

concept

**SCHEMATIC
DIAGRAMS**

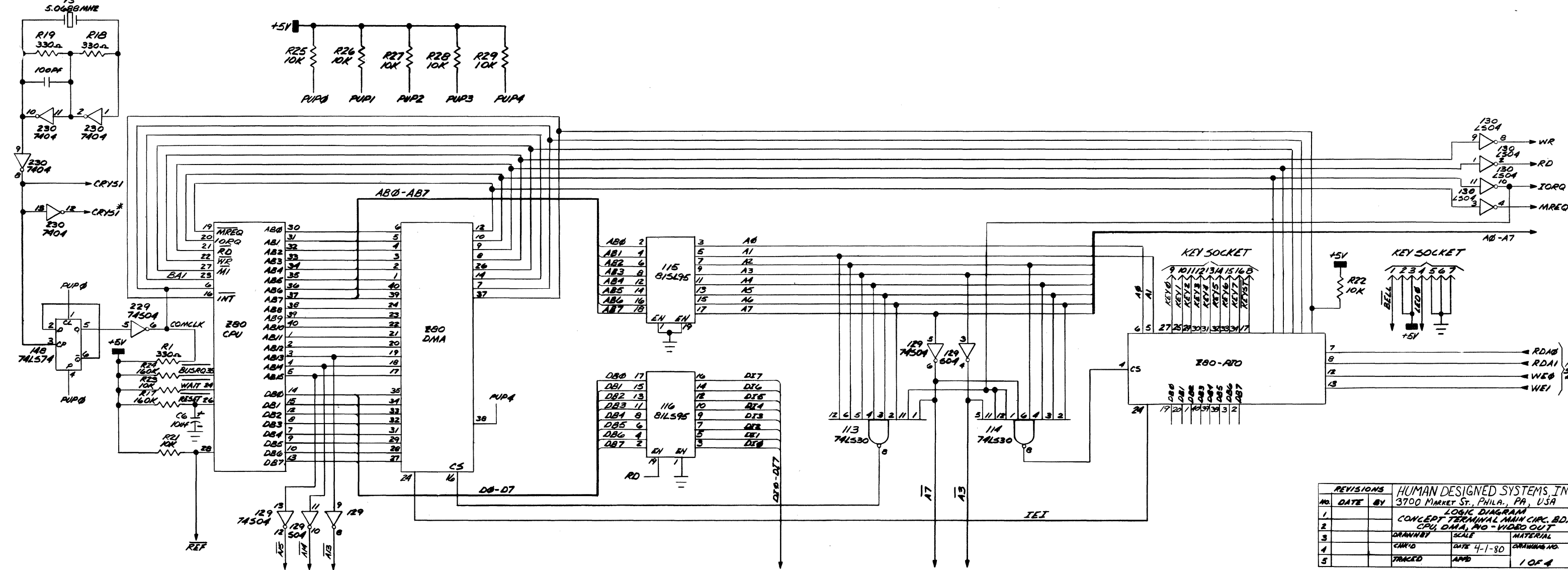
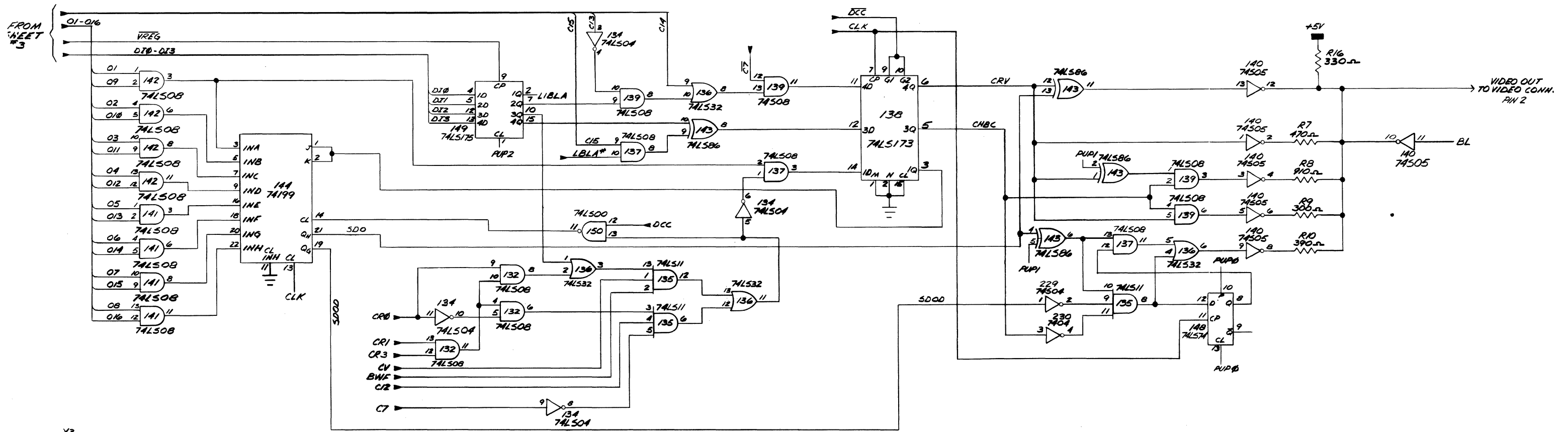
HDS human designed systems, inc.
3700 Market Street, Philadelphia, PA 19104
Phone: (215) 382-5000

CONCEPT
Schematic Diagrams

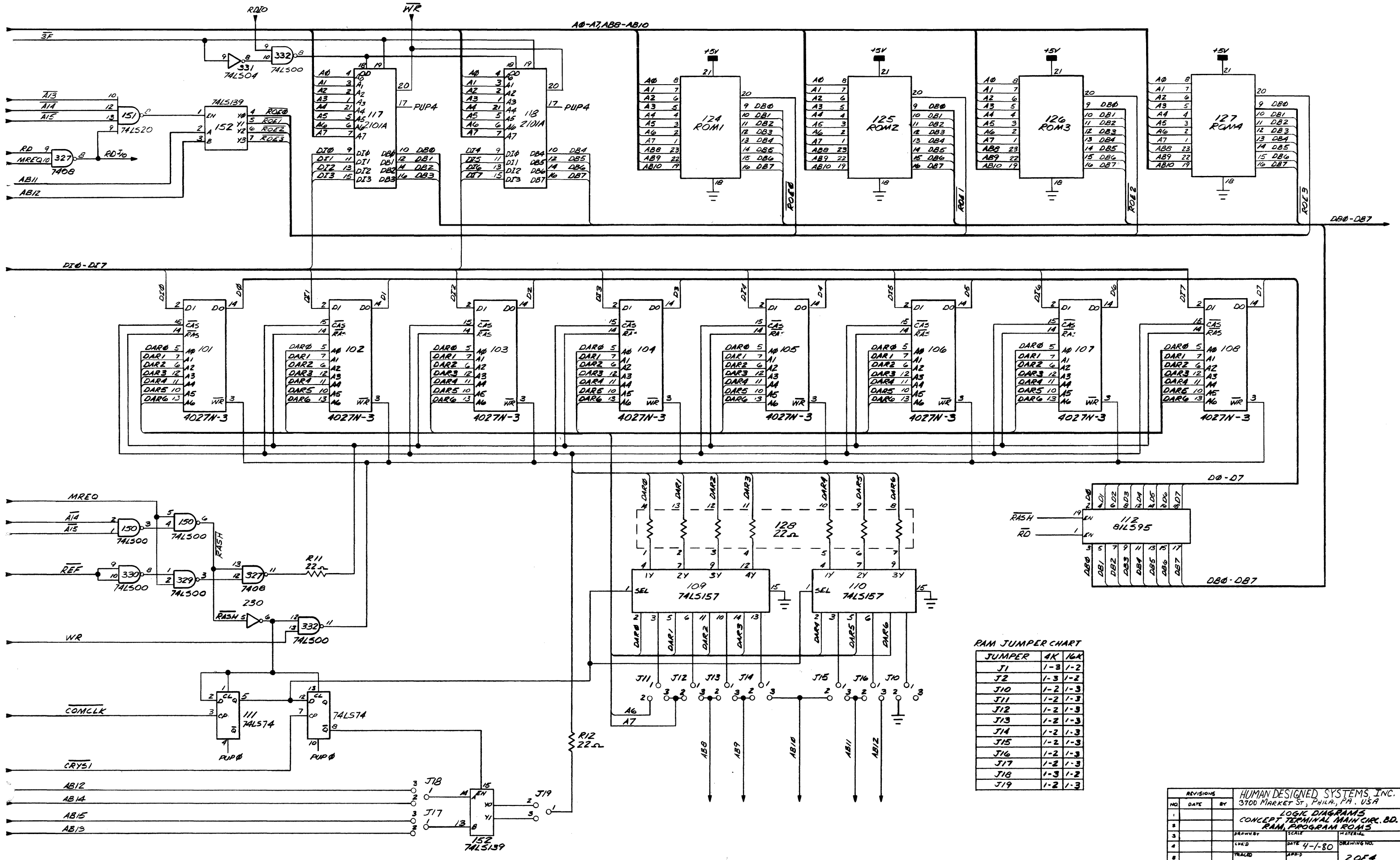
Human Designed Systems, Inc.
3700 Market Street
Philadelphia, PA 19104
(215) 382-5000

DN1300-8004-4
April, 1980

Copyright © 1980 by Human Designed Systems, Inc.
All rights reserved.



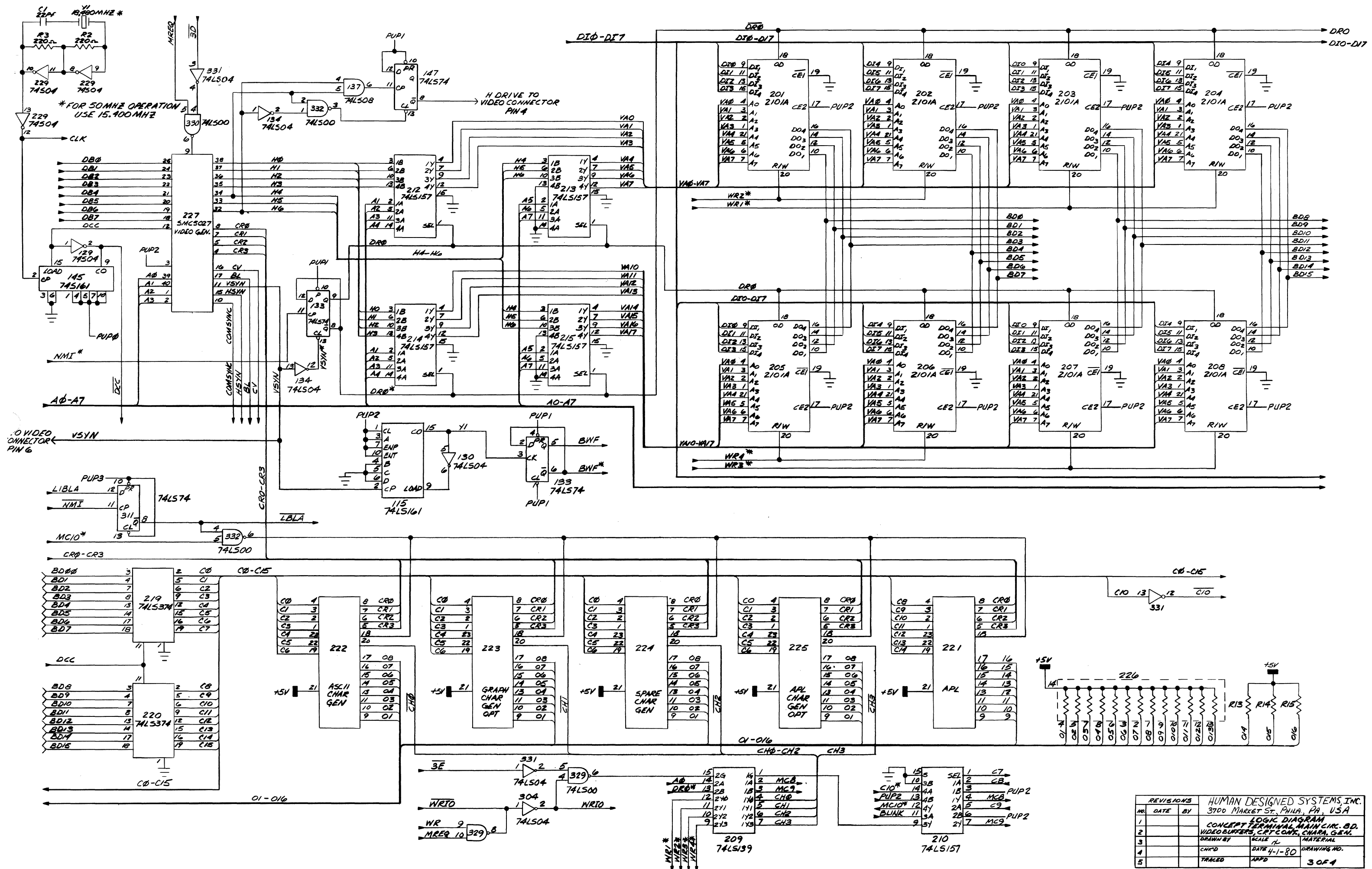
REVISIONS			HUMAN DESIGNED SYSTEMS, INC.		
NO.	DATE	BY	3700 MARKET ST., PHILA., PA., USA		
1			LOGIC DIAGRAM		
2			CONCEPT TERMINAL MAIN CIRC. BD.		
3			DRAWN BY	SCALE	MATERIAL
4			CHECK'D	DATE 4-1-80	DRAWING NO.
5			TRACED	APP'D	1 OF 4



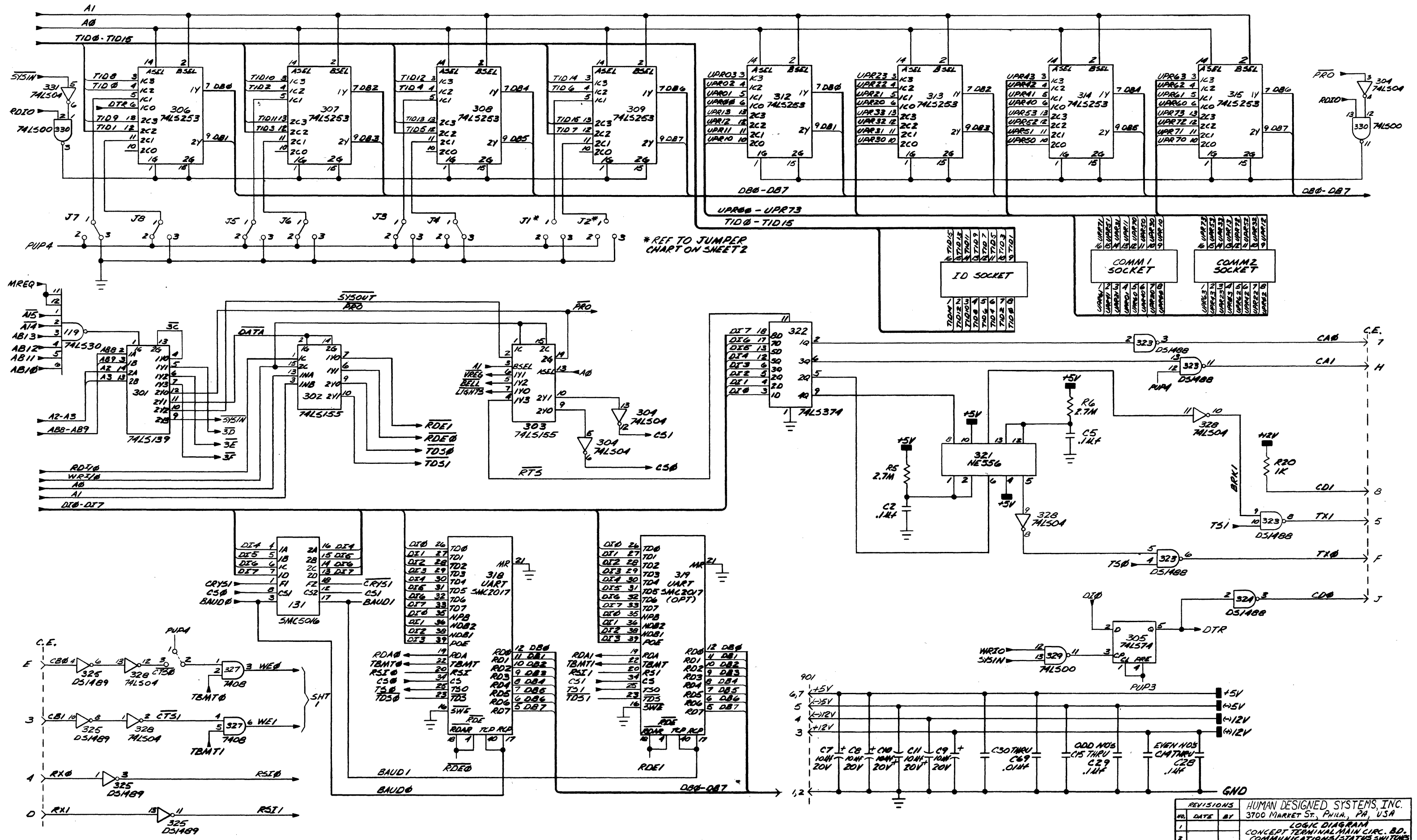
RAM JUMPER CHART

JUMPER	4K	16K
J1	1-3	1-2
J2	1-3	1-2
J10	1-2	1-3
J11	1-2	1-3
J12	1-2	1-3
J13	1-2	1-3
J14	1-2	1-3
J15	1-2	1-3
J16	1-2	1-3
J17	1-2	1-3
J18	1-3	1-2
J19	1-2	1-3

REVISIONS			HUMAN DESIGNED SYSTEMS, INC.	
NO.	DATE	BY	3700 MARKET ST., PHILA., PA., USA	
1			LOGIC DIAGRAMS	
2			CONCEPT TERMINAL MAIN CIR. BD.	
3			RAM PROGRAM ROMS	
4			DRAWN BY	SCALE
5			CHECK'D	DATE 4-1-80
6			TRACED	APPRO'D
				DRAWING NO.
				2054



REVISIONS			HUMAN DESIGNED SYSTEMS, INC.		
NO.	DATE	BY	3700 MARKET ST. PHILA, PA., USA		
1			CONCEPT	LOGIC DIAGRAM	
2			TERMINAL, MAIN CIR. B.D.	VIDEO BUFFERS, CRT CONT. CHAR. GEN.	
3			DRAWN BY	SCALE 1/4	MATERIAL
4			CHECKED	DATE 4-1-80	DRAWING NO.
5			TRACED	APPD	3 OF 4



* REF TO JUMPER CHART ON SHEET 2

REVISIONS			HUMAN DESIGNED SYSTEMS, INC.		
NO.	DATE	BY	3100 MARKET ST., PHILA., PA., USA		
1			LOGIC DIAGRAM		
2			CONCEPT TERMINAL MAIN CIRC. BD.		
3			DRAWN BY	SCALE	MATERIAL
4			CHK'D	DATE 4-1-80	DRAWING NO.
5			TRACED	APP'D	4 OF 4

MAIN CIRCUIT BOARD COMPONENTS

<u>Component Designation</u>	<u>Description</u>
101-108	4K Dynamic RAM (1 page) or 16K Dynamic RAM (4 page)
109, 110	74LS157
111	74LS74
112	81LS95
113, 114	74LS30
115, 116	81LS95
117, 118	2101 (Static RAM)
119	74LS30
120	Z80CPU
121	Z80DMA
122	Z80P10
123 - 126	Firmware ROMs
128	22 ohm resistor network
129	74LS04
130	74S04
131	5016 (Baud Rate Generator)
132	74LS08
133	74LS74
134	74LS04
135	74LS11
136	74LS32
137	74LS08
138	74LS173
139	74LS08
140	74S05
141, 142	74LS08
143	74LS86
144	74199
145	74S161
146	74LS161
147, 148	74LS74
149	74LS175
150	74LS00
151	74LS20
152	74LS139
201 - 208	2101 (Static RAM)
209	74LS139
210	74LS157
212 - 215	74LS157
219, 220	74LS374
221	APL character ROM (overstrike)
222	ASCII character ROM
223, 224	Character set ROM sockets
225	APL character ROM
226	10K ohm resistor network

MAIN CIRCUIT BOARD COMPONENTS (cont.)

<u>Component Designation</u>	<u>Description</u>
227	5027 or 5037 (CRT)
229	74S04
230	7404
301	74LS139
302, 303	74LS155
304	74LS04
305	74LS74
306 - 309	74LS253
310	Unused
311	74LS74
312 - 315	74LS253
316	16 pin socket (COMM)
317	Unused
318	2017 (Line 1 UART)
319	2017 (Line 2 UART)
321	NE556
322	74LS374
323, 324	1488
325, 326	1489
327	7408
328	74LS04
329, 330	74LS00
331	74LS04
332	74LS00
401	16 pin socket (KEY)
501A, 501B	16 pin socket (memory expansion)
801	16 pin socket (VIDEO)
901	7 pin AMP connector (power supply)
C1	22 mf capacitor
C2	0.1 mf capacitor
C3	0.01 mf capacitor
C4	0.1 mf capacitor
C5	0.01 mf capacitor
C6 - C11	10 mf 20V electrolytic capacitor
C12, C13	0.01 mf capacitor
C14 - C29	0.1 mf capacitor
C30 - C51	0.01 mf capacitor
C51A	22 pf capacitor
C52 - C54	0.01 mf capacitor
C56 - C63	0.01 mf capacitor
C64	100 pf capacitor
C65 - C69	0.01 mf capacitor
R1	330 ohm resistor
R2, R3	220 ohm resistor
R5, R6	2.7 megohm resistor
R7	470 ohm resistor
R8	910 ohm resistor
R9	300 ohm resistor
R10	390 ohm resistor
R11, R12	22 ohm resistor
R13 - R15	10K ohm resistor

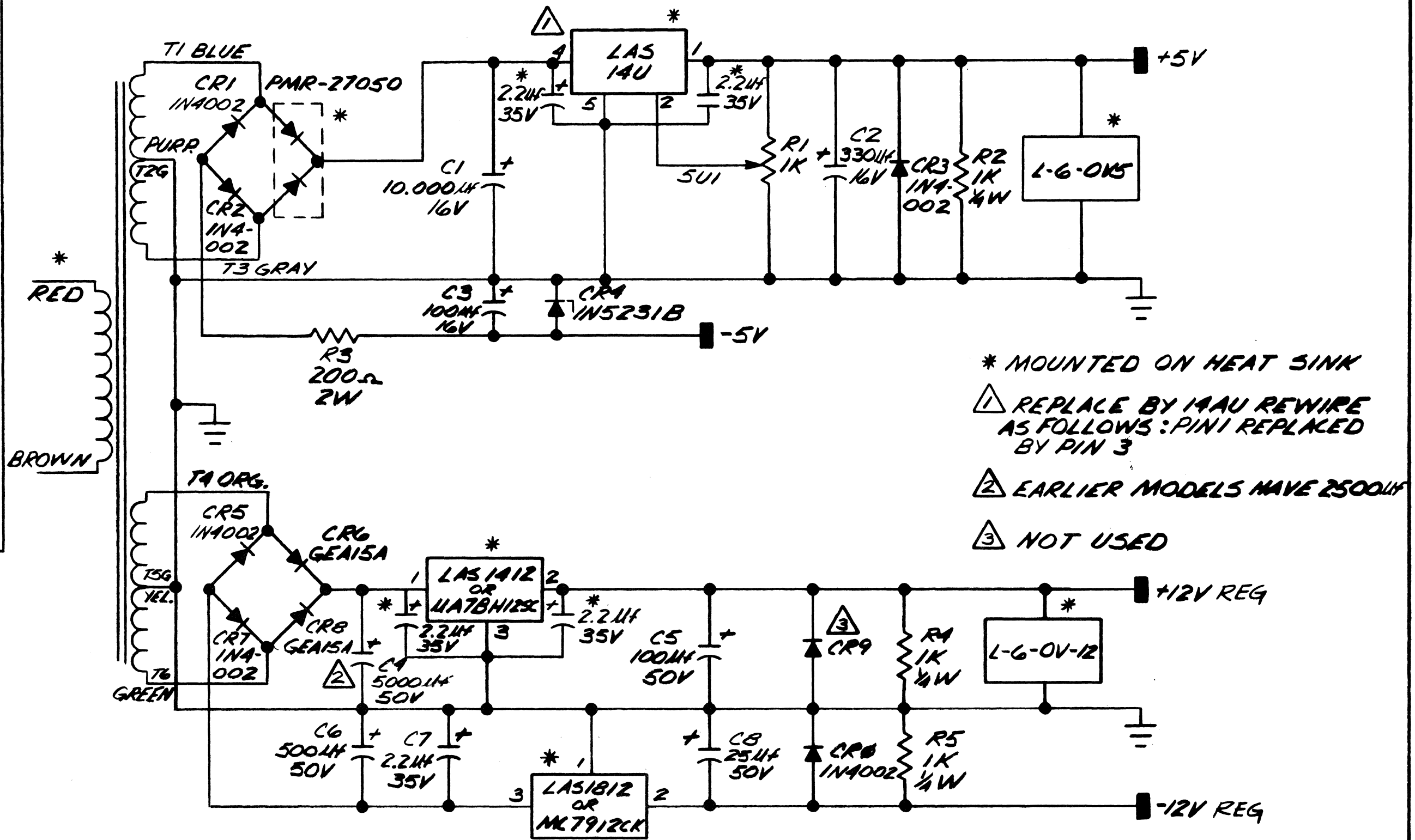
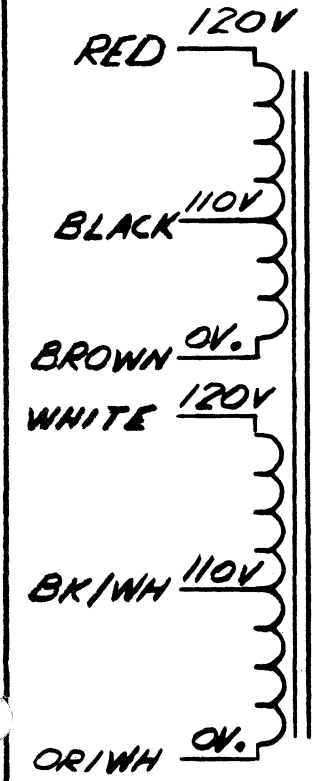
MAIN CIRCUIT BOARD COMPONENTS (cont.)

Component Designation

Description

R17	100K ohm resistor
R18, R19	330 ohm resistor
R20, R21	1K ohm resistor
R22 - R24	10K ohm resistor
R25 - R29	1K ohm resistor
Y1	5.0688 MHZ crystal
Y2	Unused
Y3	18.480 MHZ crystal

50HZ 220/240 VAC
TRANSFORMER
#5205
(SECONDARY WIRING
SAME)



- * MOUNTED ON HEAT SINK
- △ REPLACE BY 14AU REWIRE AS FOLLOWS: PIN 1 REPLACED BY PIN 3
- △ EARLIER MODELS HAVE 2500UF
- △ NOT USED

REVISIONS			HUMAN DESIGNED SYSTEMS, INC. 3700 MARKET ST., PHILA., PA., USA		
NO.	DATE	BY			
1			LOGIC DIAGRAM		
2			CONCEPT TERMINAL - POWER SUPPLY		
3			DRAWN BY	SCALE	MATERIAL
4			CHK'D	DATE 4-1-80	DRAWING NO.
5			TRACED	APP'D	

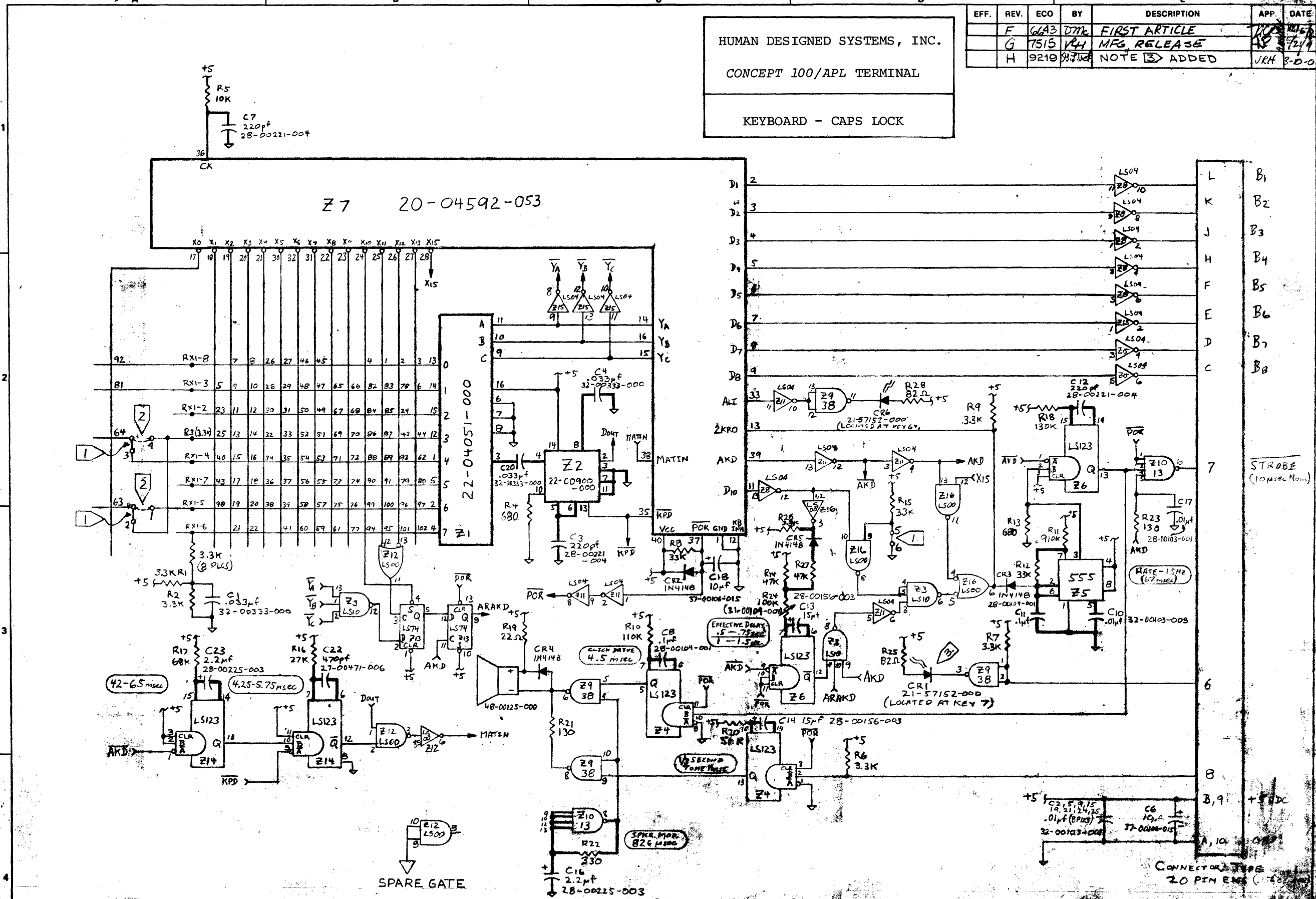
POWER SUPPLY CIRCUIT BOARD COMPONENTS

<u>Component Designation</u>	<u>Description</u>
R1	1000 ohm resistor
R2	1000 ohm, 1/4 watt resistor
R3	200 ohm, 2 watt resistor
R4, R5	1000 ohm, 1/4 watt resistor
C1	10,000 mf, 16V capacitor
C2	330 mf, 16V capacitor
C3	100 mf, 16V capacitor
C4	5000 mf, 50V capacitor (*)
C5	100 mf, 50V capacitor
C6	500 mf, 50V capacitor
C7	2.2 mf, 35V capacitor
C8	25 mf, 50V capacitor
CR0 - CR3	IN 4002
CR4	IN 5231B
CR5	IN 4002
CR6	GEA15A
CR7	IN 4002
CR8	GEA15A
CR9	-

(*) 2500 mf on earlier models

HUMAN DESIGNED SYSTEMS, INC.
 CONCEPT 100/APL TERMINAL
 KEYBOARD - CAPS LOCK

EFF.	REV.	ECO	BY	DESCRIPTION	APP.	DATE
	F	66A3	DMK	FIRST ARTICLE	JRH	11/27/67
	G	7515	VCH	MFG RELEASE	JRH	12/1/67
	H	9219	JRH	NOTE 3 ADDED	JRH	8-0-0



- 3. DO NOT INSTALL ON -036 ASBY.
- 2. INSTALL 48-00110-120 JUMPER (2 PLCS) ON 01, 03, 04, AND 05 ASSEMBLIES.
- 1. CUT TRACE (3 PLCS) ON 01, 03, 04, AND 05 ASSEMBLIES.

NOTICE OF PROPRIETARY INFORMATION
 INFORMATION CONTAINED HEREIN IS PROPRIETARY AND IS PROPERTY OF KEY TRONIC CORPORATION. WHERE FURNISHED WITH A PROPOSAL THE RECIPIENT SHALL USE IT SOLELY TO EVALUATE THE PROPOSAL. WHERE FURNISHED TO A CUSTOMER, IT SHALL BE USED SOLELY FOR PURPOSES OF INSPECTION, INSTALLATION OR MAINTENANCE. WHERE FURNISHED TO A SUPPLIER, IT SHALL BE USED SOLELY IN THE PERFORMANCE OF WORK CONTRACTED FOR BY THIS COMPANY.
 THE INFORMATION SHALL NOT BE USED OR DISCLOSED BY THE RECIPIENT FOR ANY OTHER PURPOSE WHATSOEVER.

MANUFACTURE PARTS AND/OR ASSY'S PER K.T.C. DOCUMENT	UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES	TOL. EXCEPT AS NOTED	ITEM	PART	DESCRIPTION
FTX 36-B35	XXX DIMENSION NOT TO SCALE	HOLE DIA. FRACT. ± 1/64" XX ± .01" XXX ± .005" ANG. ± 1°	SCALE	TITLE	DESCRIPTION
USED ON	RELEASED				
HDS					
65-01790					

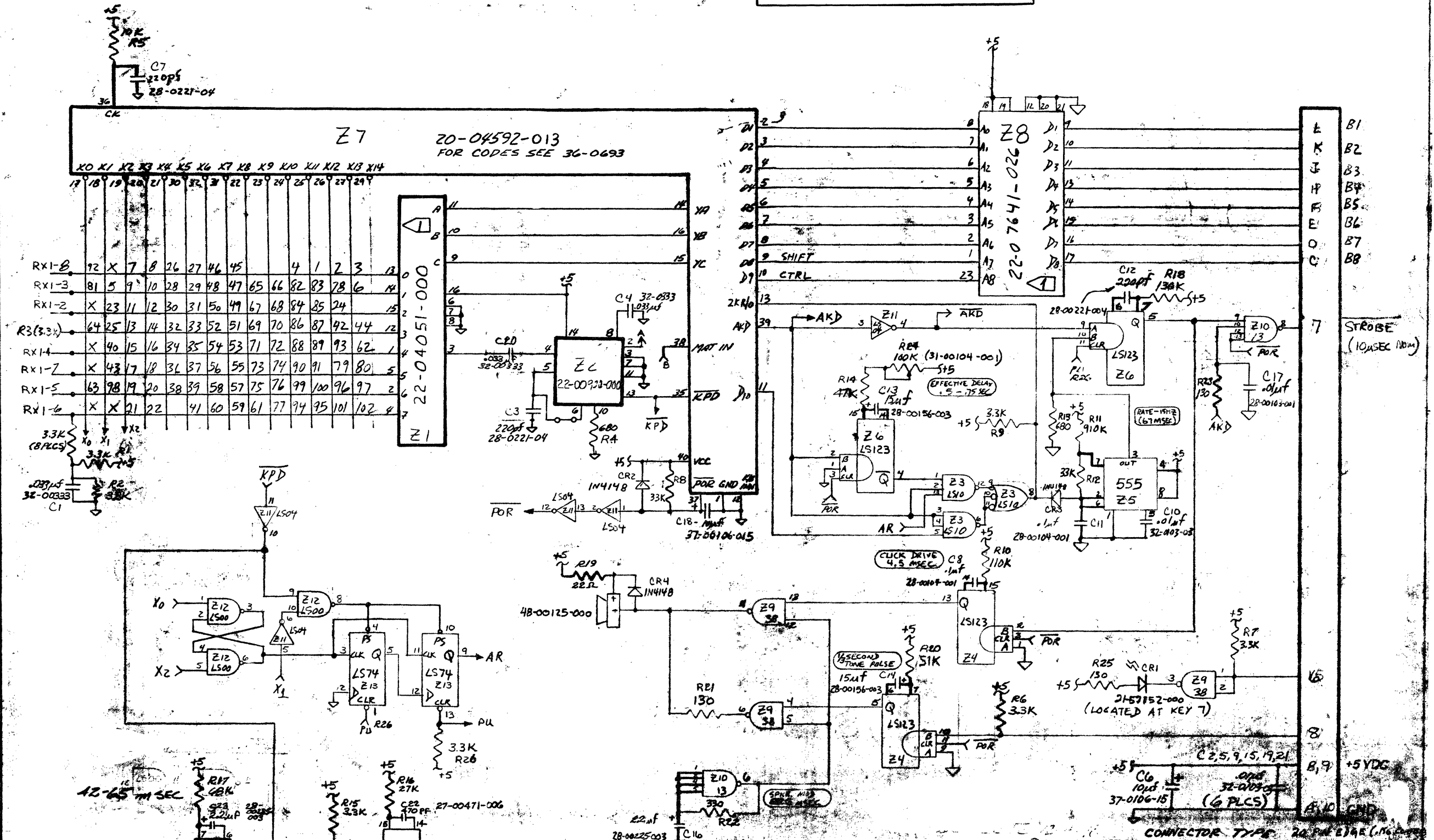
SCALE	TITLE	DESCRIPTION
1:1	SCHEMATIC	
		DWG. NO. 35
		SHEET 2

1 Z8 USE SCKT 39-00026-024 & PROM 22-07641-193. Z1 39-00044-016 SCKT ON -036 ASSY.

HUMAN DESIGNED SYSTEMS, INC.
 CONCEPT 100/APL TERMINAL
 KEYBOARD - NON-CAPS LOCK

EFF.	REV.	ECO	BY	DESCRIPTION	APP.	DATE
	A	7388	VH	MFR RELEASE		3/26/79
	B	7680	JT	FOR -031-035, 1/2 SECOND TONE		9/15/79
	C	8622	BB	ADDED -036 ASSY		1-23-80

USED ON -031, -033, -034, -035 & -036 ASSYS ONLY

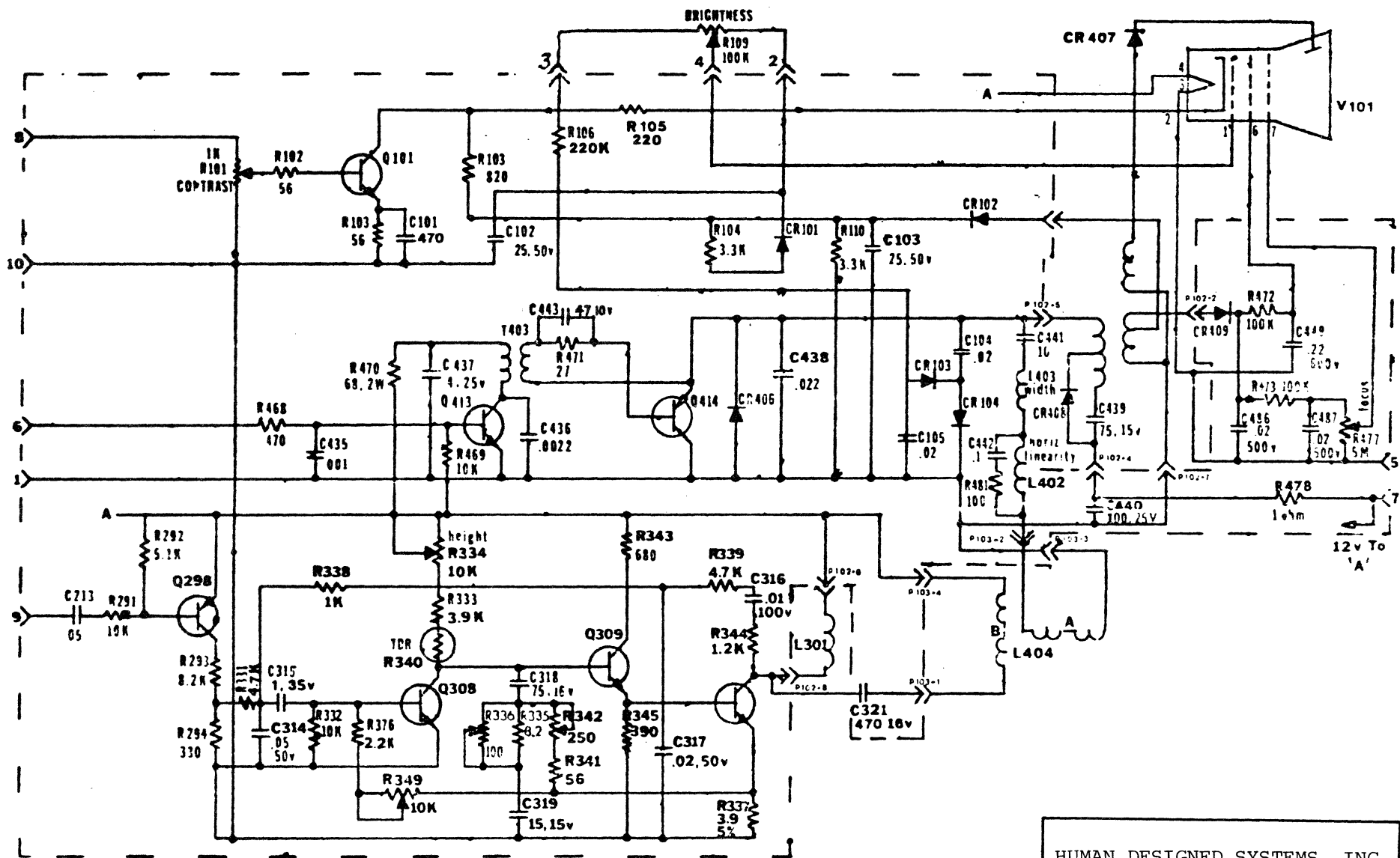


NOTICE OF PROPRIETARY INFORMATION
 INFORMATION CONTAINED HEREIN IS THE PROPERTY OF KEYTRONIC CORPORATION. WHERE FURNISHED WITH A PROPOSAL, THE RECIPIENT SHALL USE IT SOLELY TO EVALUATE THE PROPOSAL, WHERE FURNISHED TO A CUSTOMER, IT SHALL BE USED SOLELY FOR PURPOSES OF INSPECTION, INSTALLATION, OR MAINTENANCE. WHERE FURNISHED TO A SUPPLIER, IT SHALL BE USED SOLELY IN THE PERFORMANCE OF WORK CONTRACTED FOR BY THIS COMPANY.
 THE INFORMATION SHALL NOT BE USED OR DISCLOSED BY THE RECIPIENT FOR ANY OTHER PURPOSE WHATSOEVER.

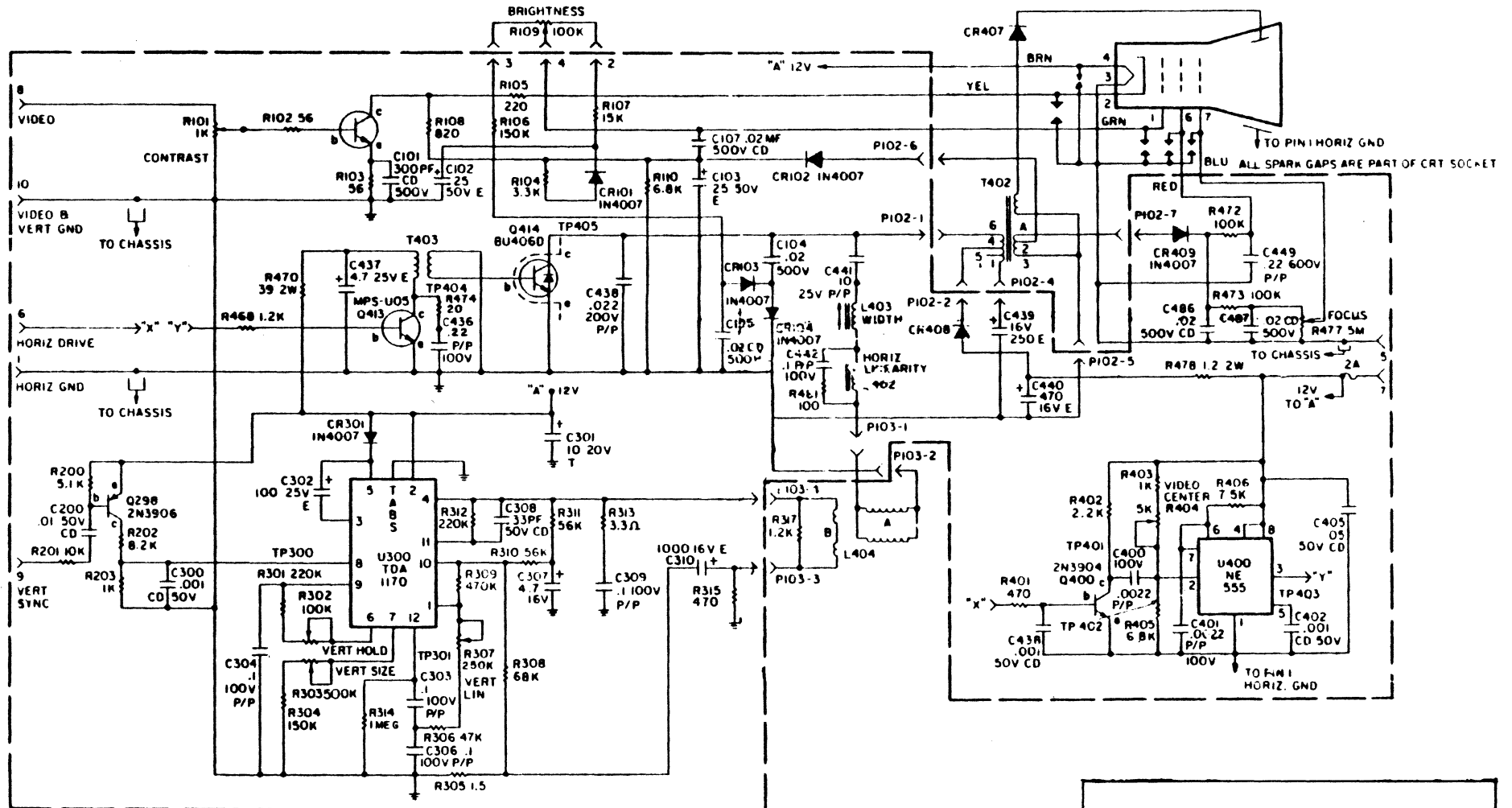
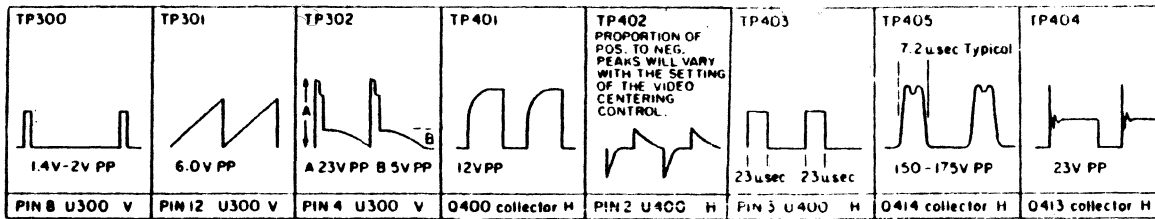
MANUFACTURE PARTS AND/OR ASSY'S PER K.T.C. DOCUMENT # FTR 36-835
 USED ON HPS

UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES		TOL EXCEPT AS NOTED	
XXX	DIMENSION NOT TO SCALE	HOLD DIA.	
RELEASED	9/17	FRACT. ± 1/64"	
APP. [Signature]	11/6/77	XX ± .01"	
CH. [Signature]	11-22-77	XXX ± .005"	
DR. MS	11-21-77	ANG. ± 1°	

keytronic corporation
 SPOKANE, WASH., U.S.A.
 DWG. NO. 35-D1790
 SHEET 2 OF 2



HUMAN DESIGNED SYSTEMS, INC.
 CONCEPT 100/APL TERMINAL
 MONITOR - MODEL DM10



HUMAN DESIGNED SYSTEMS, INC.

CONCEPT 100/APL TERMINAL

MONITOR - MODEL DM30