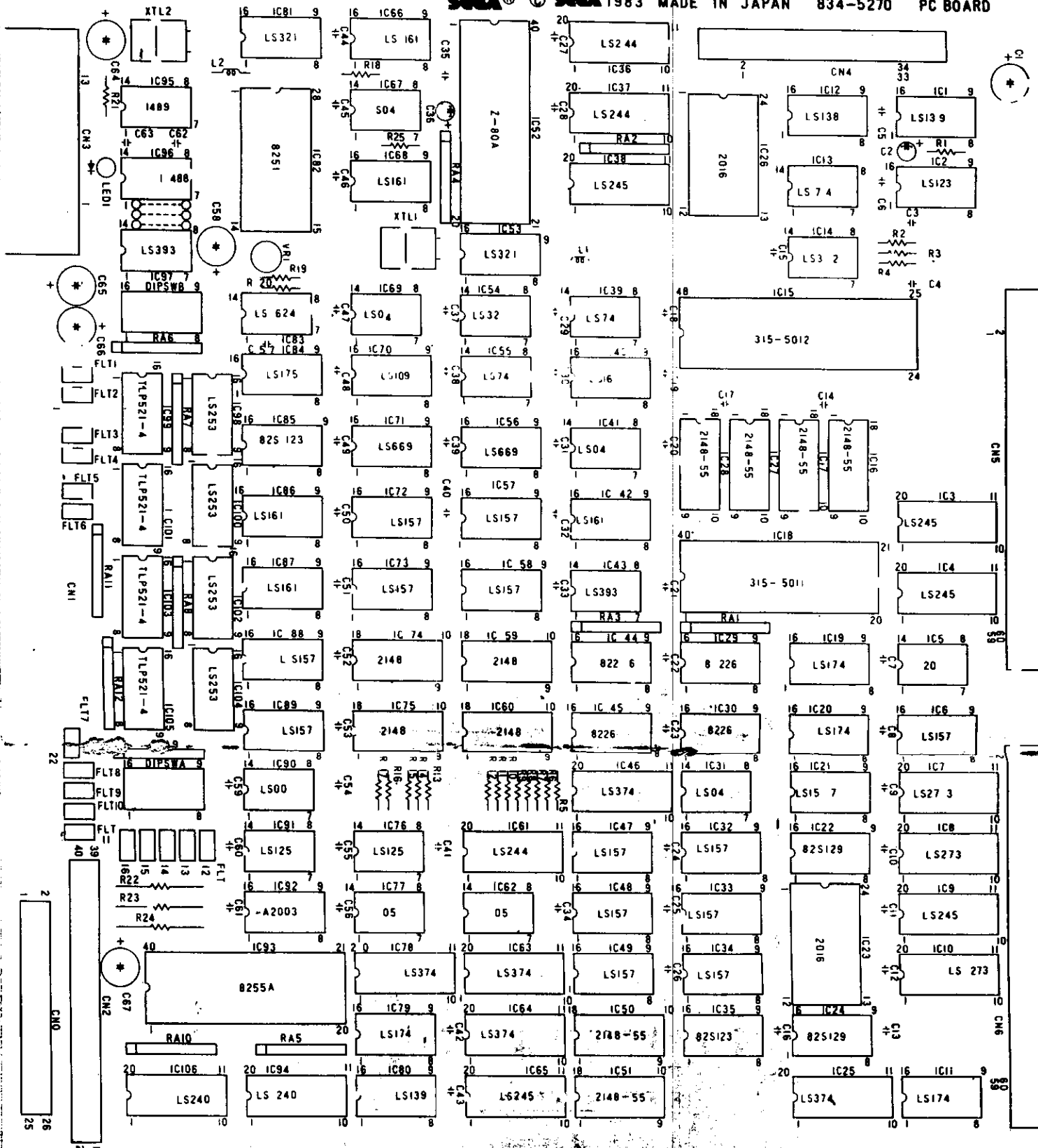


*Bally* MIDWAY  
 10601 W. BELMONT  
 FRANKLIN PARK, ILL 60131

NOTES:  
 X - 15AWG WIRE  
 • - SOLDER JOINTS  
 Δ - 18AWG / 600V WIRE

SEGA © SEGA 1983 MADE IN JAPAN 834-5270 PC BOARD

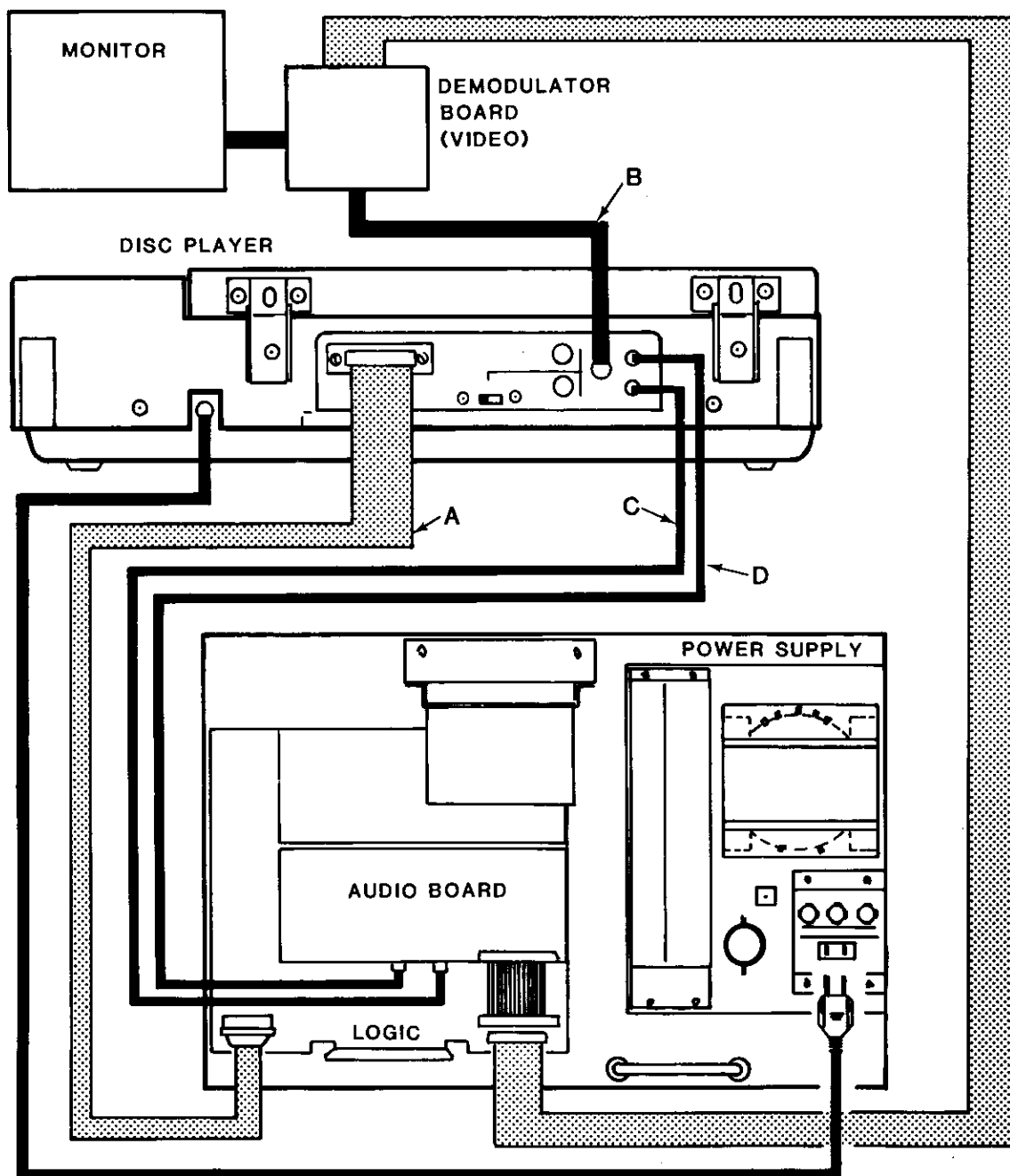
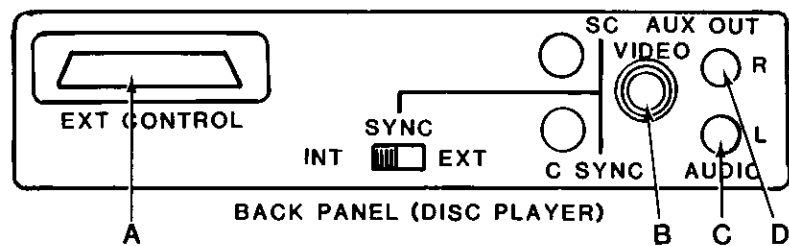


**REVISIONS**

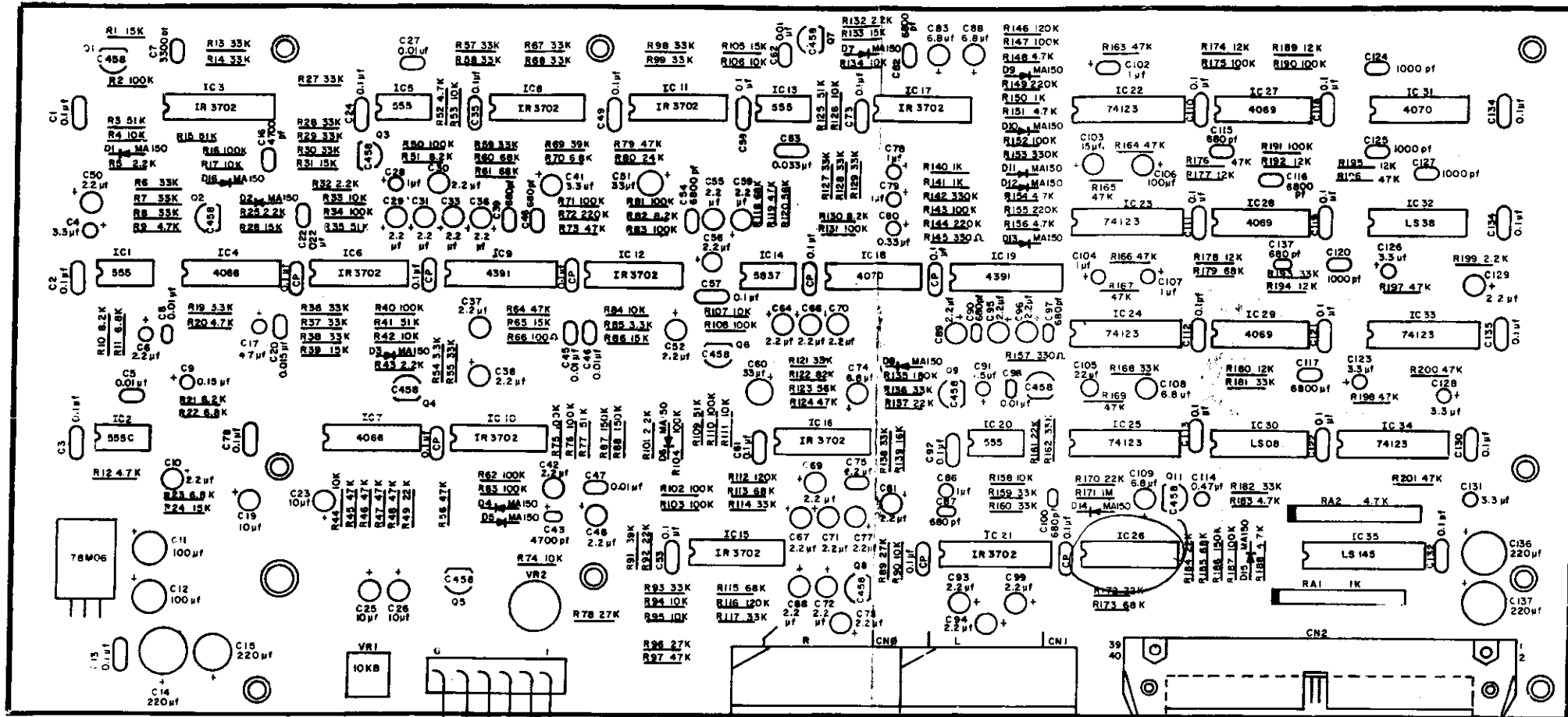
NO.	DESCRIPTION

<b>PROJECT ENG:</b>		<b>USED ON ASTRON BELT</b>		<b>Bally / MIDWAY MFG. CO.</b> <small>FRANKLIN PK. ILL.</small>	
DO NOT SCALE DWG.		NO. REQ'D   PER			
DIM. TOLERANCES UNLESS SPECIFIED		SCALE FULL		PART NO. MO51 - OOA30 - A037	
		MAIN IC BOARD ASSY DWG Q834 - 05270 - 0000			
DATE: 11/9/83					

# CONNECTION TO VIDEO DISC PLAYER

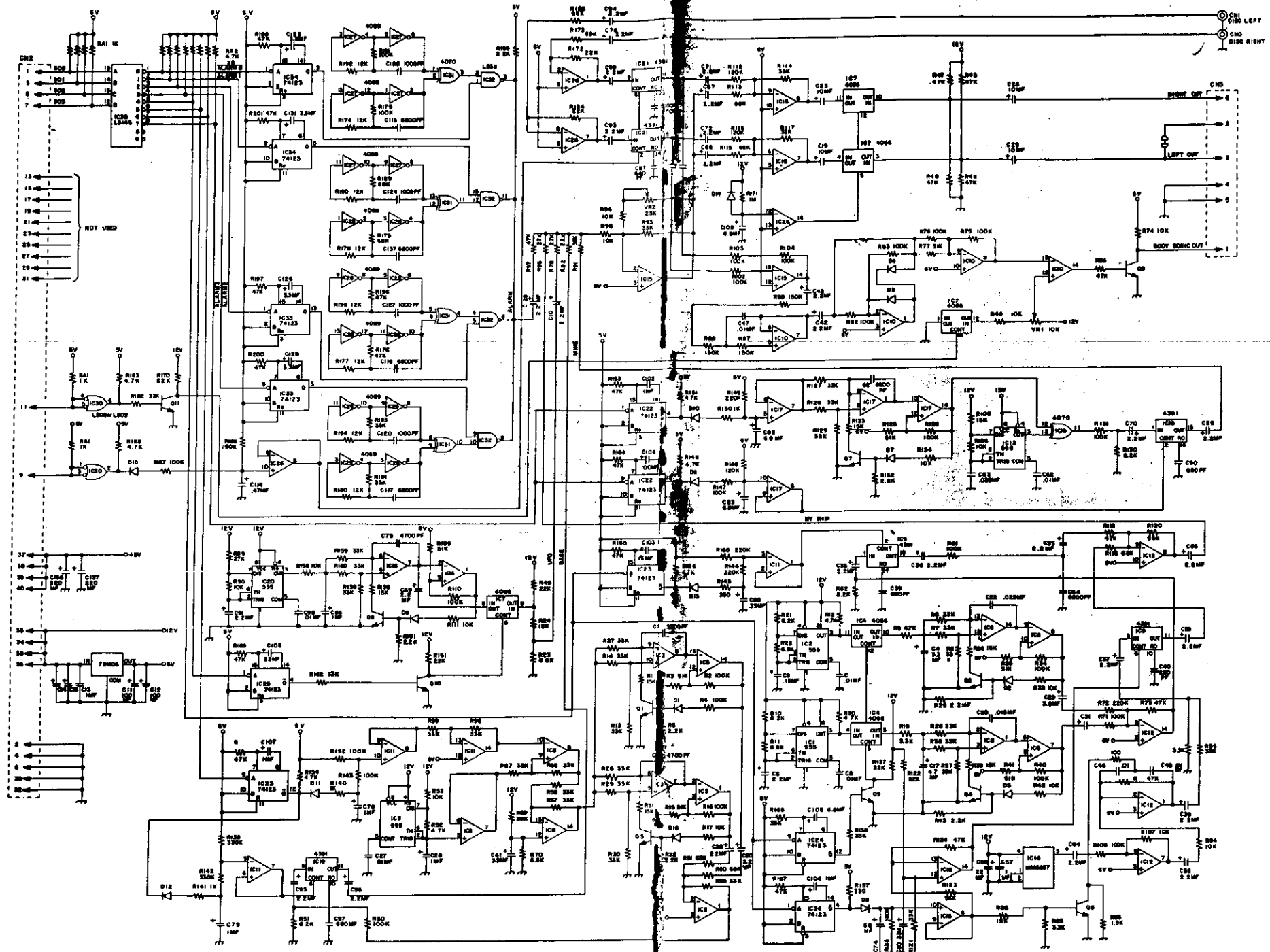


AMPLIFIER AND SPEAKERS (2) NOT SHOWN

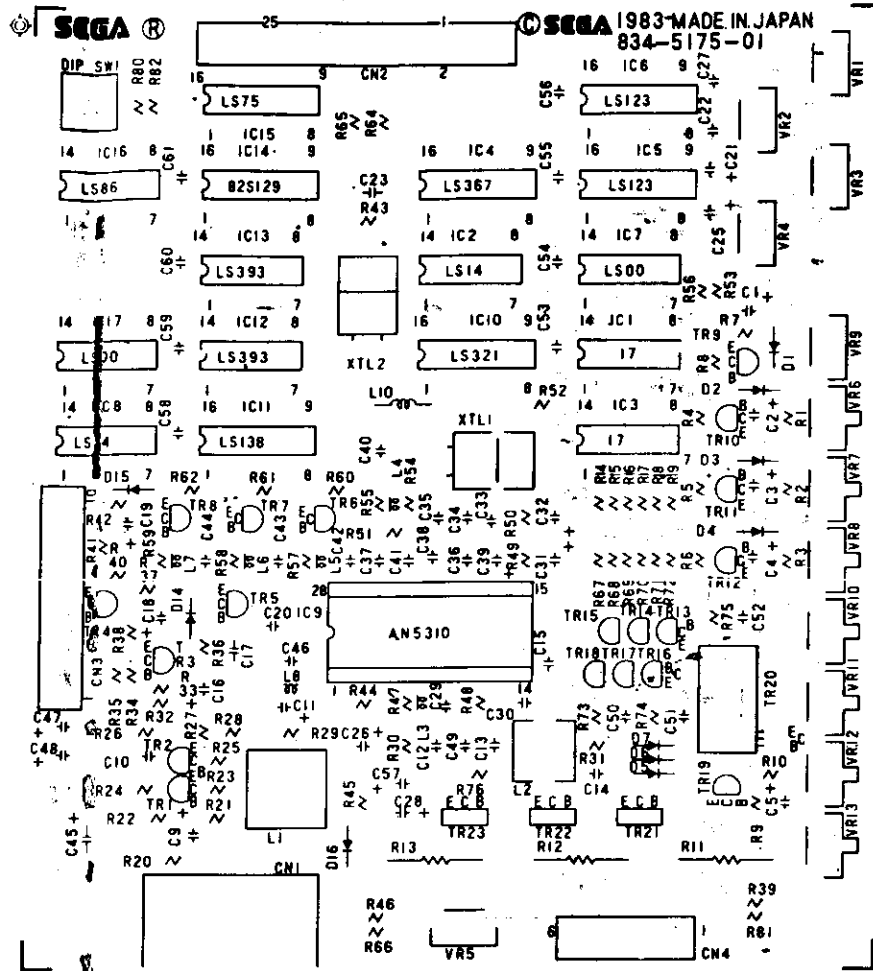


PROJECT ENG: J. SZERSZEN		USED ON GALAXY RANGER		REVISIONS	
DO NOT SCALE DWG.		HEAT TREAT	SCALE FULL	NO. REQ'D   PER	
DIM TOLERANCES UNLESS SPECIFIED		MAT'L.	SOUND BOARD ASSEMBLY DWG		PART NO. M051 - 00A36 - A012
CONCENTRICITY ± 0.02 MAX TYPICAL ± 0.01 DECIMAL ± 0.005 HOLE DIA + 0.02 0.00		FINISH	Q834 - 05315 - 0000		
DRW. ted	DATE 2/16/84				

Bally / MIDWAY MFG. CO.  
FRANKLIN PK ILL

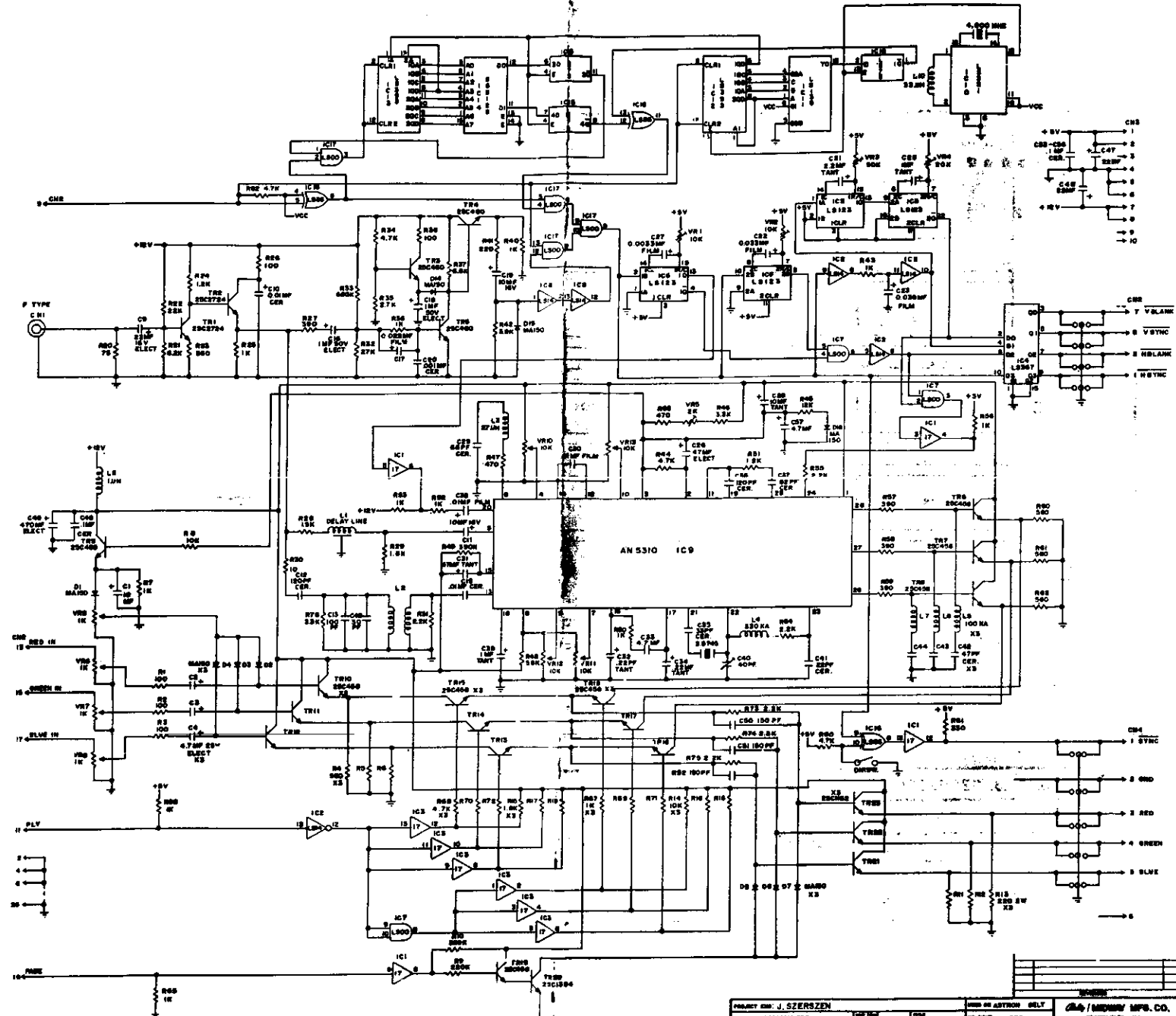


NAME: J. LEEZER  
 ADDRESS: 1000 S. WILLOW STREET  
 CITY: FULLERTON, CALIF. 92631  
 PHONE: (714) 771-1411  
 TITLE: SENIOR DESIGN ENGINEER  
 COMPANY: SHERMETO INC. SALARY RANGER  
 BOARD: SD  
 DATE: 2-28-72  
 DES: 0035-0000  
 PART NO: 0035 - 4015

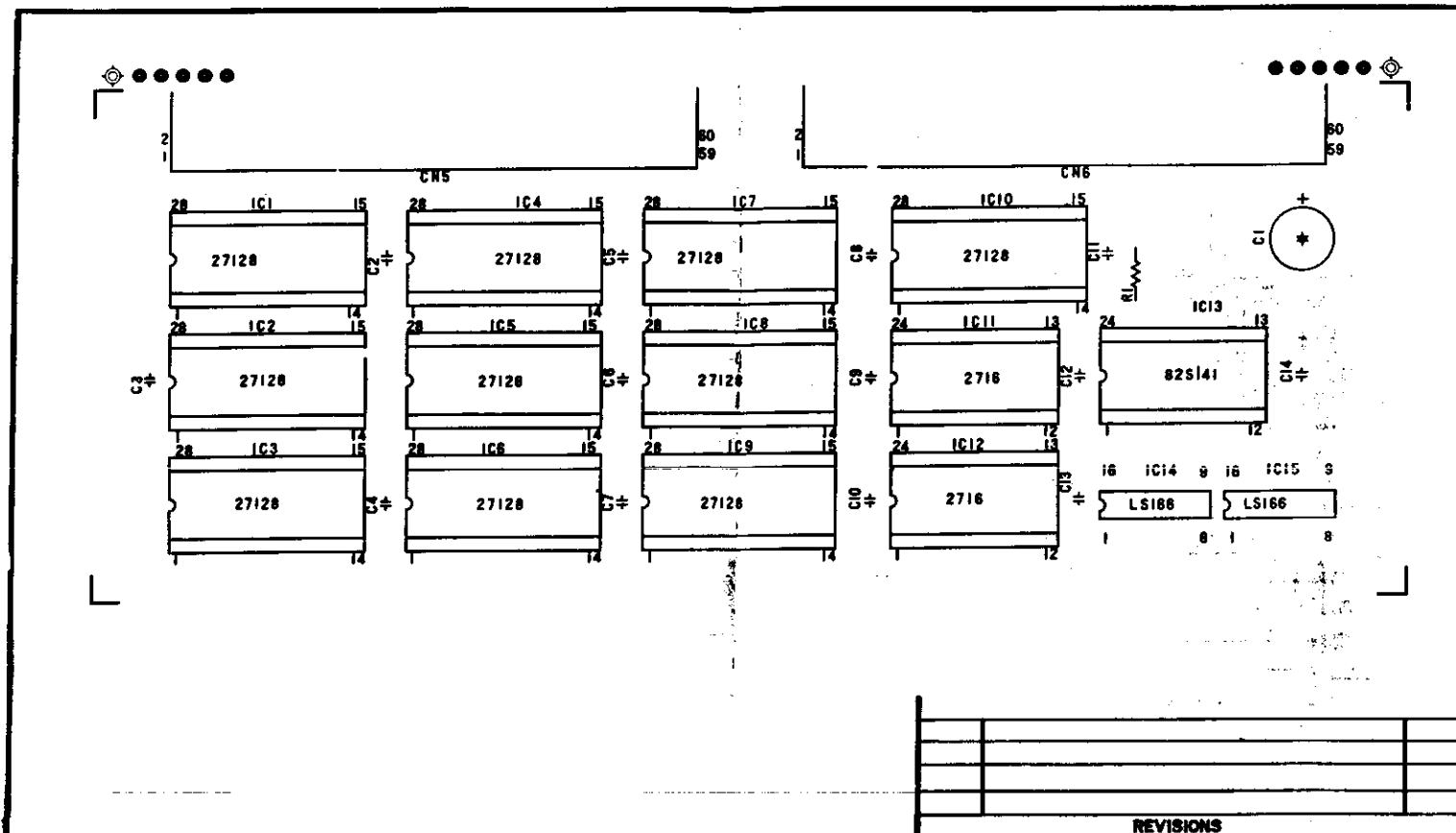


REVISIONS	

PROJECT ENG:		USED ON ASTRON BELT		<b>Bally / MIDWAY MFG. CO.</b> FRANKLIN PK. ILL.	
DO NOT SCALE DWG.		SCALE FULL	NO. REQ'D 1 PER		
DIM. TOLERANCES UNLESS SPECIFIED CONCENTRICITY TYP 0.03 FRACTIONAL 1/64 DECIMAL 0.005 HOLE DIA +.002 - .000		DWR. <b>193</b> CKD. DATE <b>11/9/83</b>	DEMODULATOR P.C. ASSEMBLY DWG Q 834-05175-0000		PART NO. <b>M051-00A30 -A035</b>



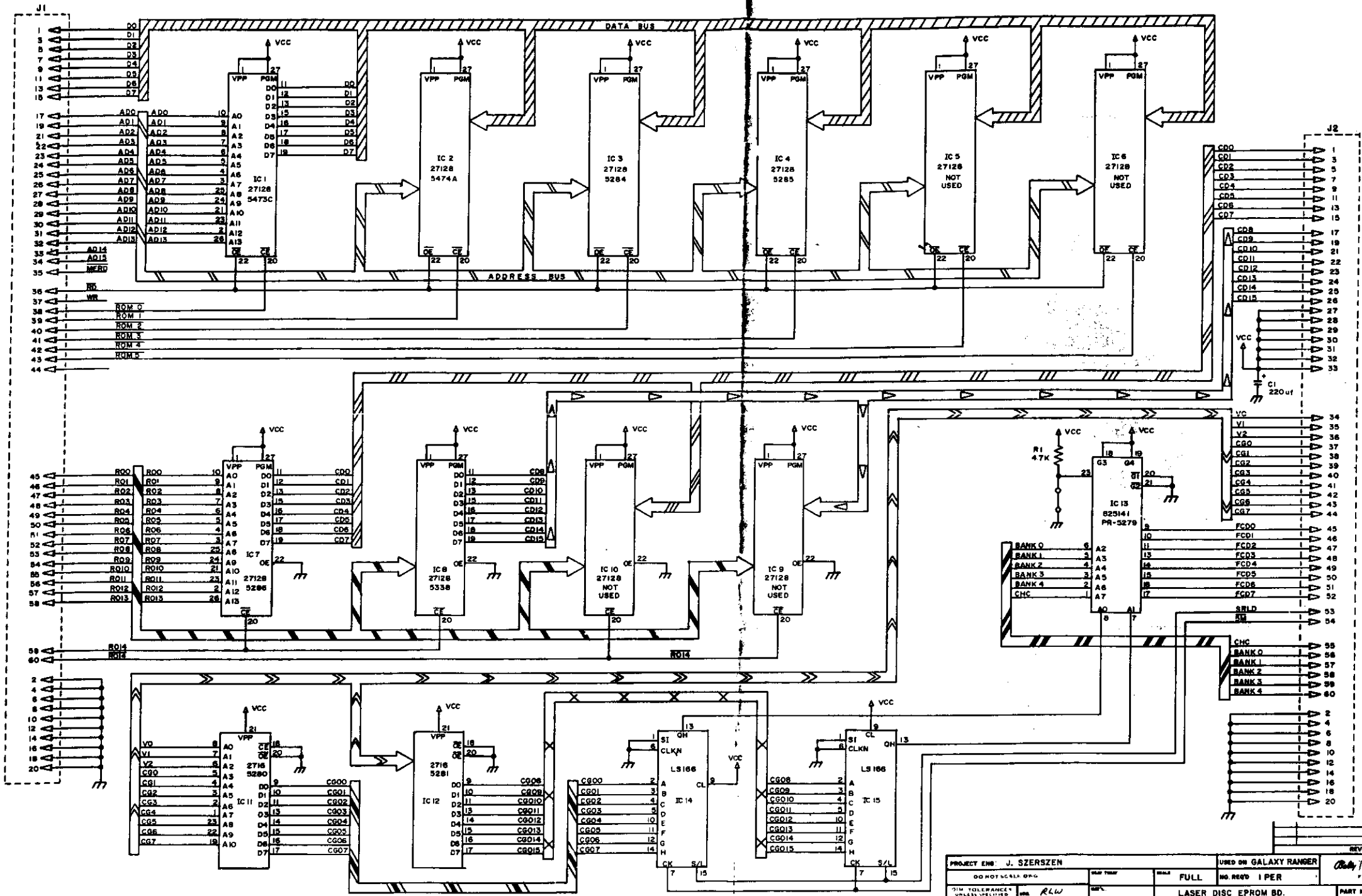
DESIGNED BY: J. SZERZEN		CHECKED BY: ASTROM DELT		DATE: 11/20/85	
DRAWN BY: J. SZERZEN		DATE: 11/20/85		REV: 1	
PART NO. DEMODULATOR P.C		Q 834-05175-0000		MOSI-00430-A036	
MFG. TOLERANCES: 20%		MFG. DATE: 11/20/85		MFG. NO.:	



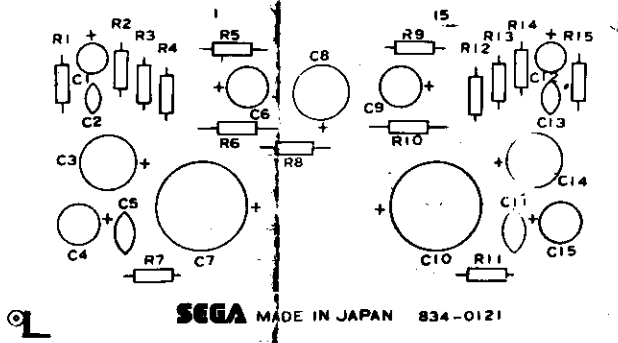
REVISIONS	

PROJECT ENG: J. SZERSZEN		USED ON GALAXY RANGER		<i>Bally / MIDWAY MFG. CO.</i> FRANKLIN PK. ILL.
DO NOT SCALE DWG.	WEAT TREAT	SCALE FULL	NO. REQ'D 1 PER	
DIM. TOLERANCES UNLESS SPECIFIED	DRW. RLW	DATE 02/28/84	LASER DISC EPROM BD. ASSY DWG A080-91684-BA30	
CONCENTRICITY T.I.R. 0.03 FRACTIONAL 1/64 DECIMAL 0.005 HOLE DIA. ±.002 - .000	CHG. DATE	PART NO. M051 - 00A30 - B018		



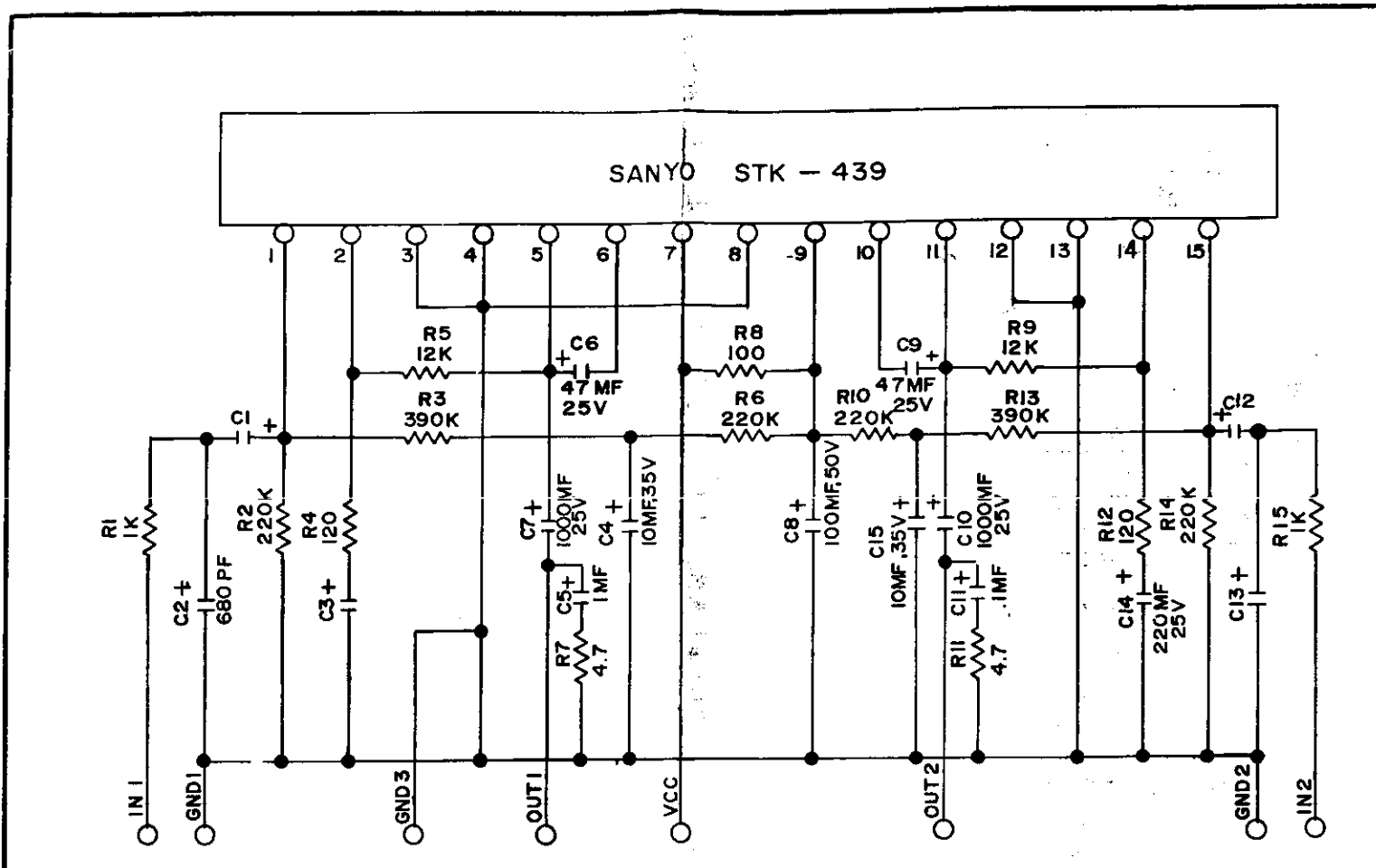


PROJECT ENG: J. SZERSZEN		USED ON GALAXY RANGER		REVISION:
DO NOT SCALE DWG		SCALE: FULL	NO. REVD: 1 PER	FRANKLIN PK. ILL.
DIM TOLERANCES UNLESS SPECIFIED		LASER DISC EPROM BD. SCHEMATIC DWG		PART NO: M051 - 00A30 - B019
DATE: 02-28/84		A080-91684-B030		



REVISIONS	

PROJECT ENG:		USED ON ASTRON BELT		Bally / MIDWAY MFG. CO. FRANKLIN PK. ILL.	
DO NOT SCALE DWG.		MAT. TREAT	SCALE FULL	NO. REQ'D   PER	
DIM. TOLERANCES UNLESS SPECIFIED		MAT'L.	AUDIO POWER AMP P.C. ASSEMBLY DWG Q834 - 00513 - 0000		PART NO. M051 - 00A30 - A033
CONCENTRICITY T.I.R. .003	DRW. <i>BB</i>	FINISH	DATE 11/9/83		
FRACTIONAL . . . . . 1/16					
DECIMAL . . . . . .005					
HOLE DIA. . . . . +.002-.000					

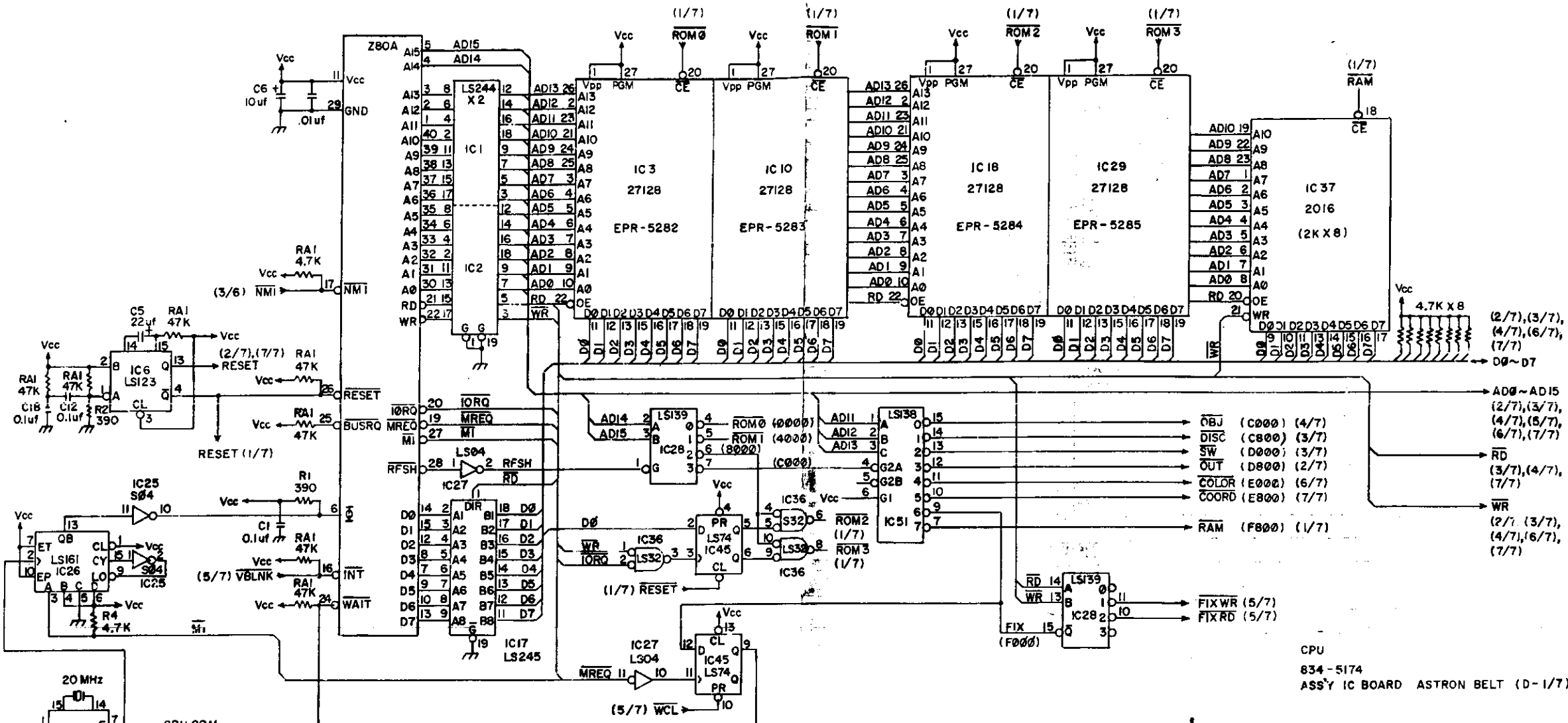


THIS DWG. IS CONFIDENTIAL & PROPERTY OF MIDWAY MFG. CO.

<b>DIM. TOLERANCES</b> UNLESS OTHERWISE SPEC. CONCENTRICITY T.I.R. .002 FRACTIONAL ± .164 DECIMAL ± .005 HOLE DIA. + .002 - .000 ANGLE ± 1/2° <b>DO NOT SCALE DWG.</b>	FIRST USED ON <b>ASTRON BELT</b>	<b>MIDWAY MFG. CO.</b> FRANKLIN PK., ILL. 60131 A BALLY CO.	<b>REVISIONS</b>
	DRN <i>M. N.</i> DATE <b>11/9/83</b> SCALE <b>FULL</b>		
	MECH CHK _____ MAT L _____	PART NO. <b>MO-5-1-0-0-A-3-0-A-0-3-4</b>	
	ELEC CHK _____ FINISH _____		

BRUNING-40-107

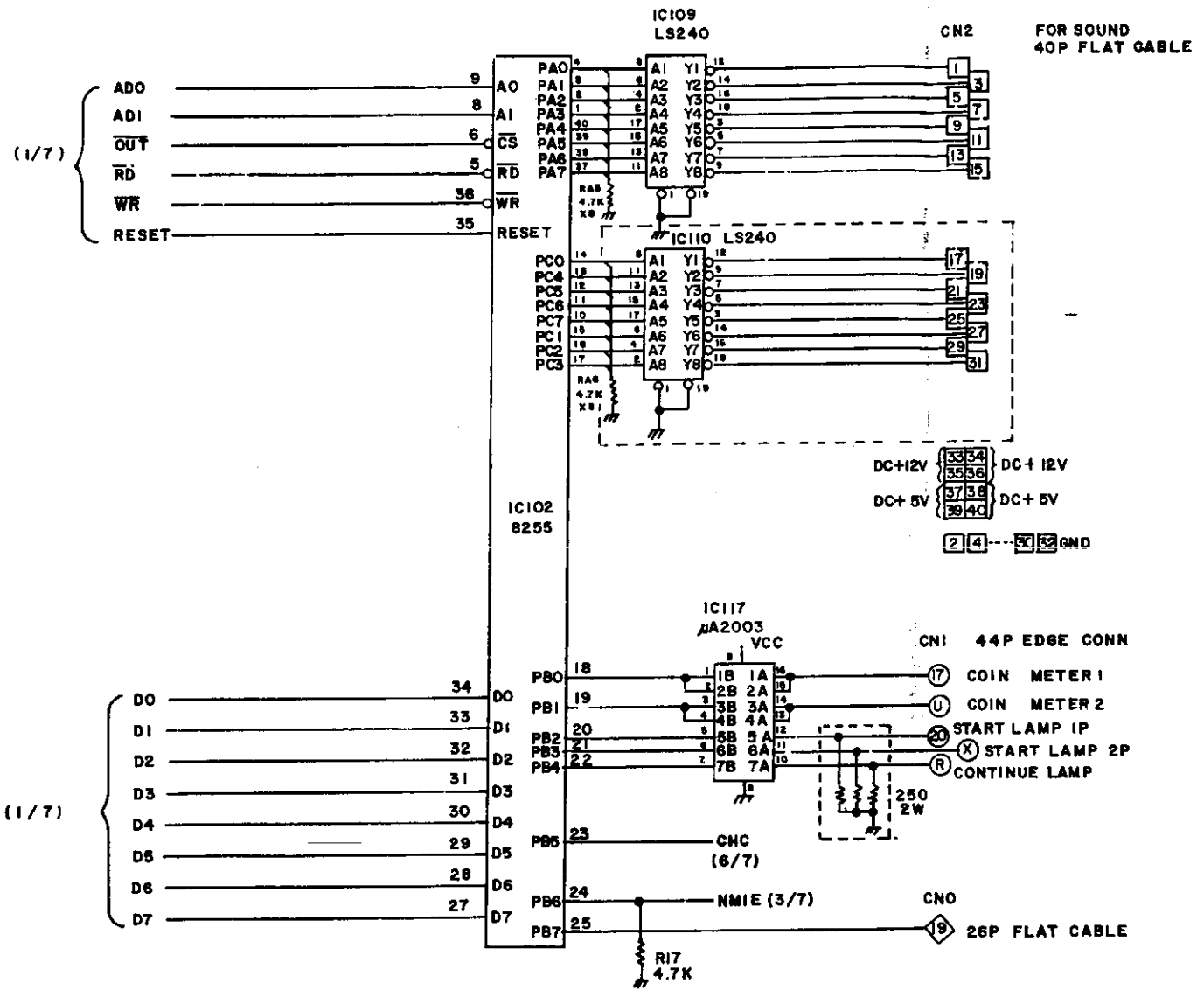




CPU  
834-5174  
ASS'Y IC BOARD ASTRON BELT (D-1/7)

SHEET 1 OF 7	
REVISIONS	

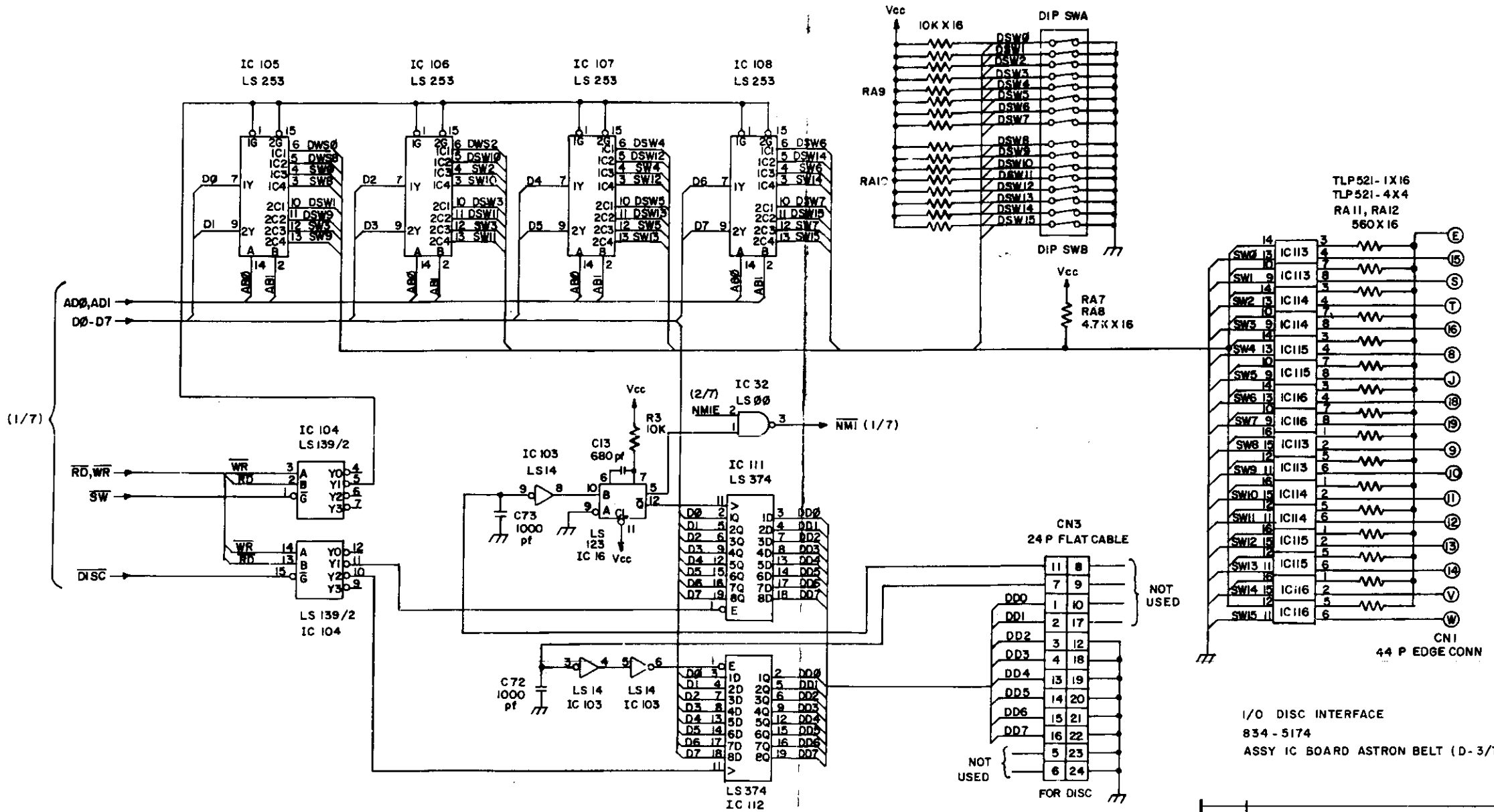
PROJECT ENG: J. SZERSZEN		USED ON ASTRON BELT		Bally / MIDWAY MFG. CO.	
DO NOT SCALE		SCALE FULL		FRANKLIN PK ILL	
DIM. TOLERANCES UNLESS OTHERWISE SPECIFIED		HEAT TREAT		NO. REQ'D 1 PER	
DRG RW		SCALE		PART NO	
CHK		FINISH		M051-00A30 - A046	
DATE 11-21-83		SCHEMATIC DWG.			
		MAIN IC BD. (PIONEER)			
		Q834-05174-0300			



OUTPUT  
 834-5174  
 ASSY IC BOARD ASTRON BELT  
 (D-2/7)

SHEET 2 OF 7	
REVISIONS	

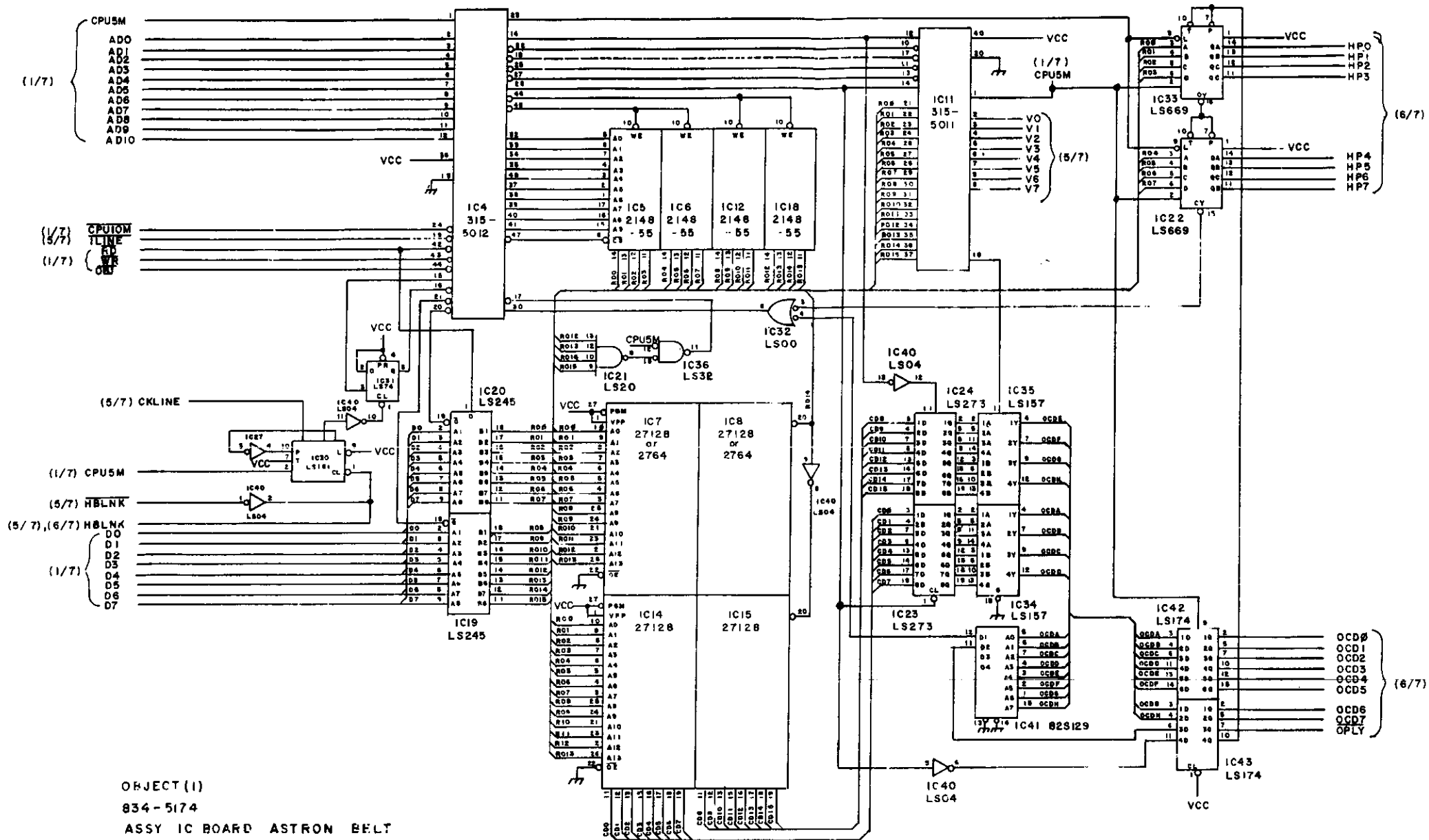
PROJECT ENG: J. SZERSZEN			USED ON ASTRON BELT		<i>Bally</i> / MIDWAY MFG. CO. FRANKLIN PK. ILL.
DO NOT SCALE DWG.			HEAT TREAT	SCALE FULL	
DIM. TOLERANCES UNLESS SPECIFIED		DWR: GAK	NO. REQ'D   PER		PART NO. M051 - 00A30 - A046
UNCERTAINTY ± 0.005 FRAC TIONAL ± 1/100 DECIMAL ± 0.005 HOLE DIA +0.02 0.000		CRD. 11/16/83	SCHEMATIC DWG. MAIN IC BD. (PIONEER) Q834-05174-0300		
		DATE	FINISH		



I/O DISC INTERFACE  
834 - 5174  
ASSY IC BOARD ASTRON BELT (D-3/7)

SHEET 3 OF 7	
REVISIONS	

PROJECT ENG: J. SZFPSZEN		USED ON ASTRON BELT		Bally / MIDWAY MFG. CO.	
DRAWN: TSS		SCALE: FULL		FRANKLIN PK. ILL.	
DATE: 11/17/83		NO. REQ'D: 1 PER		PART NO.	
SHEETS: 7		SCHEMATIC DWG		M051 - 00A30 - A046	
DATE: 11/17/83		MAIN IC BD. (PIONEER)		Q634-05174-0300	

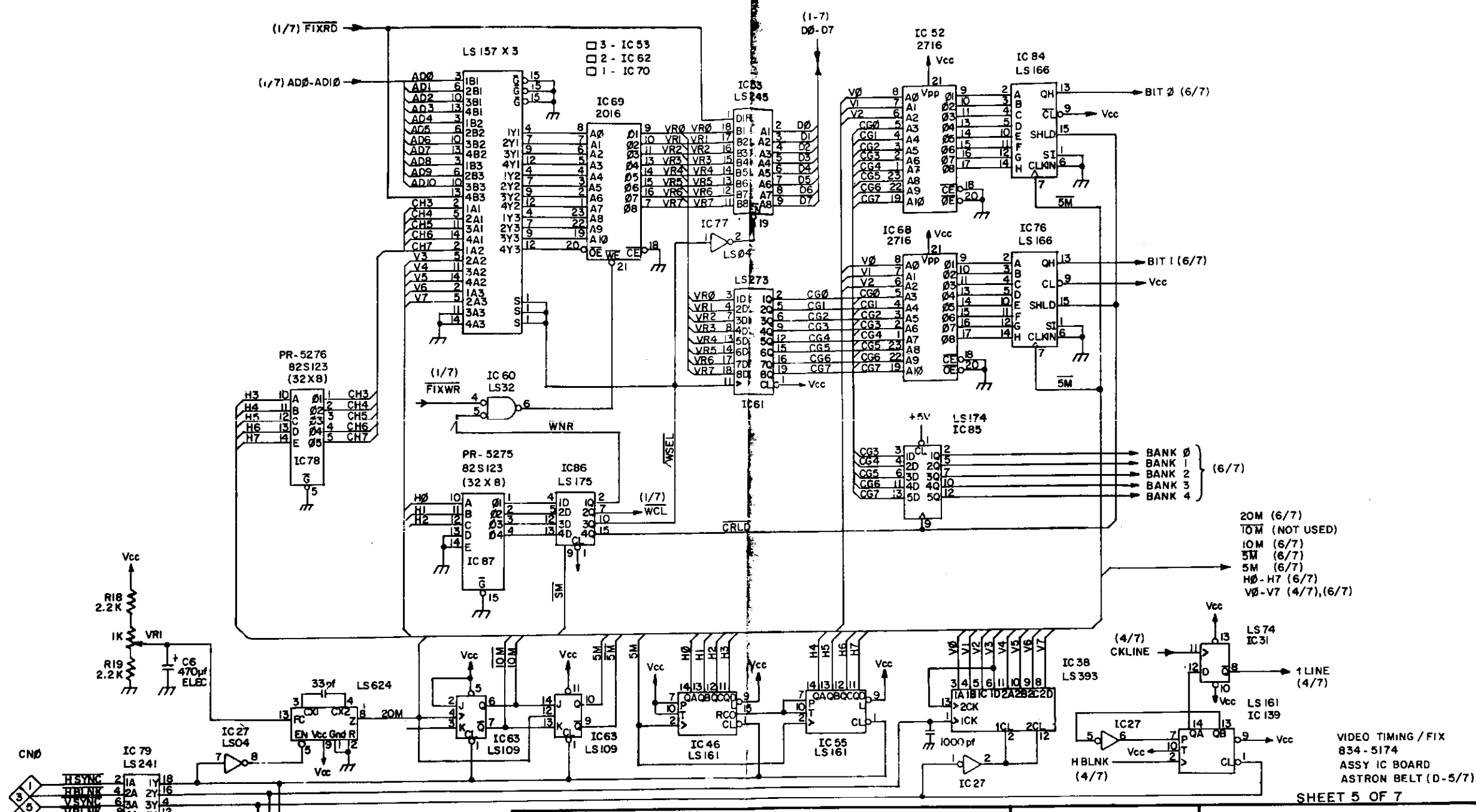


OBJECT (1)  
 834-5174  
 ASSY IC BOARD ASTRON BELT  
 (D-4/7)

SHEET 4 OF 7

PROJECT ENG:		HEAT TREAT		USED ON ASTRON BELT		Bally / MIDWAY MFG. CO. FRANKLIN PK ILL	
DO NOT SCALE DIMS		SCALE		NO. REQ'D   PER			
DIM TOLERANCES UNLESS SPECIFIED		MAY'L.		MAIN IC BD. (PIONEER)		PART NO.	
DATE 11/22/83		FINISH		Q834-05174-0300		M051-00A30 - A046	





20M (6/7)  
10M (NOT USED)  
10M (6/7)  
5M (6/7)  
5M (6/7)  
H0 - H7 (6/7)  
V0 - V7 (4/7), (6/7)

VIDEO TIMING / FIX  
834 - 5174  
ASSY IC BOARD  
ASTRON BELT (D-5/7)

PROJECT ENG:	USED ON ASTRON BELT	Bally / MIDWAY MFG. CO. FRANKLIN PK. ILL.	
DO NOT SCALE DWG.	SCALE FULL		NO. REQ'D 1 PER
DIM TOLERANCES UNLESS SPECIFIED	MAT'L.	SCHEMATIC DWG MAIN IC BD (PIONEER) Q834 - 05174 - 0300	
DRAW. <b>TSB</b>	FINISH		PART NO.
CONCENTRICITY ±0.005 FRACTIONAL DECIMAL HOLE DIA +0.000	DATE 11/22/83		M051 - 00A30 - A046

PROJECT ENG. **J. SZERSZEN**  
 DATE: 11/21/83  
 DESIGNED BY: **KLU**

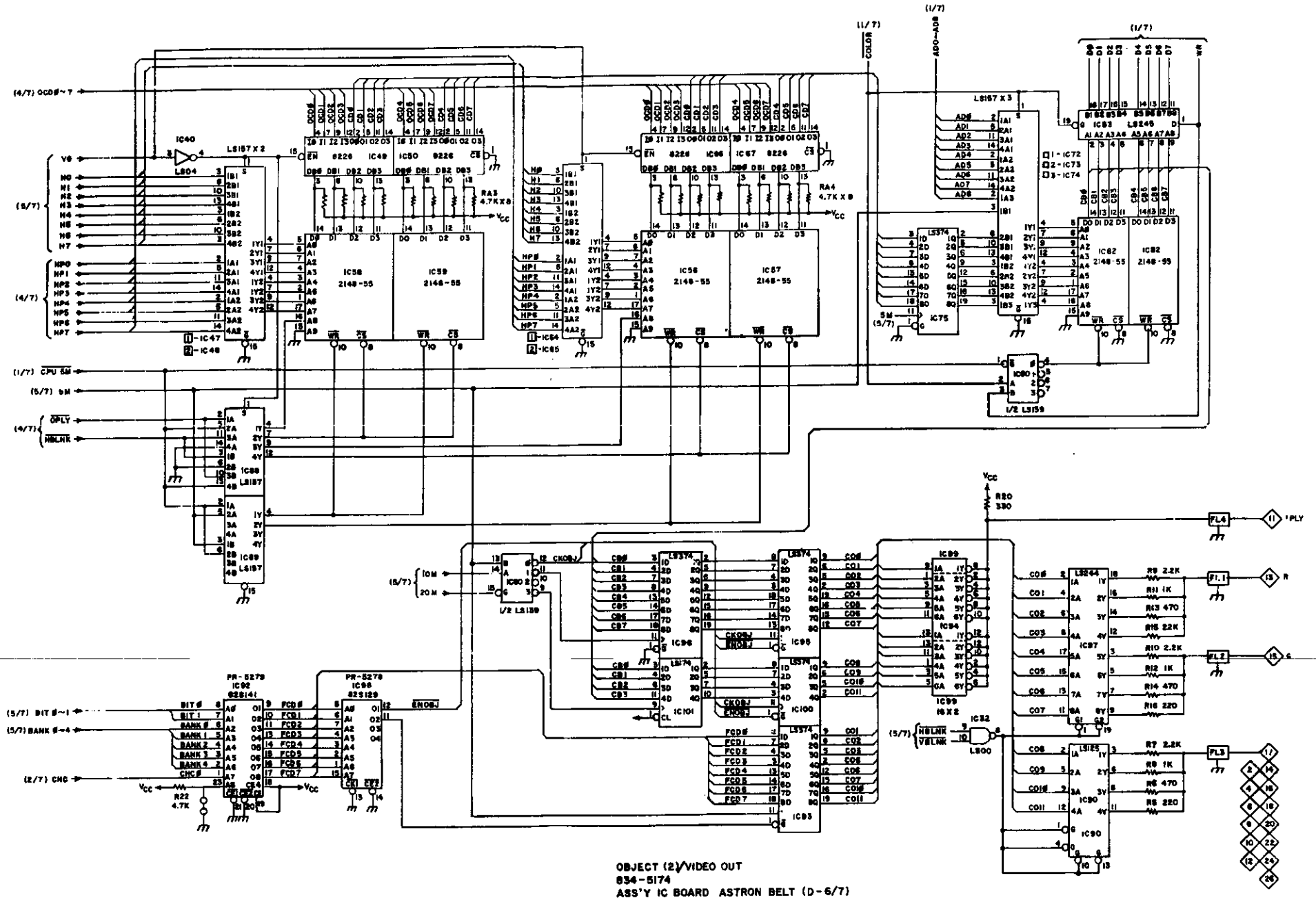
SCHEMATIC DWG.  
 MAIN IC BD. (PIONEER)  
 Q834-08174-0300

PART NO. **M051 - 00A30 - A046**

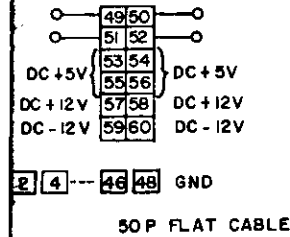
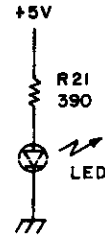
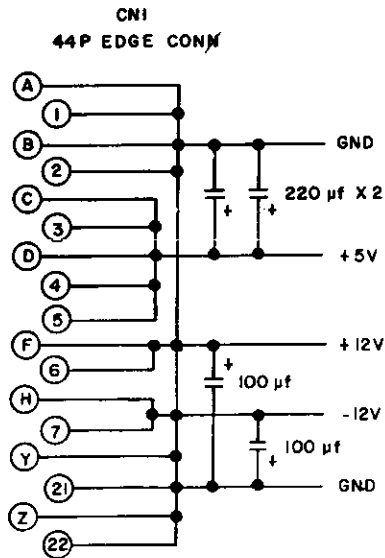
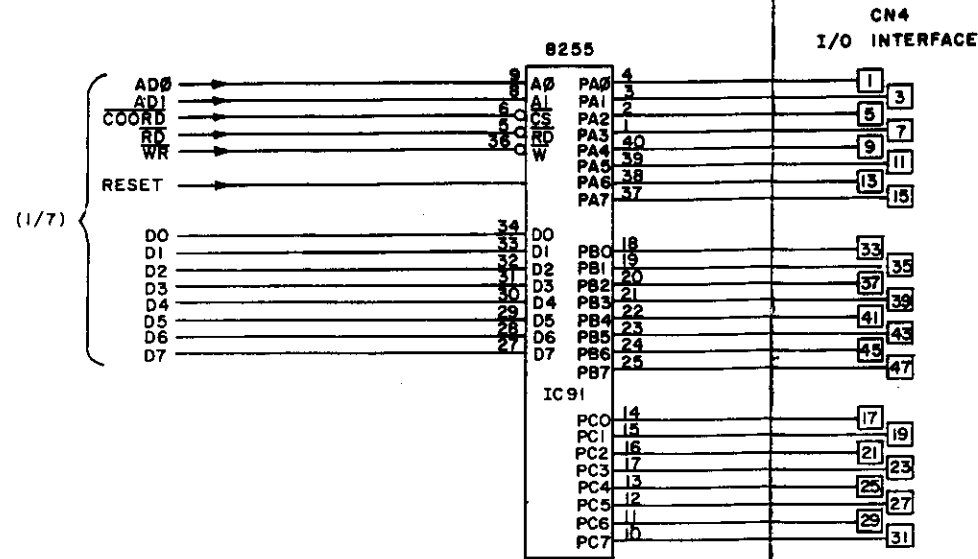
USED ON ASTRON BELT  
 FULL NO RECD 1 PER

**Midway MFG. CO.**  
 FRANKLIN, PA. U.S.A.

SHEET 6 OF 7



OBJECT (2) VIDEO OUT  
 834-5174  
 ASS'Y IC BOARD ASTRON BELT (D-6/7)



I/O - INTERFACE  
834-5174  
ASSY IC BOARD ASTRON BELT (D-7/7)

SHEET 7 OF 7	
REVISIONS	

PROJECT ENG: J. SZERSZEN		USED ON ASTRON BELT		Bally / MIDWAY MFG. CO. FRANKLIN PK. ILL.	
DO NOT SCALE DWG.		HEAT TREAT	SCALE FULL	NO. REQ'D 1 PER	
DIM TOLERANCES UNLESS SPECIFIED		MAT'L	SCHEMATIC DWG		PART NO.
DRW. TBB	CRD.	FINISH	MAIN IC BD (PIONEER)		M051 - 00A30 - A046
DATE 11/16/83		Q834 - 05174 - 0300			

**BALLY/MIDWAY'S GALAXY RANGER**  
**U.R. #A36**  
**ROM/EPROM PART NUMBERS AND COMPATABILITY**

HITACHI SYSTEM EPROM BOARD LOCATION	PIONEER SYSTEM LOGIC BOARD LOCATION	MIDWAY PART NUMBER
IC 1	NOT USED	0A36-00803-0001
IC 2	NOT USED	0A36-00803-0002
IC 3	IC 18	0A36-00803-0003
IC 4	IC 29	0A36-00803-0004
IC 7	IC 7	0A36-00803-0005
IC 8	IC 8	0A36-00803-0006
IC 9	IC 15	0A36-00803-0007
IC 10	IC 14	0A36-00803-0008
NOT USED	IC 3	0A36-00803-0012
NOT USED	IC 10	0A36-00803-0013
IC 11	IC 52	0A36-00803-0009
IC 12	IC 68	0A36-00803-0010