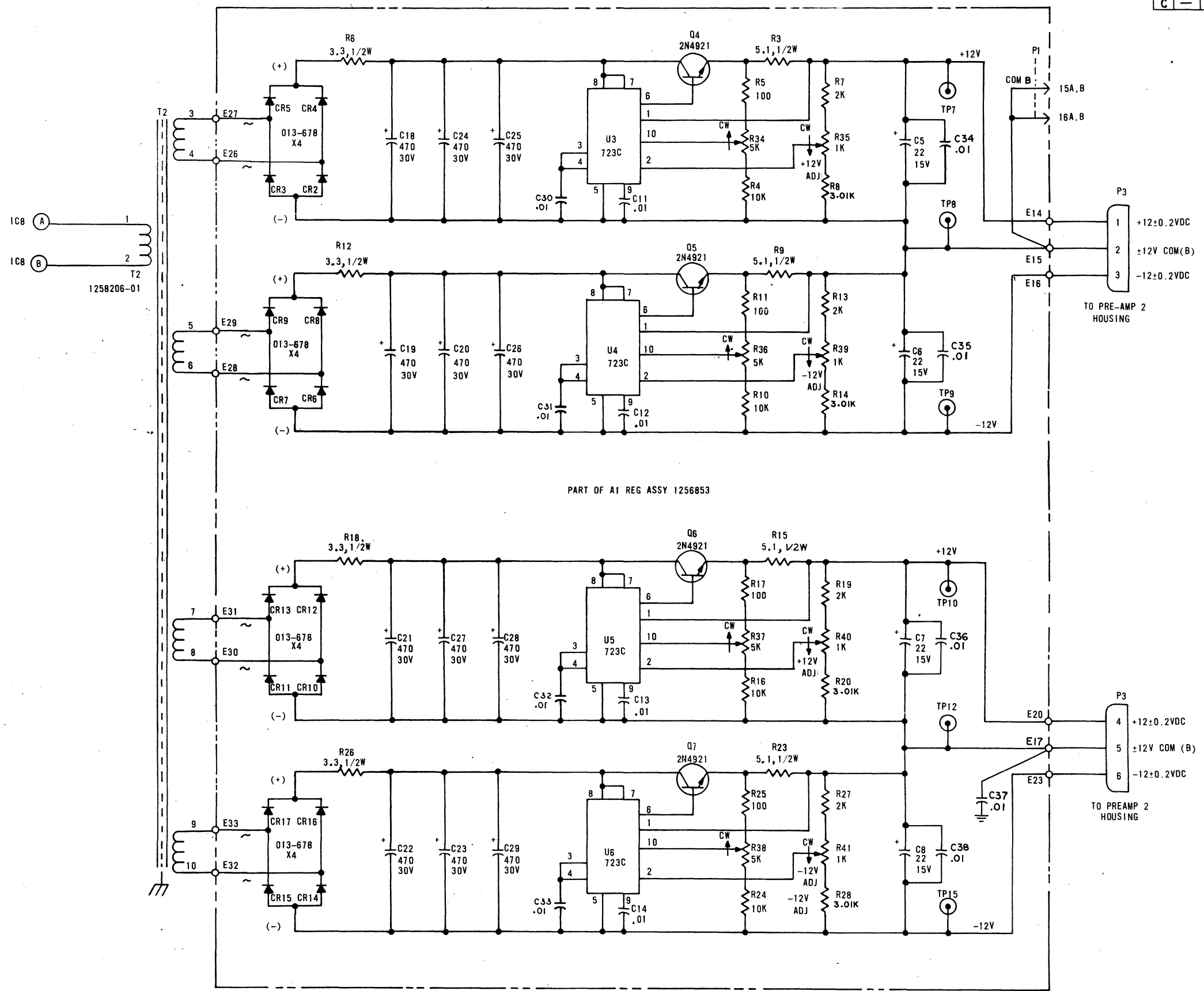
**SCHEMATIC DIAGRAM,  
POWER SUPPLY REGULATOR**

SIZE CODE IDENT NO  
**D 92739 1259510-02**

SHEET 1 OF 3

1259510-02

REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
C	-	SEE SHEET 1			

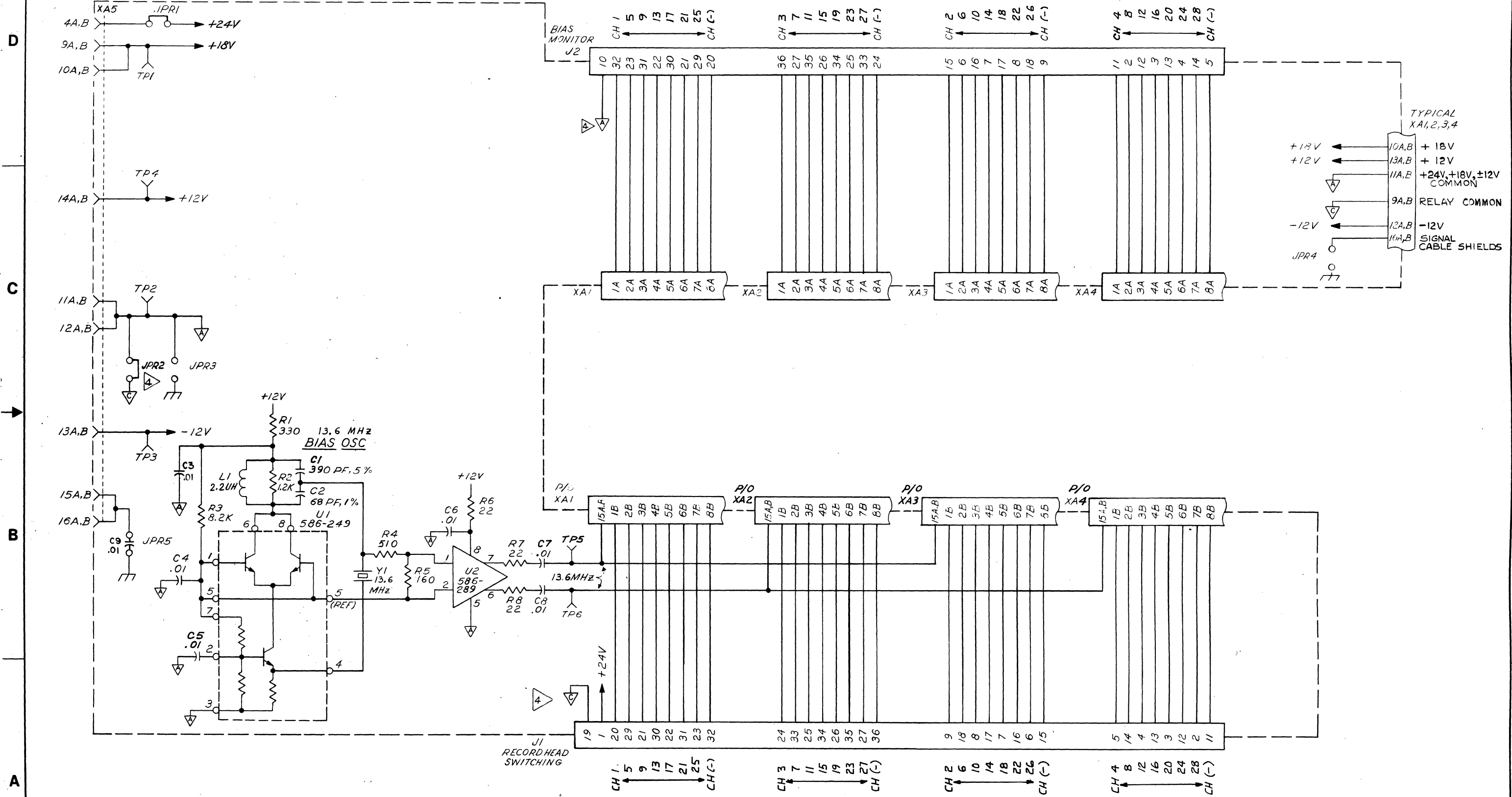


SIZE	CODE IDENT NO.	1259510-02
D	92739	
SCALE		SHEET 2 OF 3

1259510-02

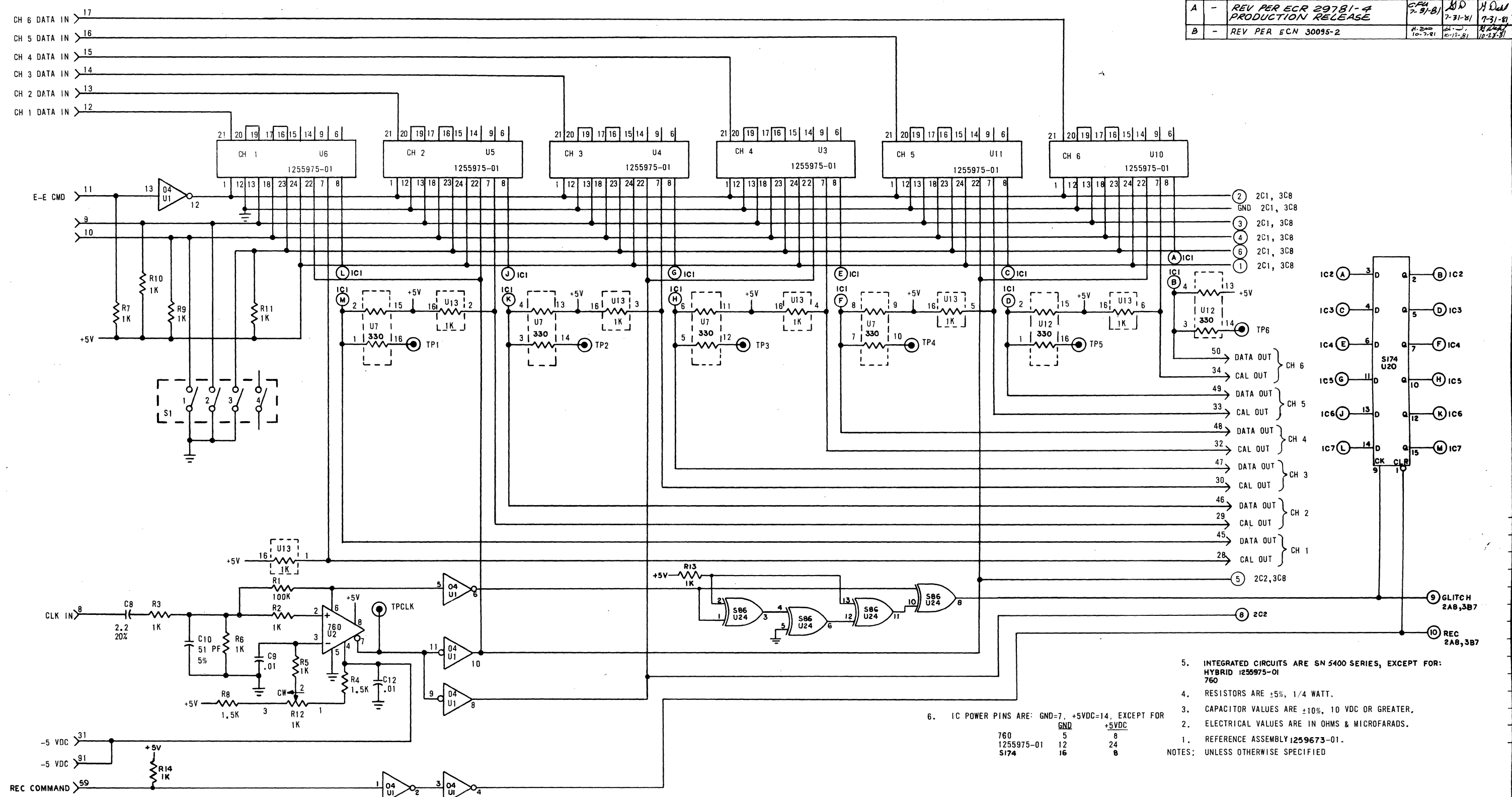
REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
C	-	SEE SHEET 1			

A2 INTERCONNECT AND BIAS OSC ASSY 1256883



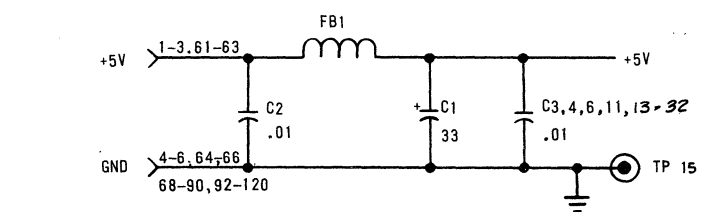
- TYPICAL  
XA1,2,3,4
- +18V ← 10A,B +18V
  - +12V ← 13A,B +12V
  - ← 11A,B +24V, +18V, +12V COMMON
  - ← 9A,B RELAY COMMON
  - 12V ← 12A,B -12V
  - ← 16A,B SIGNAL CABLE SHIELDS

REVISONS		SIGNATURE AND DATE	
TR	ZONE	DESCRIPTION	DATE
A	-	REV PER ECR 29781-4 PRODUCTION RELEASE	7-31-81
B	-	REV PER ECN 30095-2	10-2-81



- INTEGRATED CIRCUITS ARE SN 5400 SERIES, EXCEPT FOR: HYBRID 1255975-01 760
- RESISTORS ARE ±5%, 1/4 WATT.
- CAPACITOR VALUES ARE ±10%, 10 VDC OR GREATER.
- ELECTRICAL VALUES ARE IN OHMS & MICROFARADS.
- REFERENCE ASSEMBLY 1259673-01.
- NOTES: UNLESS OTHERWISE SPECIFIED

	GND	+5VDC
760	5	8
1255975-01	12	24
S174	16	8



REF DESIGNATIONS		NOT USED	
LAST USED	C32	NOT USED	C5,7
	FB1		
	R13		
	S1		
	TP15, TPCLK		
	U23		

NOTICE  
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UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	TOL	DRAWN BY	DATE	12/29/80
±	2 PLC 3 PLC	CHK BY		
±	ANG	ENGRG APPD		
±		AUTH BY		

**AMPEX** HEADQUARTERS  
Redwood City, California 94063

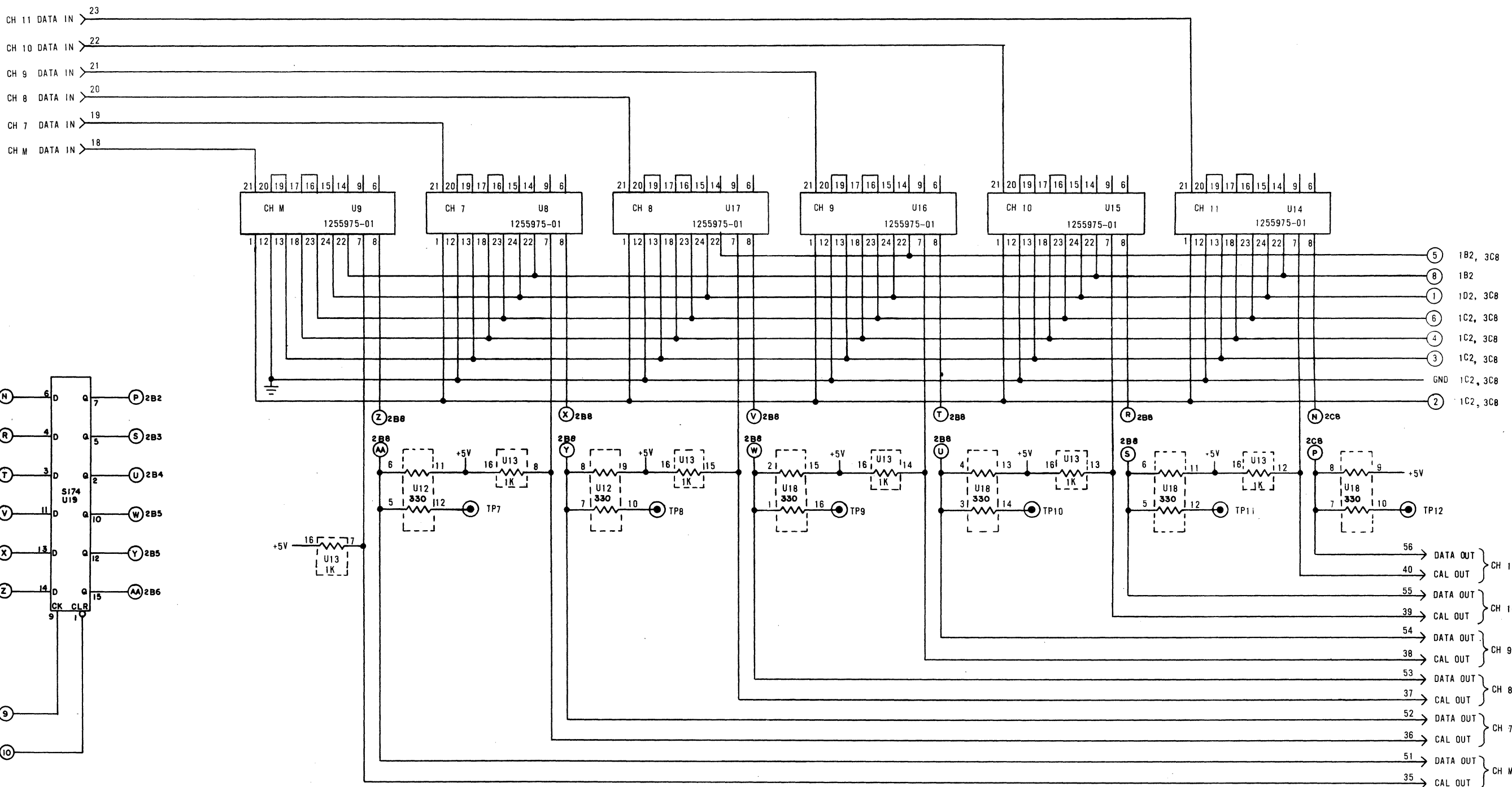
**SCHMATIC DIAGRAM**  
ENCODER NO. 1

SIZE CODE IDENT NO.  
**D 92739** 1259670 -01

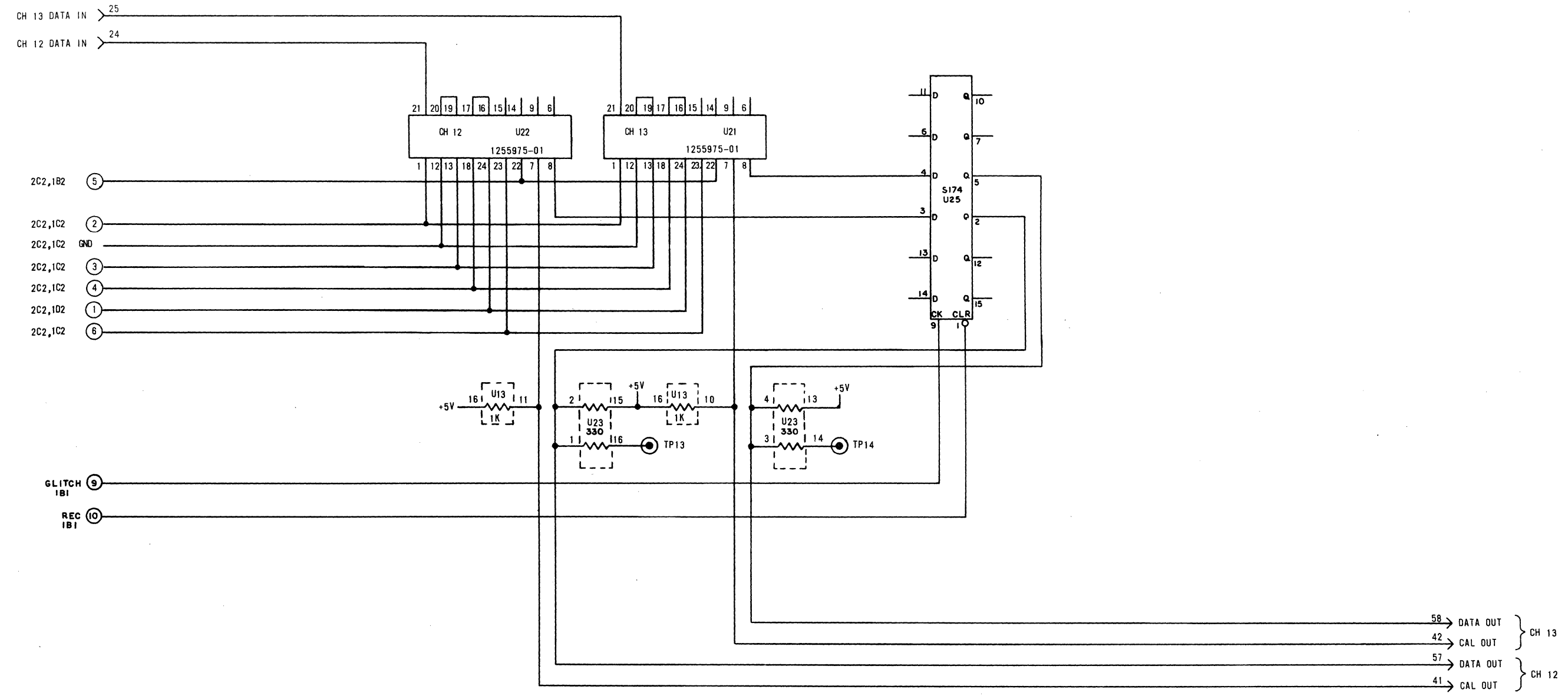
SCALE: \_\_\_\_\_ SHEET 1 OF 3



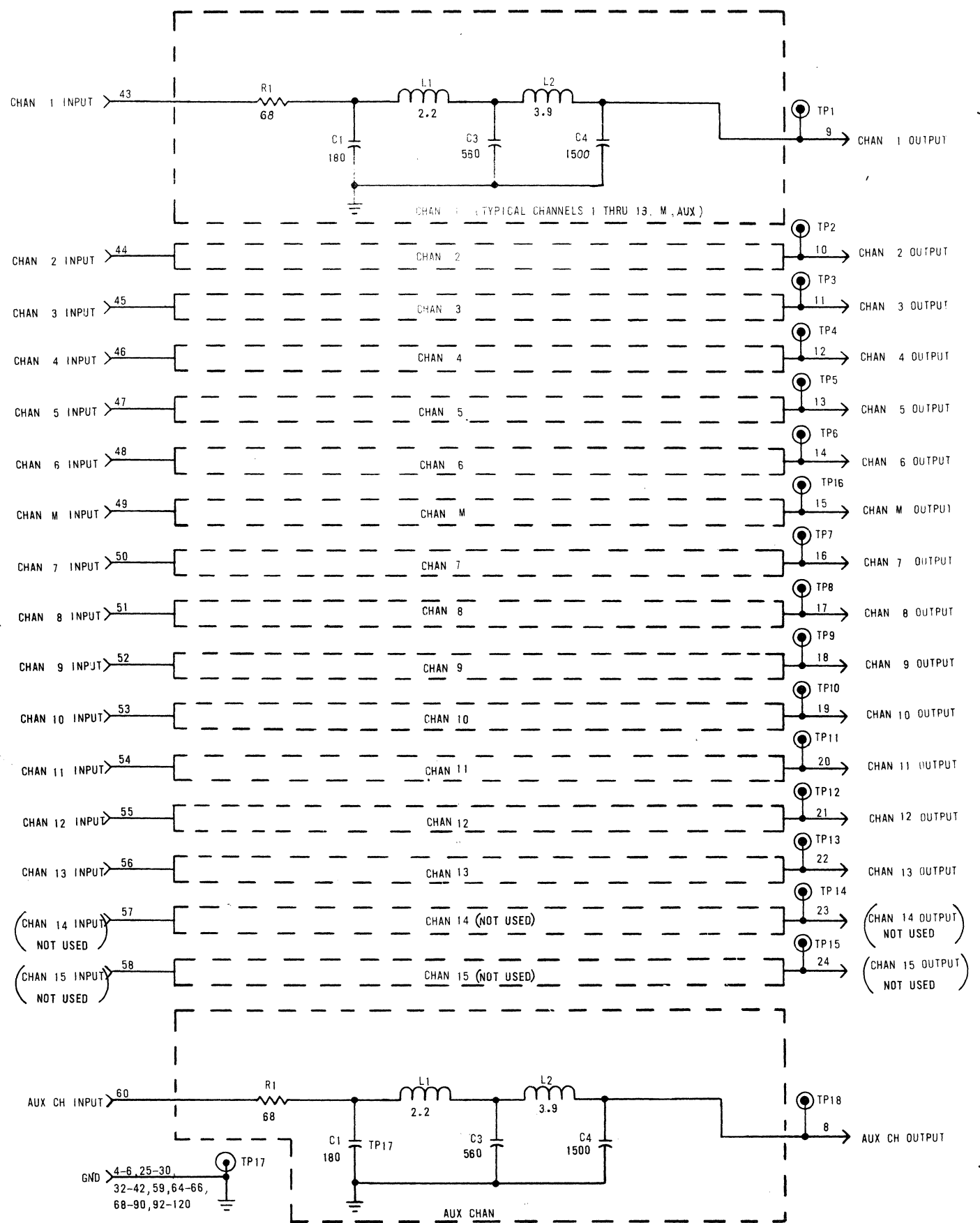
REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
B	-	SEE SH 1	-	-	-



REVISIONS			SIGNATURE AND DATE		
LTR	ZONE	DESCRIPTION	DFT	CHK	ENGRG
B	-	SEE SH 1	-	-	-



LTR		ZONE		DESCRIPTION			SIGNATURE AND DATE		
DFT	CHK	ENGR	DFT	CHK	ENGR	DFT	CHK	ENGR	
A	-			PRODUCTION RELEASE					



TYPICAL CIRCUIT CH 1 THRU CH 13, M & AUX

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C4	C2
L2	
R1	

- 4. RESISTORS ARE +2%, 1/4W.
  - 3. ALL CAPACITORS ARE ±5%, 500 VDC OR GREATER.
  - 2. REFERENCE ASSEMBLY 1259733-01.
  - 1. ELECTRICAL VALUES ARE IN OHMS, PICO FARADS & MICROHENRIES.
- NOTES: UNLESS OTHERWISE SPECIFIED.

QTY	UQ	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q54	Q55	Q56	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	Q87	Q88	Q89	Q90	Q91	Q92	Q93	Q94	Q95	Q96	Q97	Q98	Q99	Q100
UNLESS OTHERWISE SPECIFIED		SIGNATURE		DATE		PART NUMBER		EQUIVALENT		DESCRIPTION		PARTS LIST		MATERIAL		FINISH		SIZE		CODE IDENT NO		SCALE		SHEET		OF		1																																																																							
DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED PLATED FINISHES		DRAWN BY		2-3-81		HAWK BY		PART NUMBER		AMPEX		HEADQUARTERS		REMOVE BURRS AND SHARP EDGES		YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		D 92739		1259730-01		NONE		CPA 9429-21A277		SHEET 1		OF 1																																																																							

CAT	ITEM	NEXT	USED	IN	MF	PR
APPLICATION	ASSY	ON	CODE			
1259733	HBR					

1259730-01