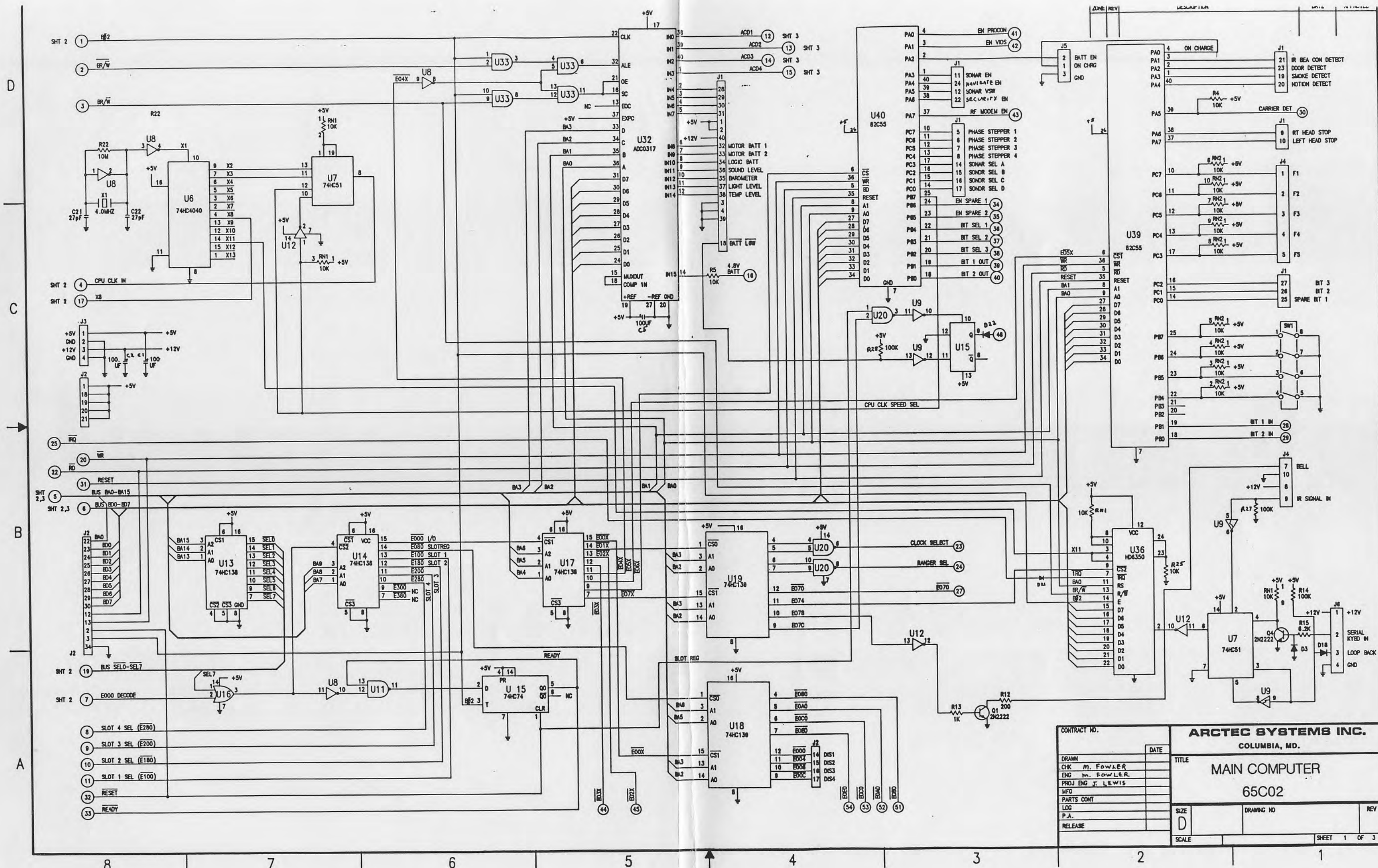
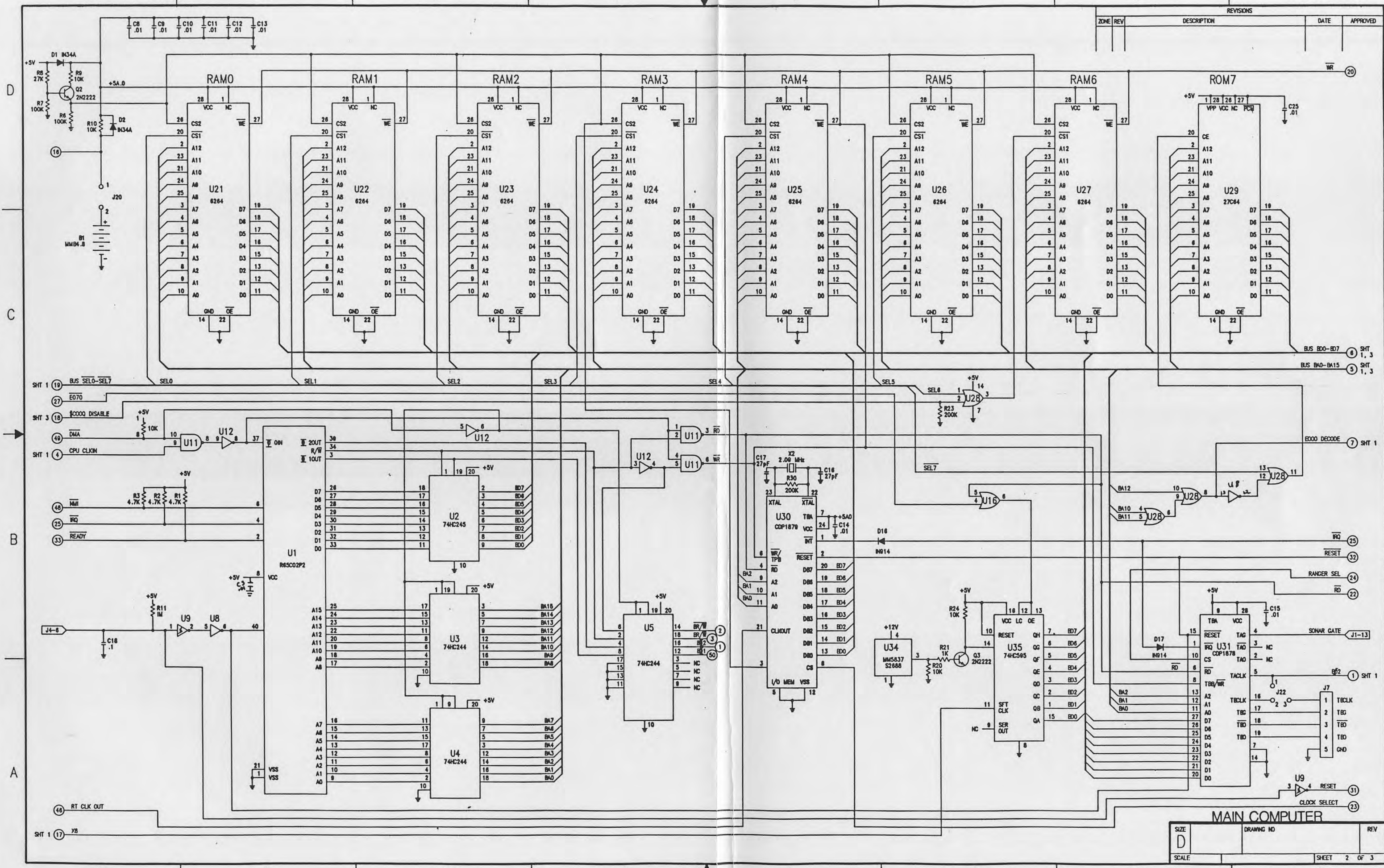


DRAWN BY T HEMELT	DATE 9/14/84	arctec systems COLUMBIA, MD. U.S.A.
CHECKED BY M J DULLER	DATE 9/14/84	
APPROVED BY M J DULLER	DATE 9/14/84	TITLE ROM EXPANSION BOARD
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE
X/XX 1		SHT. OF
X/XX 2		DRAWING NUMBER
X/XX 3		PART NUMBER
ANGULAR 1		
REVISION #	DATE	SUPERSEDED BY
		SUPERSEDES
		PIECES PER ASSEMBLY



CONTRACT NO.		DATE		TITLE	
DRAWN		DATE		ARCTEC SYSTEMS INC.	
CHK M. FOWLER		DATE		COLUMBIA, MD.	
ENG M. FOWLER		DATE		MAIN COMPUTER	
PROJ ENG J. LEWIS		DATE		65C02	
MFG		DATE		SIZE	
PARTS CONT		DATE		DRAWING NO	
LOG		DATE		REV	
P.A.		DATE		SCALE	
RELEASE		DATE		SHEET 1 OF 3	

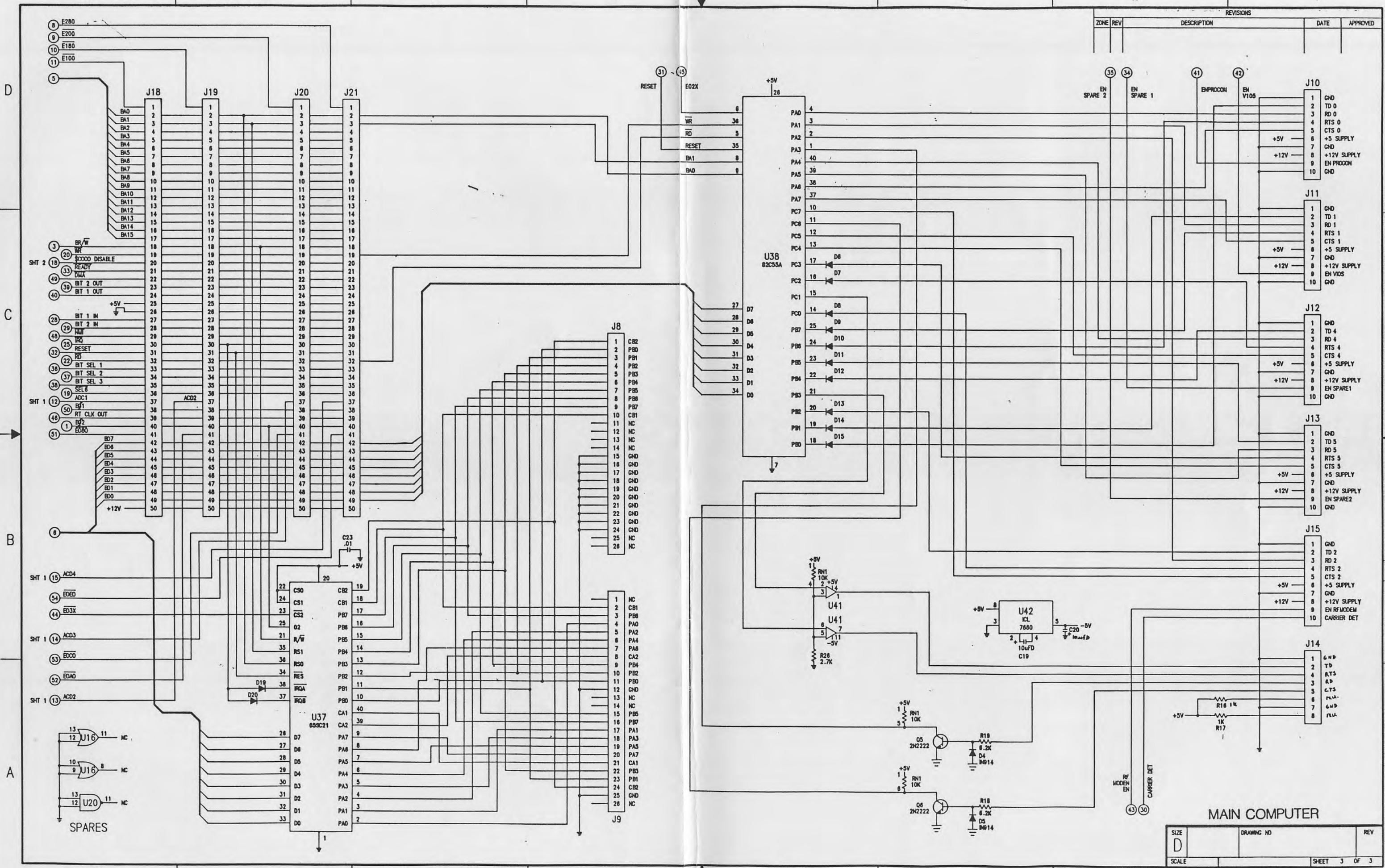
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



MAIN COMPUTER

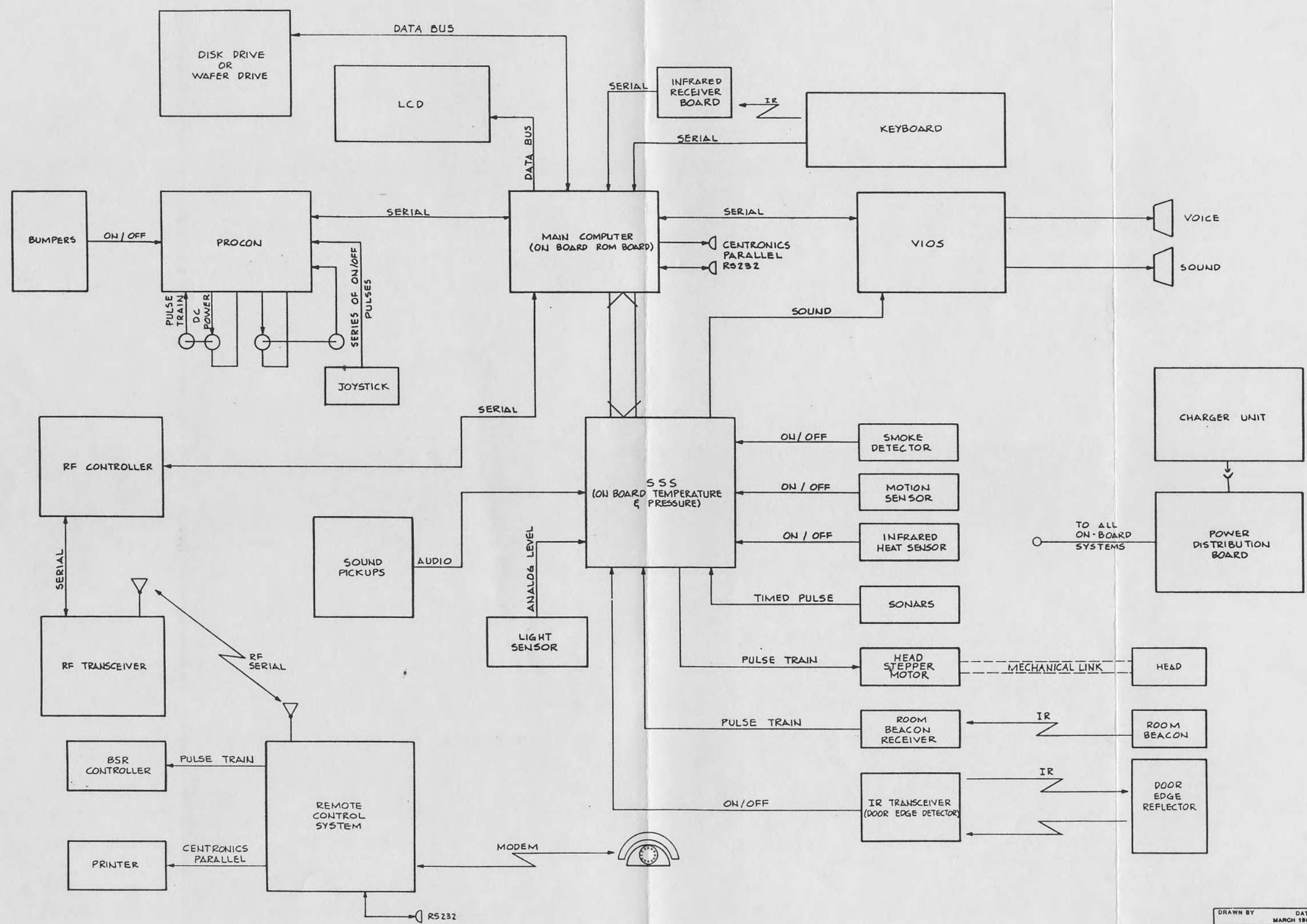
SIZE D	DRAWING NO	REV
SCALE	SHEET 2 OF 3	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



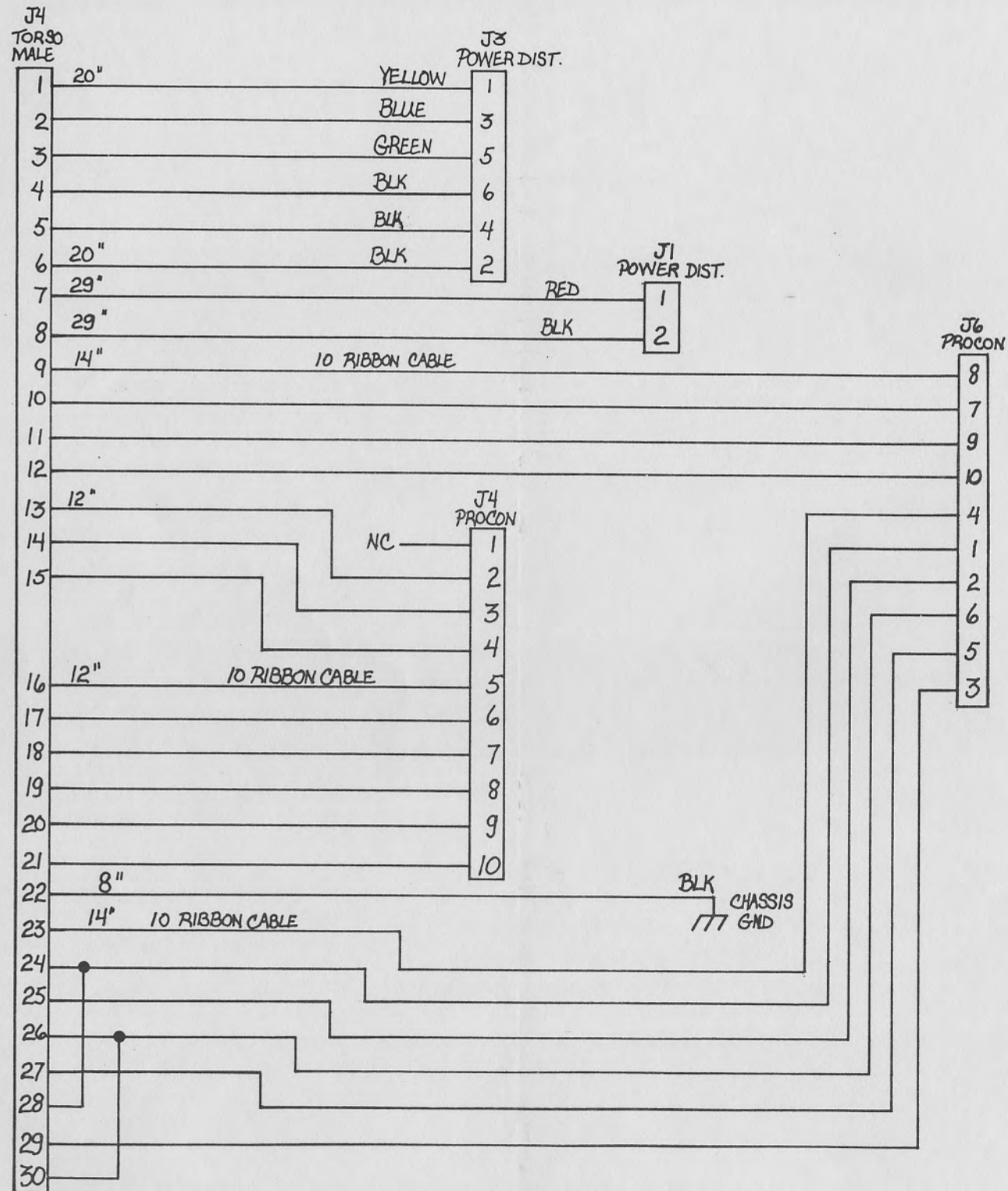
SIZE D	DRAWING NO	REV
SCALE	SHEET 3 OF 3	

ROBOT BLOCK DIAGRAM



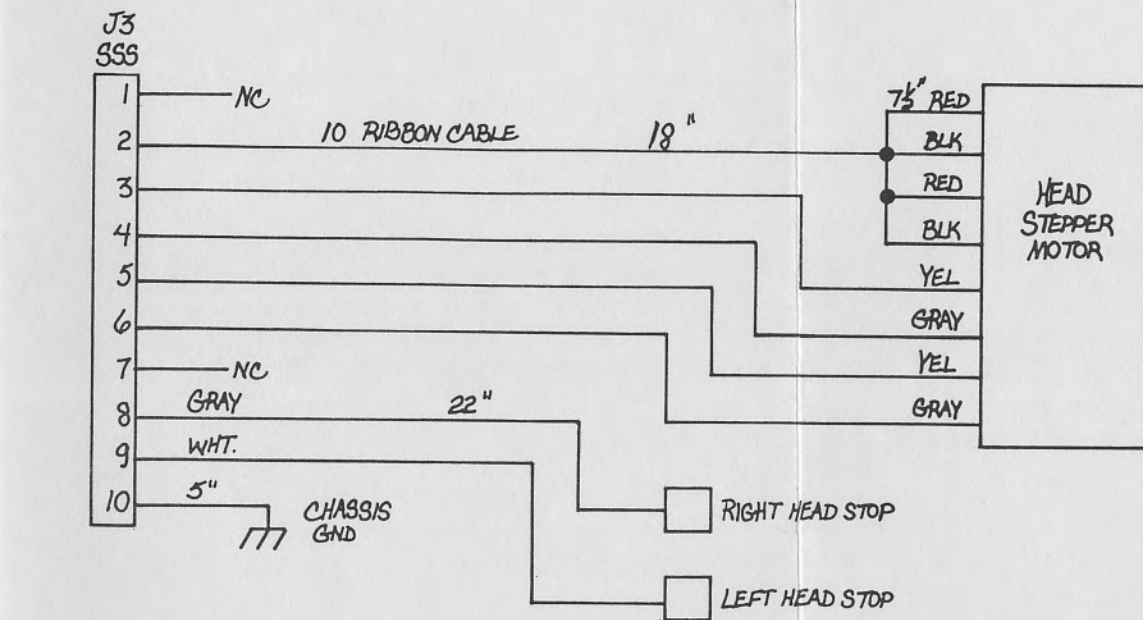
DRAWN BY	DATE	arctec systems	COLUMBIA, MD.	U.S.A.
CHECKED BY	MARCH 1986			
APPROVED BY	DATE	TITLE		
TOLERANCE UNLESS OTHERWISE SPECIFIED		GEMINI ROBOT FUNCTIONAL BLOCK DIAGRAM		
X/XX 1		SCALE	SHT. 1 OF 1	
.XX 2		DRAWING NUMBER	PART NUMBER	
.XXX 2		1		
ANGULAR 1				
REVISION #	DATE	SUPERSEDED BY	SUPERSEDES	PIECES PER ASSEMBLY

WIRING DIAGRAM TORSO HARNESS

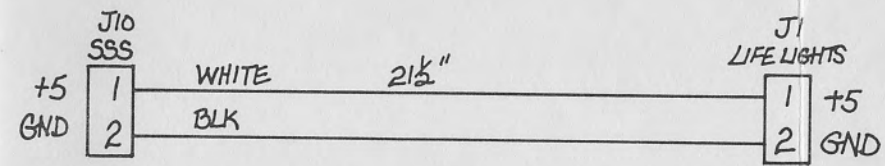


ARCTEC SYSTEMS		
GEMINI TORSO WIRING DIAGRAM		
15		1 of 5
		EWN: 3/95

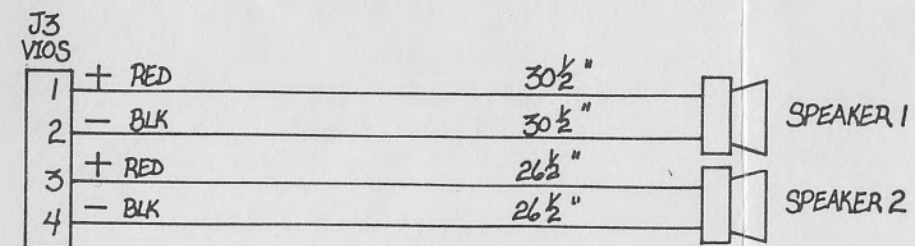
HEAD MOTOR



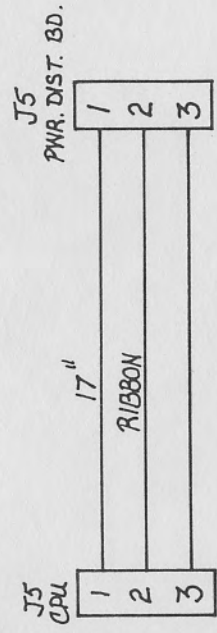
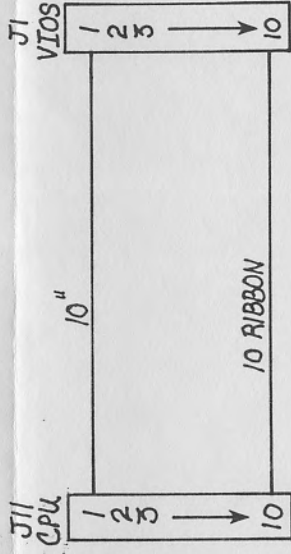
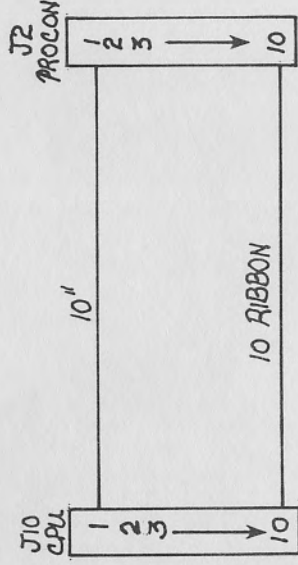
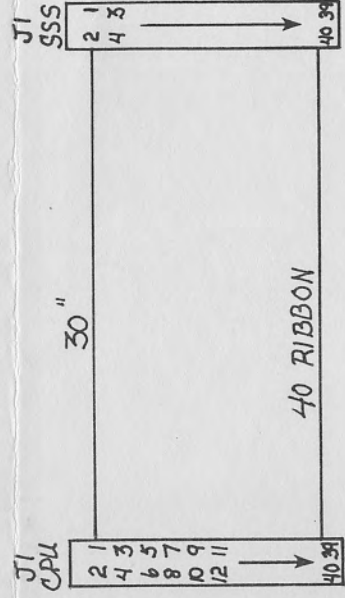
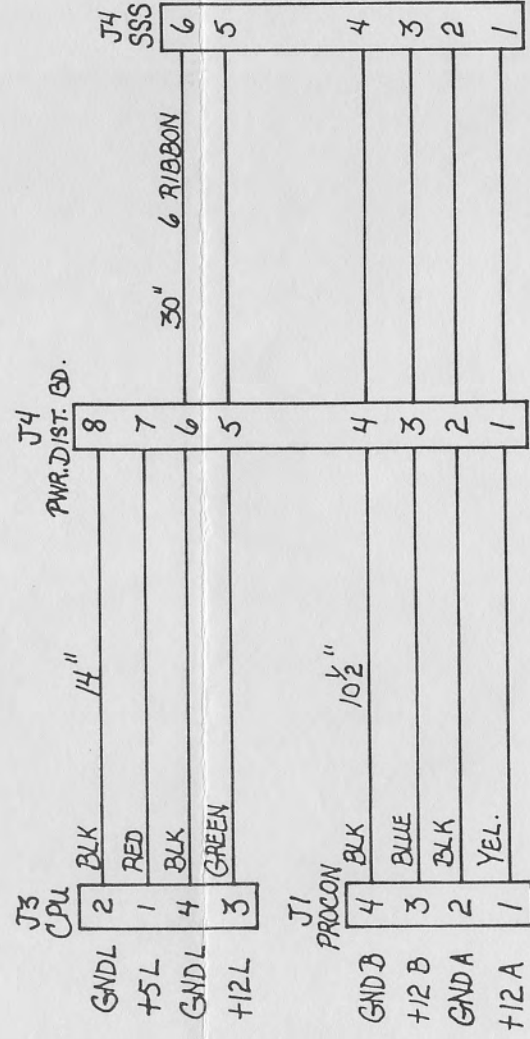
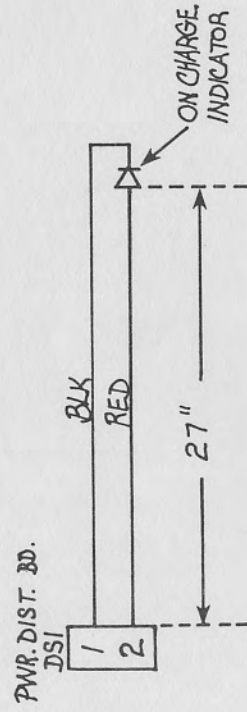
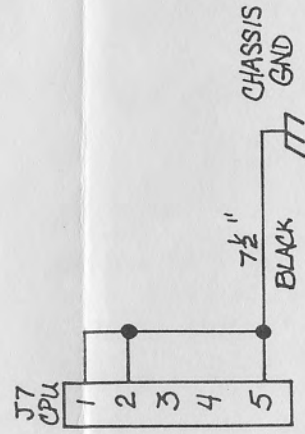
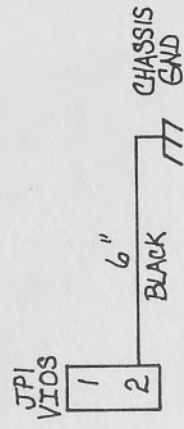
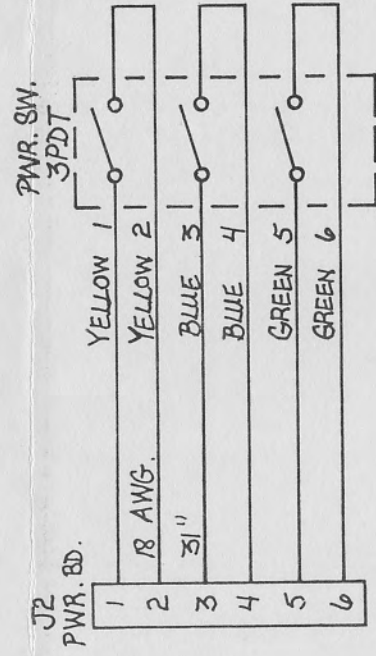
LIFE LIGHTS



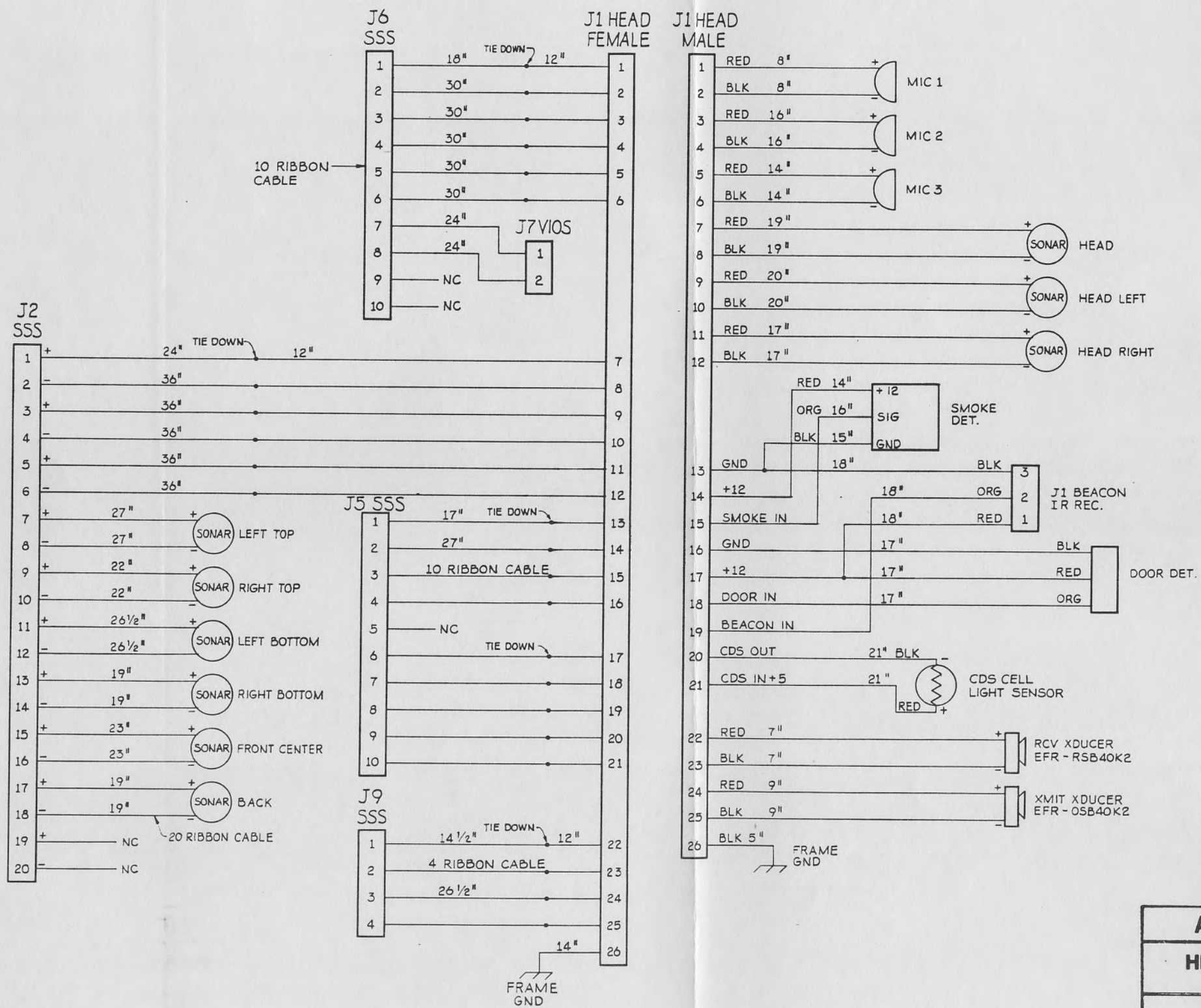
SPEAKERS



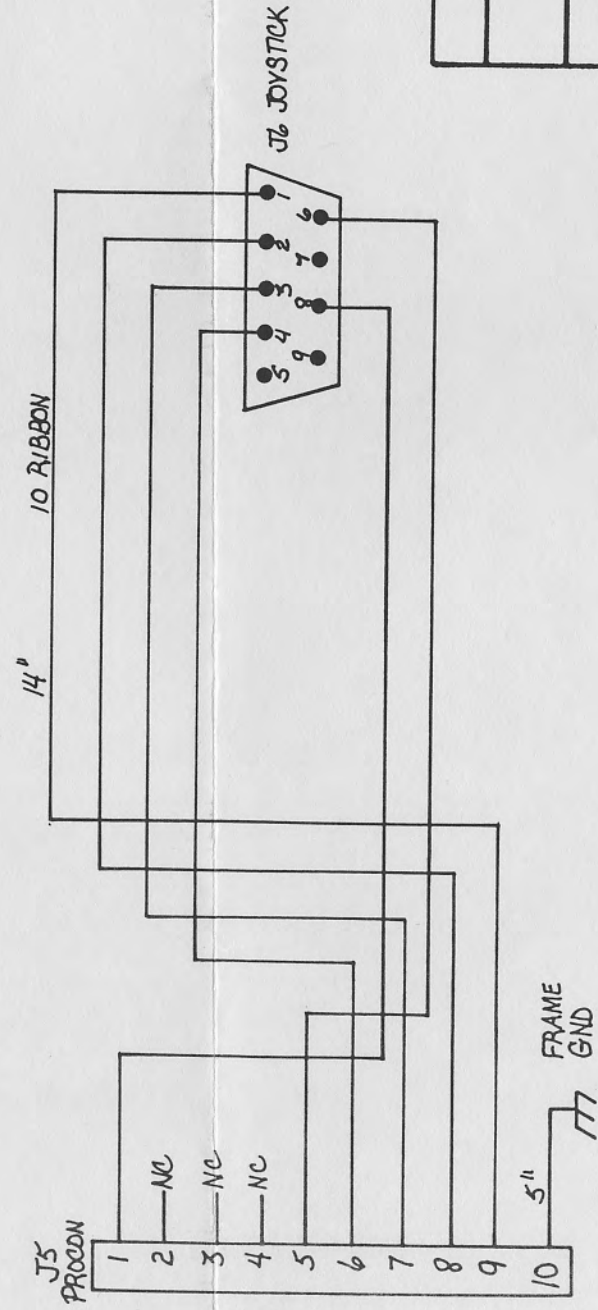
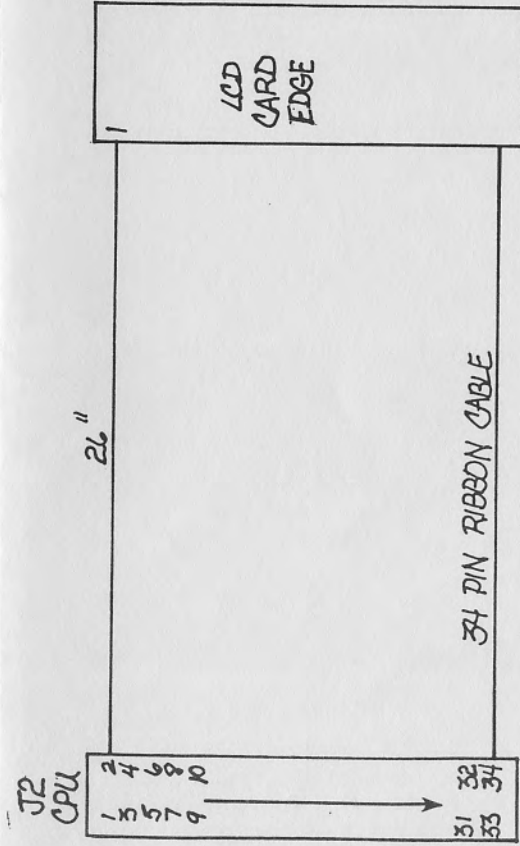
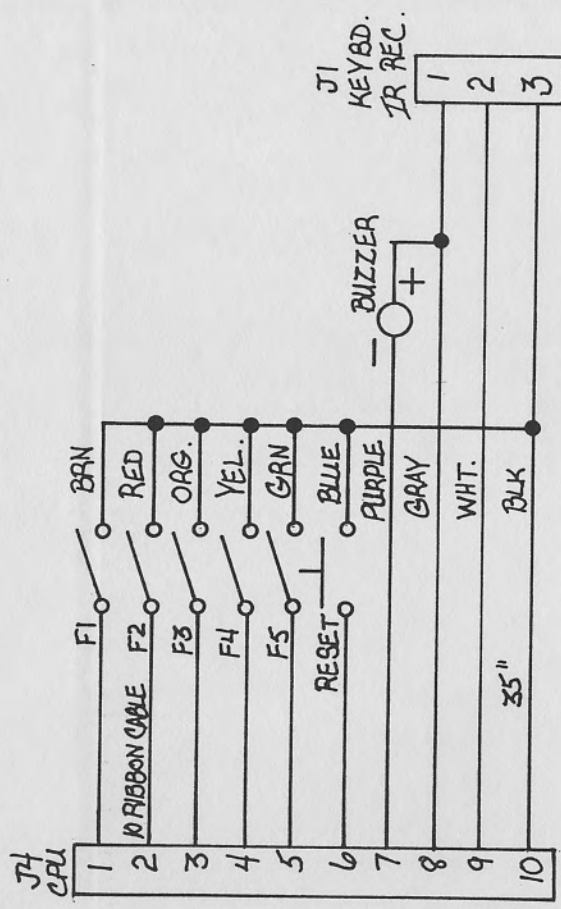
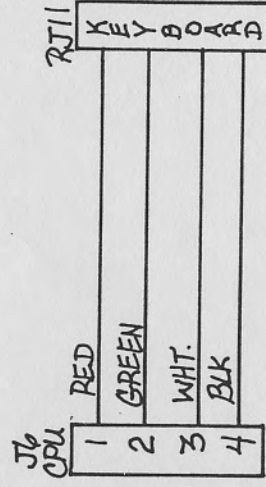
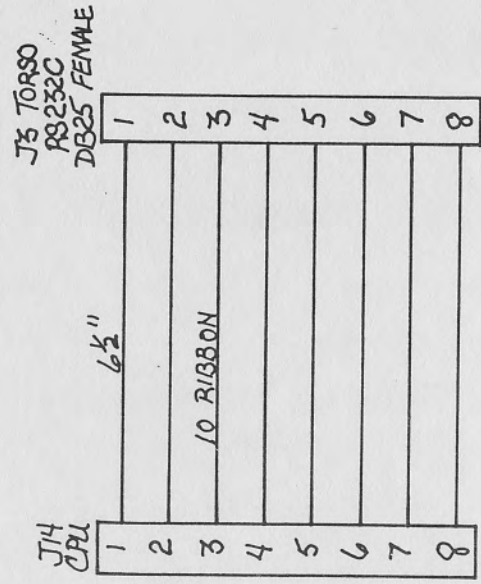
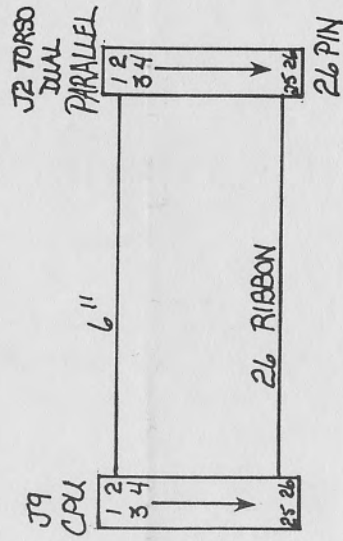
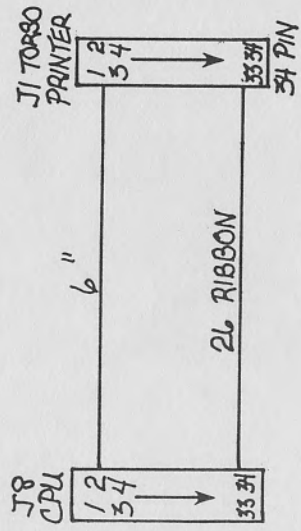
GEMINI TORSO WIRING DIAGRAM



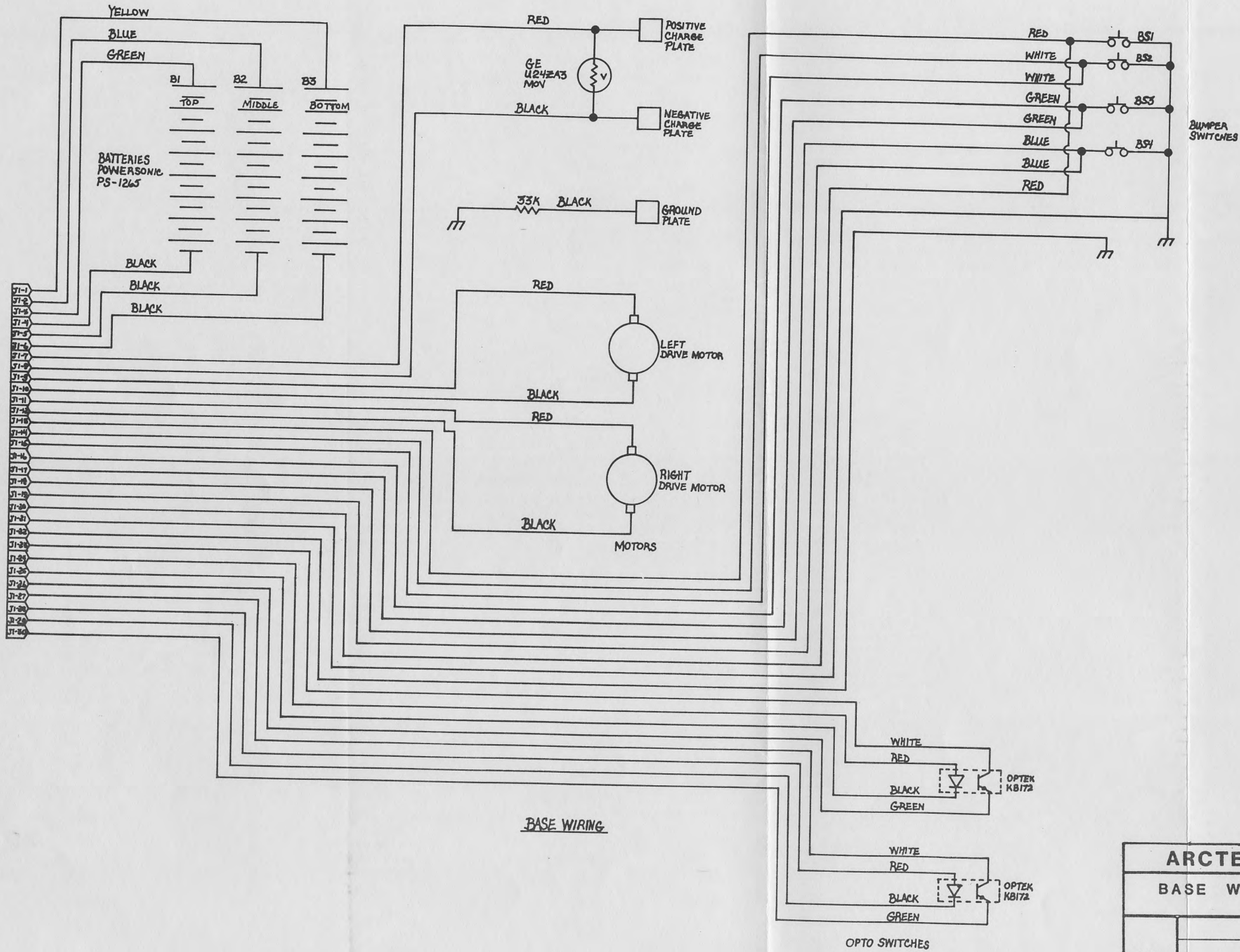
ARCTEC SYSTEMS	
GEMINI MISC. TORSO WIRING DIAGRAMS	
16	2 of 5
DWN. 3/55	



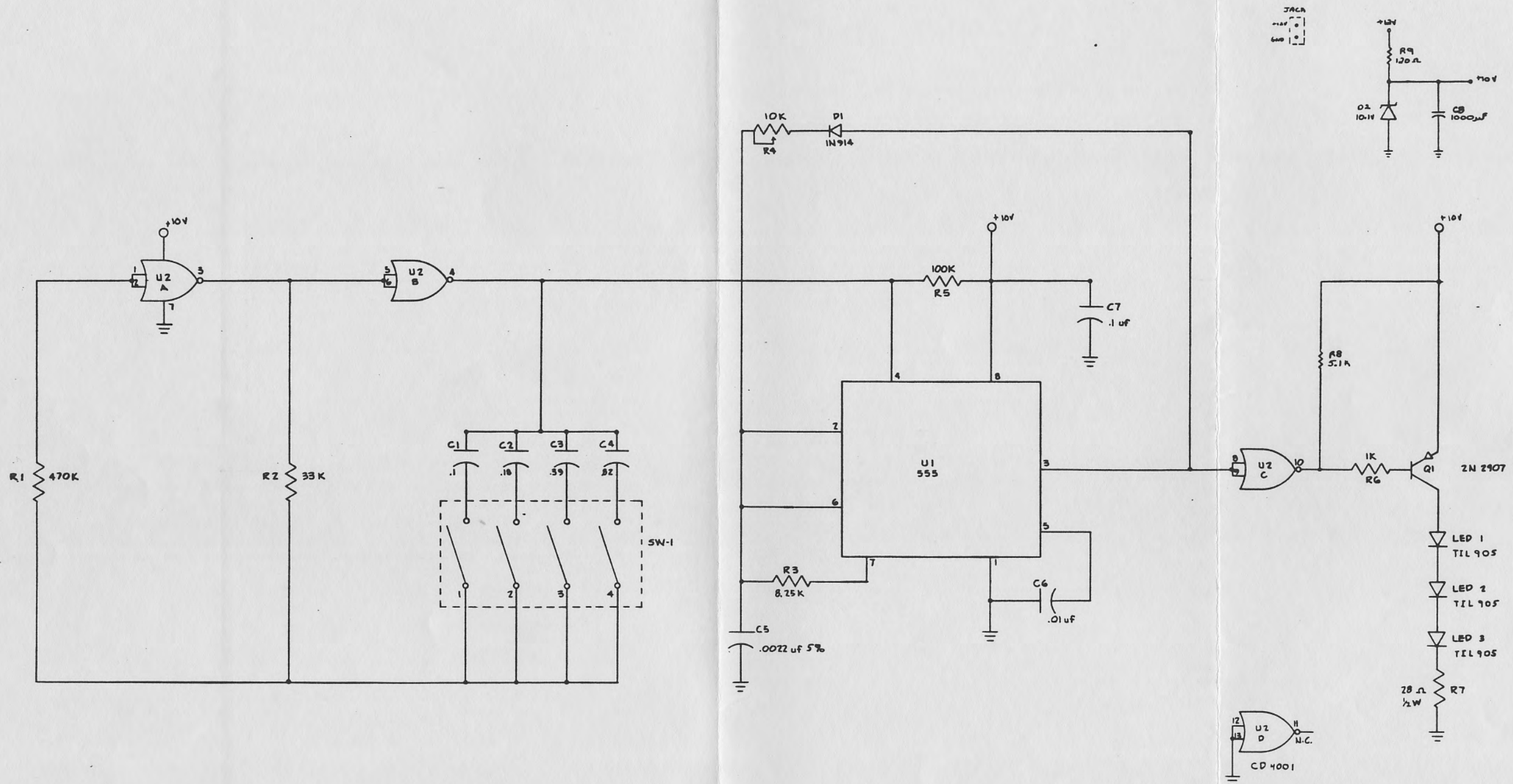
WIRING DIAGRAMS USER INTERFACES



ARCTEC SYSTEMS	
USER INTERFACES	
WIRING	
18	4 of 5
DRWN. 3/85	

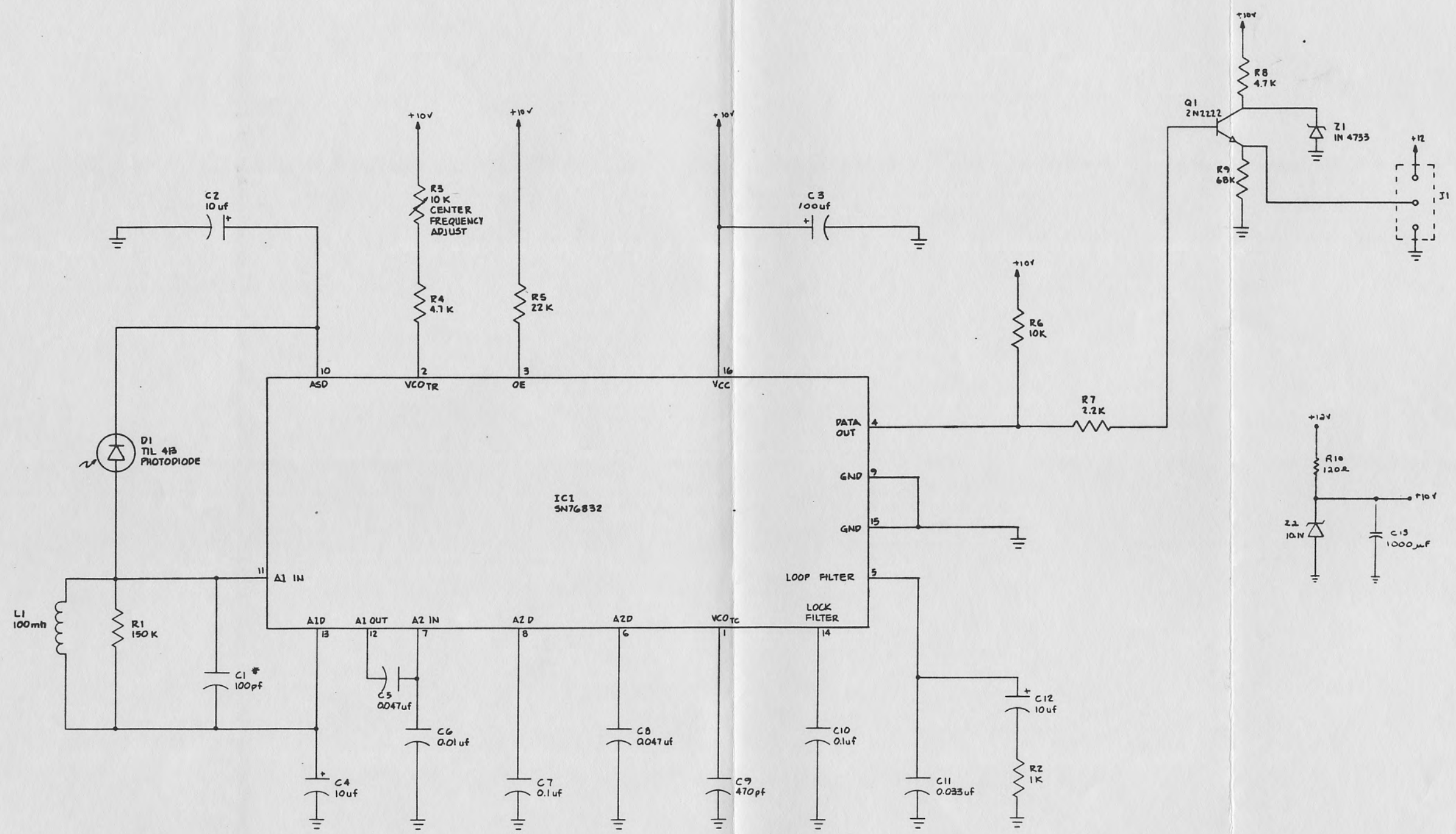


ARCTEC SYSTEMS		
BASE WIRING DIAGRAM		
		5 of 5
19		DRWN. 3/85



INFRARED TRANSMITTER BOARD

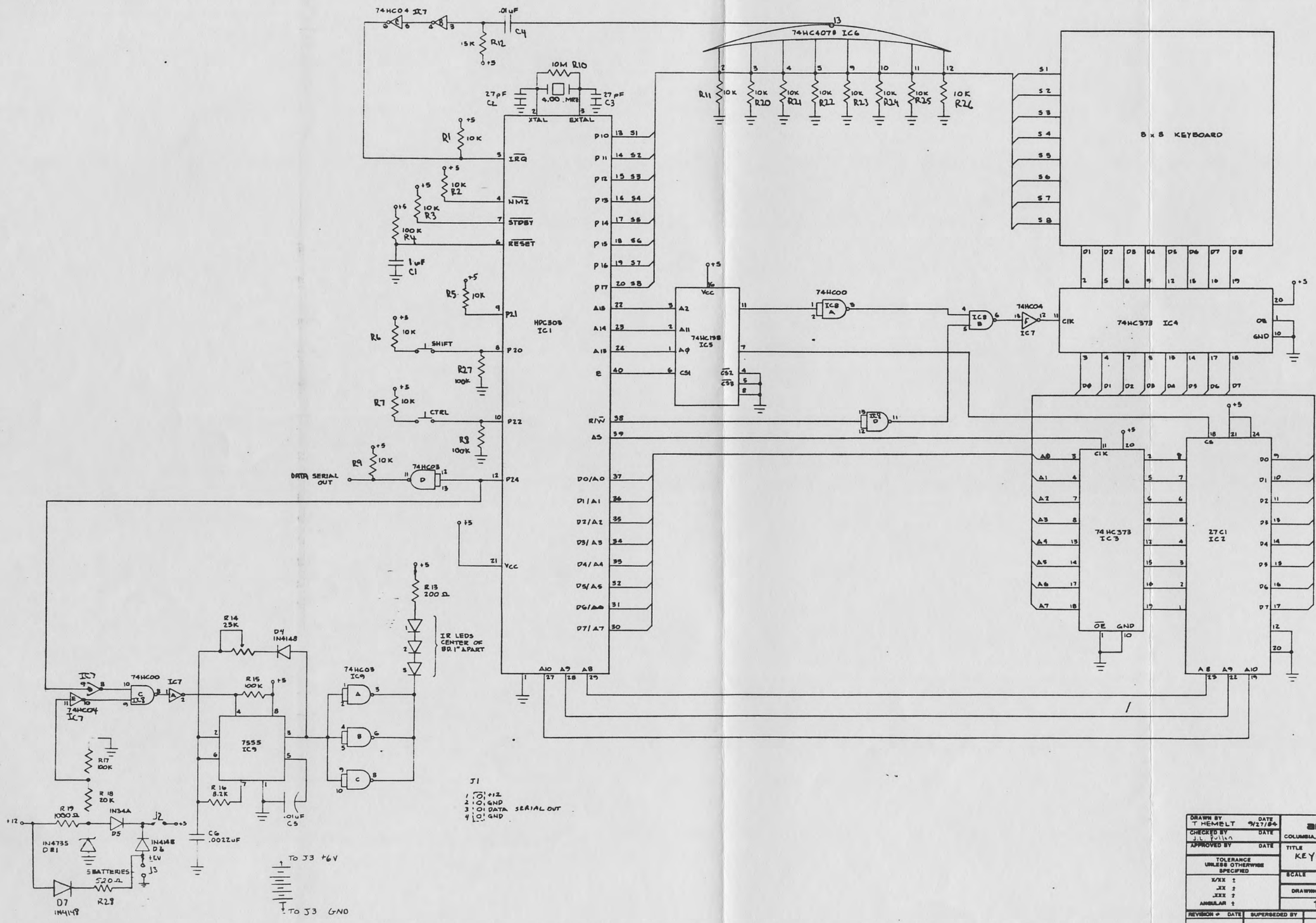
DRAWN BY T. HEMELT CHECKED BY M. EDWARDS APPROVED BY TOLERANCE UNLESS OTHERWISE SPECIFIED .XX % .XXX % ANGULAR ±	DATE 9/17/84 DATE 9/13/84 DATE SCALE DRAWING NUMBER 11 REVISION # DATE SUPERSEDED BY SUPERSEDES PART NUMBER	arctec systems COLUMBIA, MD. U.S.A. TITLE INFRARED TRANSMITTER BOARD SHY. ___ OF ___ PART NUMBER
--	---	---



* NOTES:
 1. FOR KEYBOARD IR RECEIVER C1 = 400 pf
 2. FOR BEACON IR RECEIVER C1 = 100 pf

INFRARED RECEIVER BOARD

DRAWN BY T. HEMELT	DATE 7/18/84	arctec systems COLUMBIA, MD. U.S.A.
CHECKED BY M. F. LAR	DATE 7/19/84	
APPROVED BY	DATE	TITLE INFRARED RECEIVER BOARD
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE
.XX ±		SHT. ___ OF ___
.XXX ±		DRAWING NUMBER
ANGULAR ±		PART NUMBER
		10
REVISION	DATE	SUPERSEDED BY
		SUPERSEDES
		PAGES PER ASSEMBLY



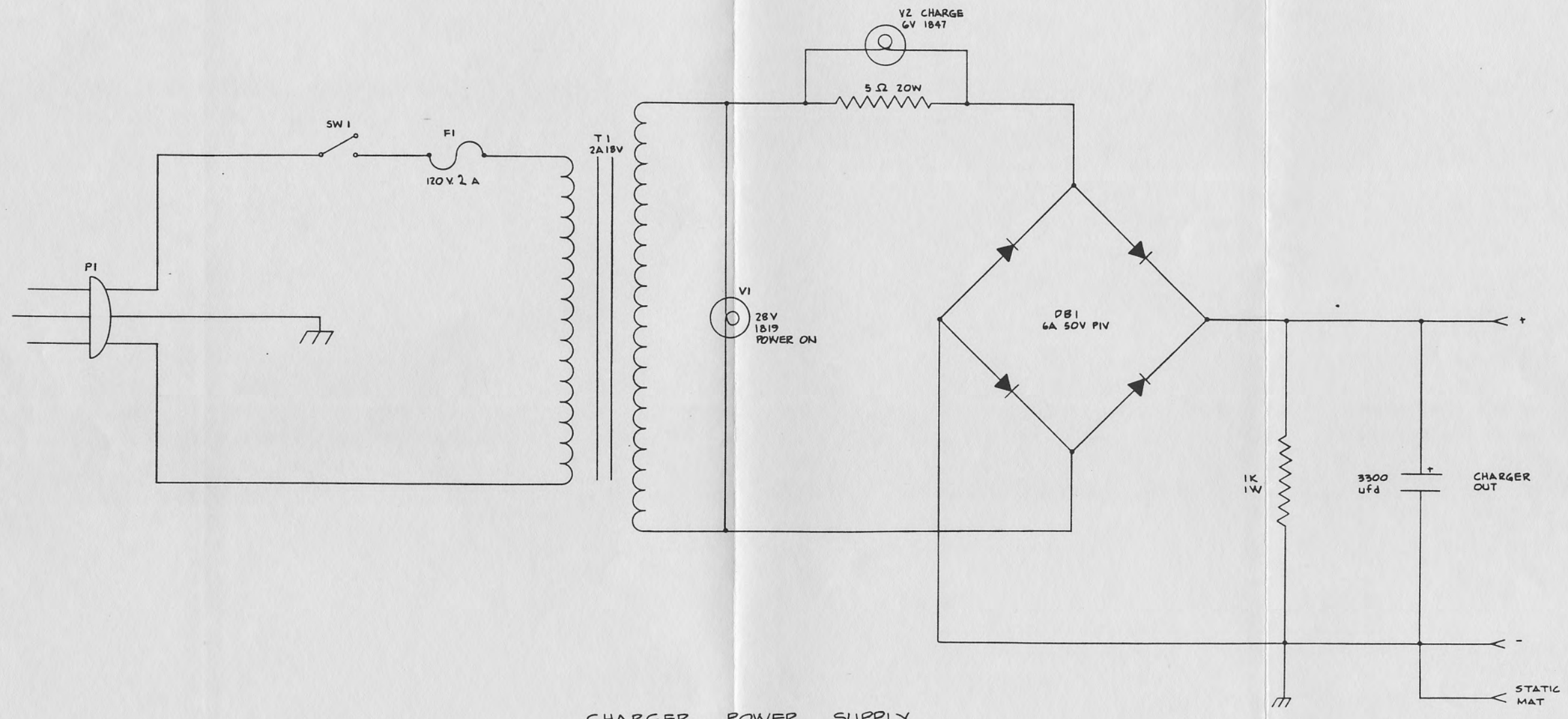
J1
 1: 0+5V
 2: 0 GND
 3: 0 DATA SERIAL OUT
 4: 0 GND

DRAWN BY T. HEMELT	DATE 9/27/84	arctec systems	
CHECKED BY J.L. FULTON	DATE	COLUMBIA, MD.	U.S.A.
APPROVED BY	DATE	TITLE KEYBOARD LOGIC	
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	SHT. OF
1/XX 1	2/XX 2	DRAWING NUMBER	PART NUMBER
3/XX 3	4/XX 4	12	
ANGULAR 1		REVISION #	DATE
		SUPERSEDED BY	SUPERSEDES
			PIECES PER ASSEMBLY

D1	SP	φ	!	1	2	3	4	5	6	7
D2	C	B)	9	#	:	+ ;	<	= -	? /
D3	T	@	A	A	B	B	C	C	D	D
	e	NULL	a	SOH	b	STX	c	ETX	d	ROT
D4	H	H	I	I	J	J	K	K	L	L
	h	BS	i	HT	j	LF	k	VT	l	FF
D5	P	P	Q	Q	R	R	S	S	T	T
	p	DLE	q	DC1	r	DC2	s	DC3	t	DC4
D6	X	X	Y	Y	Z	Z	.	:	→	↑
	x	CAN	y	EM	z	SUB	.	FS	↑	RS
D7	SPACE				↓		ESCAPE		CARRIAGE	←
									RETURN	
	S1	S2	S3	S4	S5	S6	S7	S8		

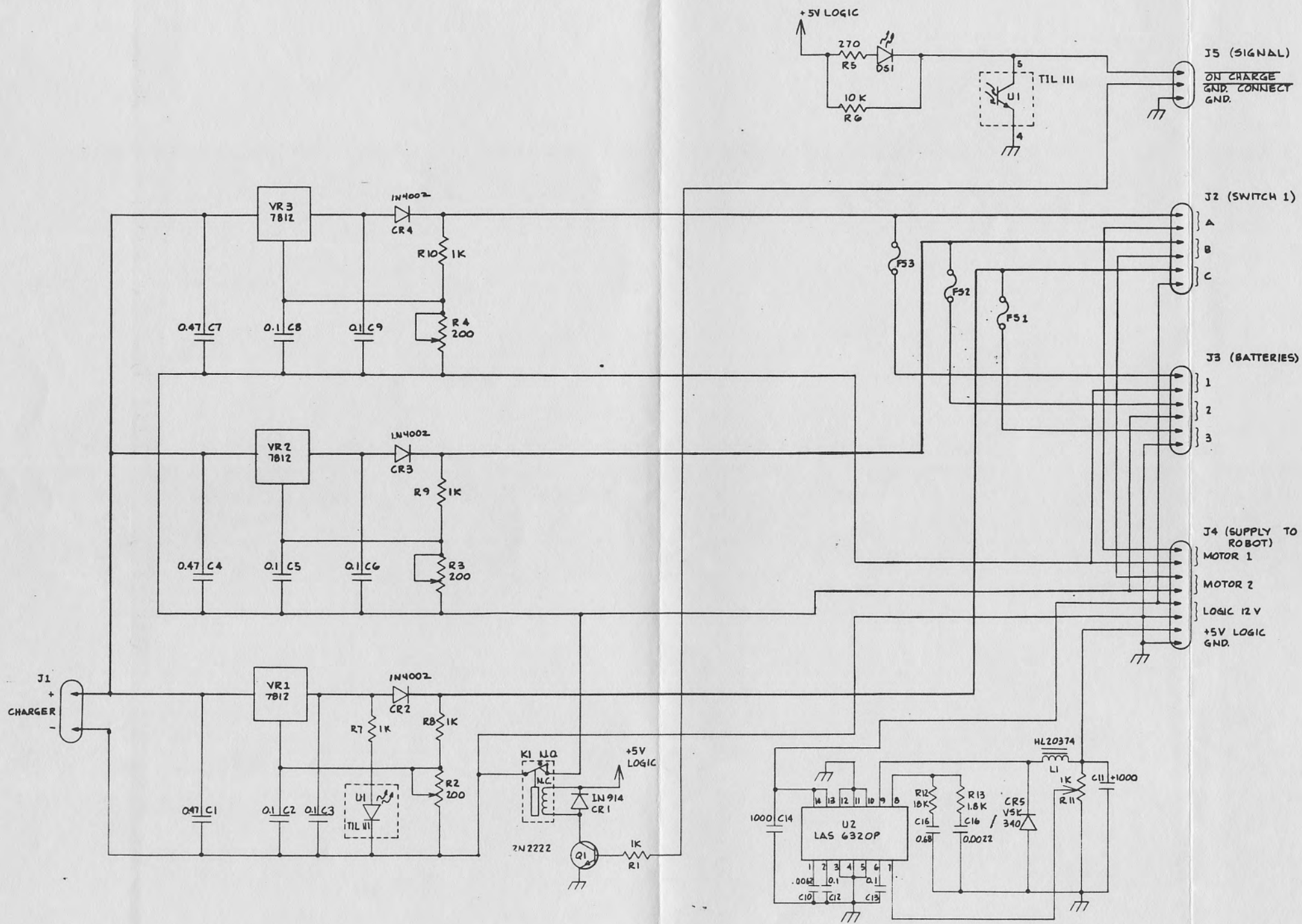
KEYBOARD MATRIX

DRAWN BY T. HEWELT	DATE 9/20/84	arctec systems	
CHECKED BY	DATE	COLUMBIA, MD.	U.S.A.
APPROVED BY	DATE	TITLE KEYBOARD MATRIX	
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	SHT. 2 OF 2
1/XX ± .XX ± .XXX ± ANGULAR ±		DRAWING NUMBER 13	PART NUMBER
REVISION #	DATE	SUPERSEDED BY	PIECES PER ASSEMBLY

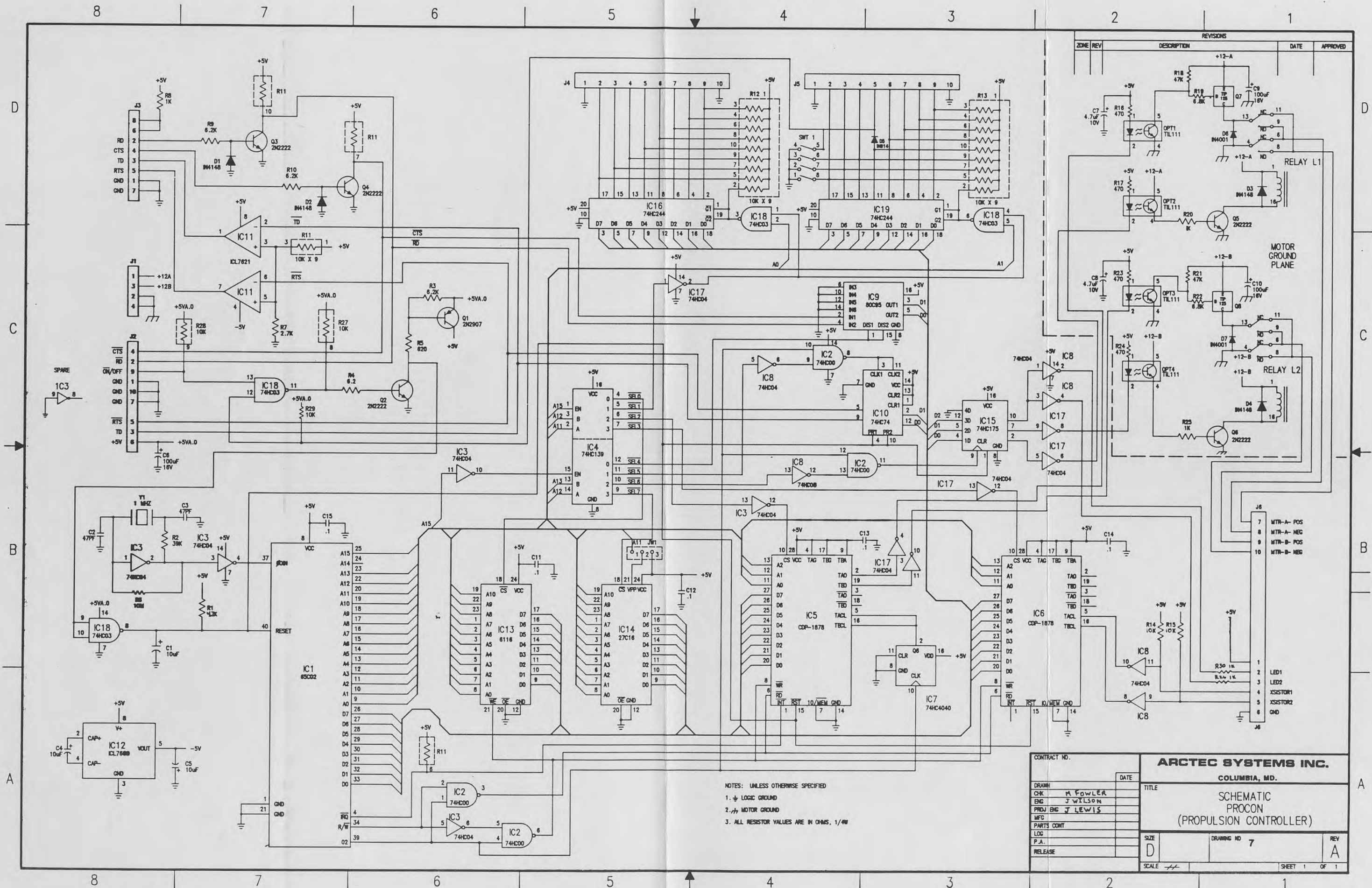


CHARGER POWER SUPPLY

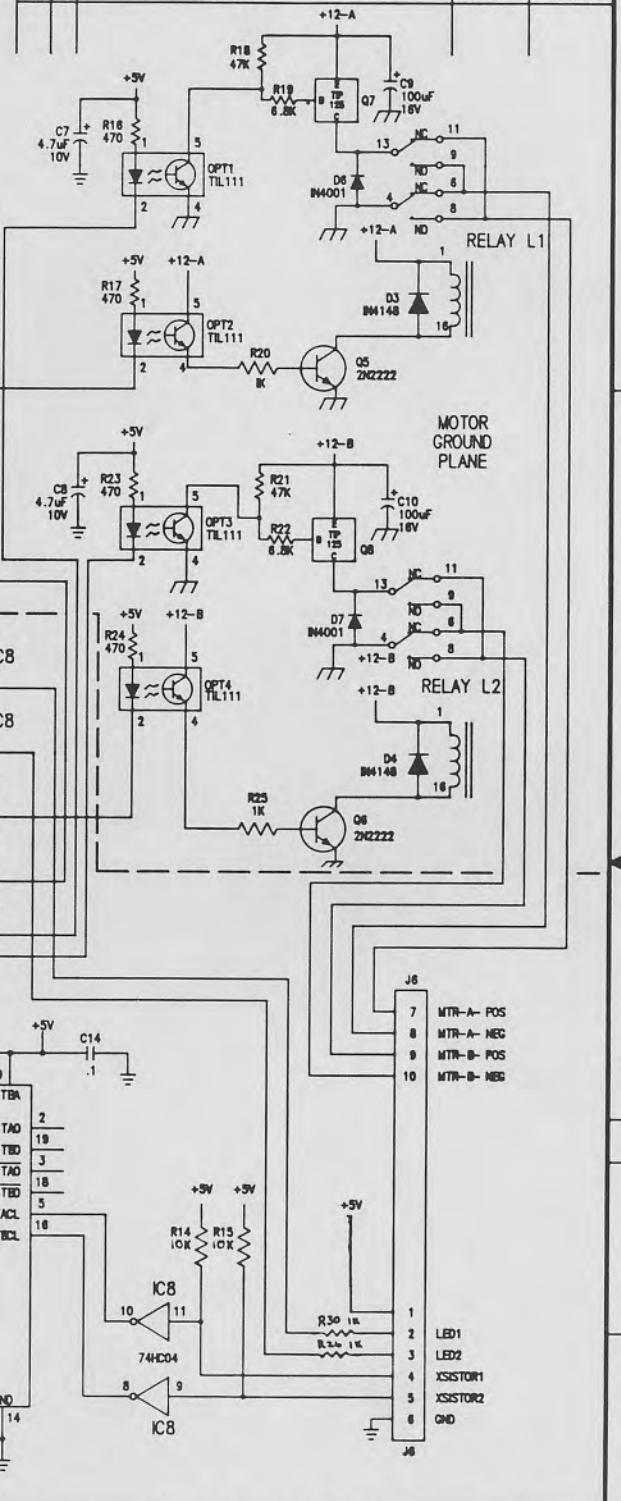
DRAWN BY T. HEMELT		DATE 9/4/84	arctec systems COLUMBIA, MD. U.S.A.	
CHECKED BY M. E. ...		DATE 9/19/84		
APPROVED BY			TITLE CHARGER POWER SUPPLY	
TOLERANCE UNLESS OTHERWISE SPECIFIED			SCALE	SHT. ___ OF ___
X/XX : .XX : .XXX : ANGULAR :			DRAWING NUMBER 14	PART NUMBER
REVISION #	DATE	SUPERSEDED BY	SUPERSEDES	PIECES PER ASSEMBLY



DRAWN BY T. HEMBLT	DATE 8/27/84	ARCTIC SYSTEMS COLUMBIA, MD. U.S.A.	
CHECKED BY M. FOWLER	DATE 9/29/84		
APPROVED BY M. FOWLER	DATE 9/30/84	TITLE POWER DISTRIBUTION BD.	
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	ENT. 1 OF 1
X/XX 1		DRAWING NUMBER	PART NUMBER
XX 2		9	
XXX 3			
ANALOG 4			
REVISION 0	DATE	SUPERSEDED BY	SUPERSEDES
B	9/29/84		

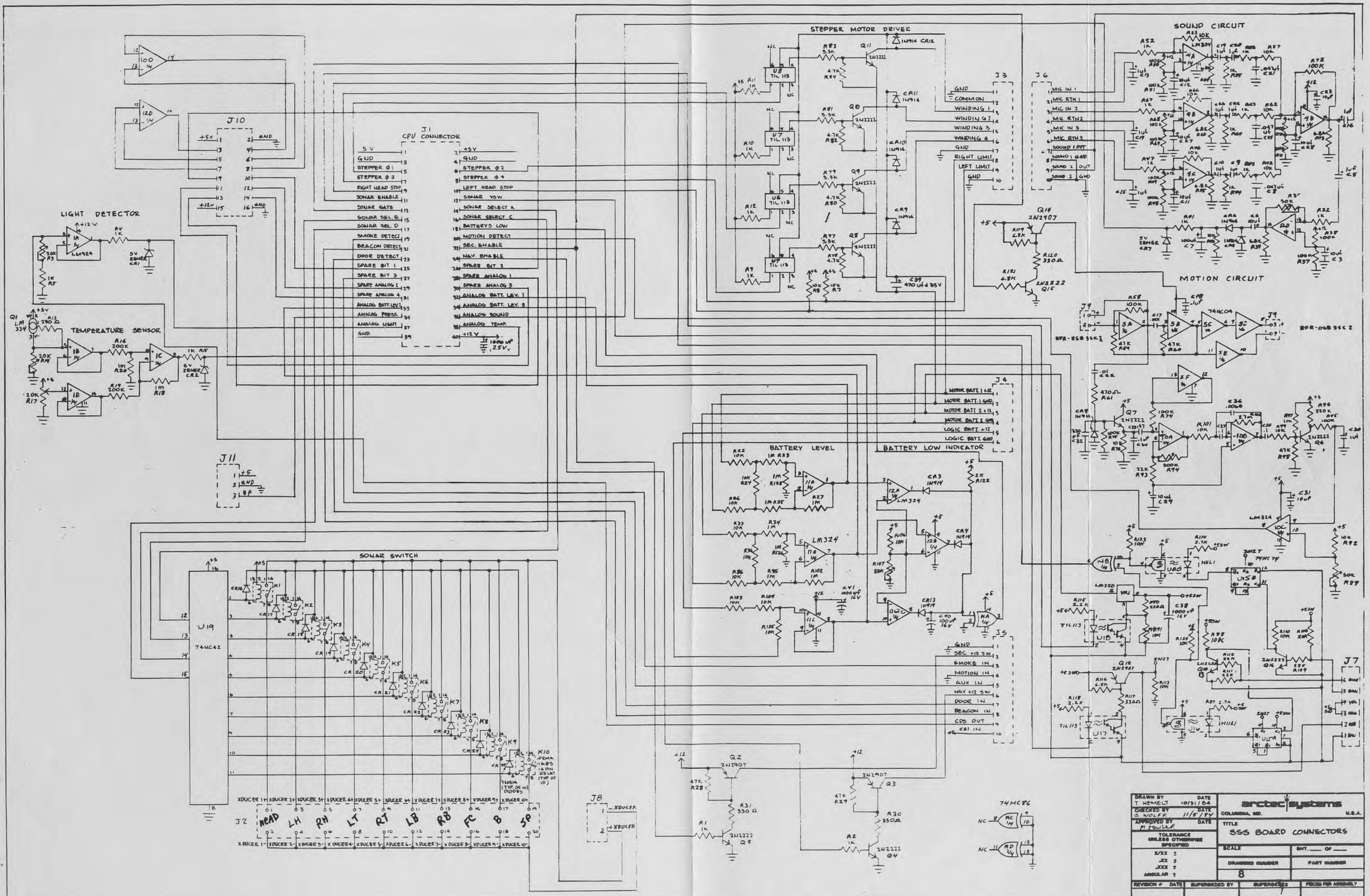


ZONE	REV	DESCRIPTION	DATE	APPROVED

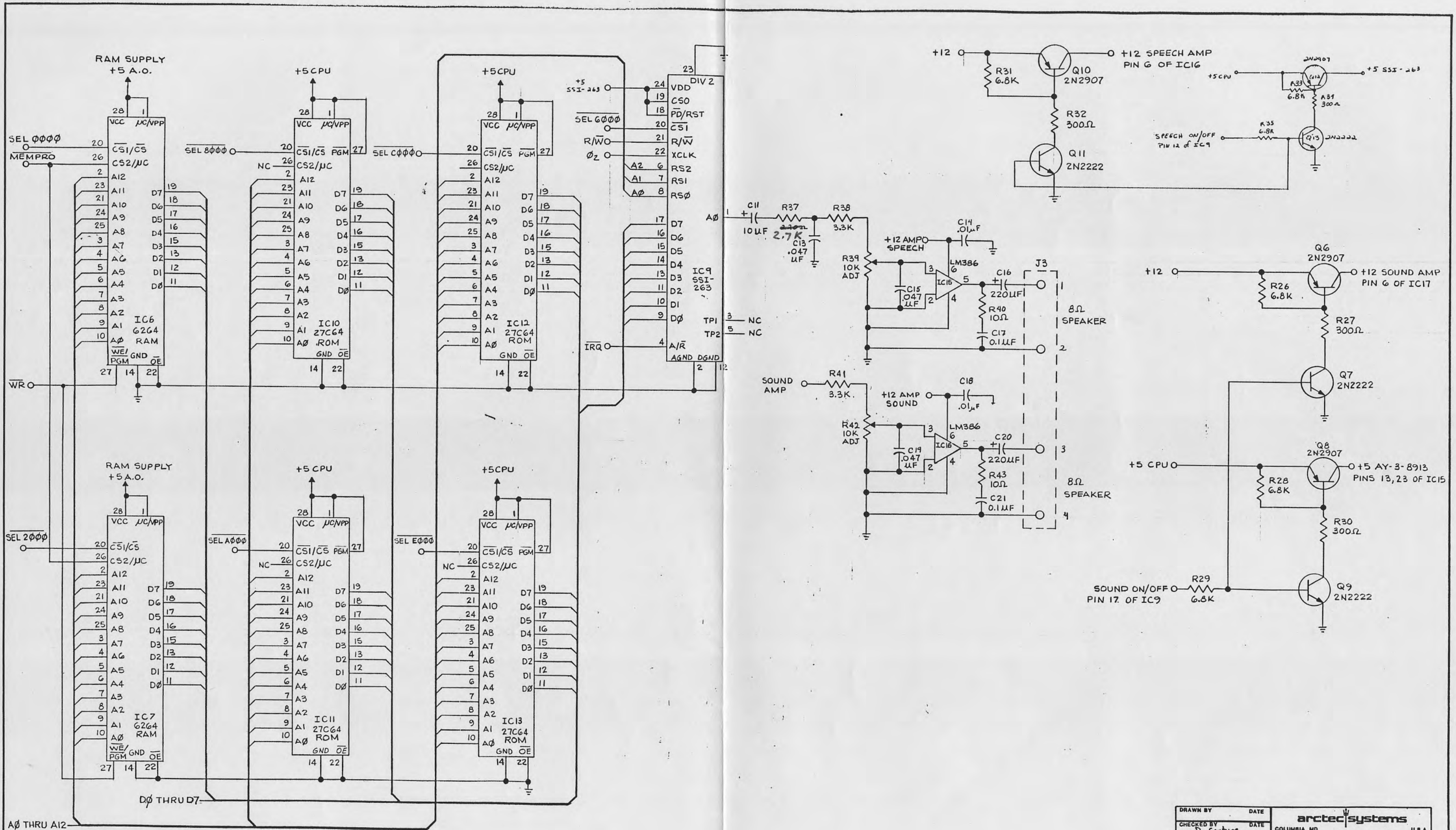


NOTES: UNLESS OTHERWISE SPECIFIED
 1. ⊕ LOGIC GROUND
 2. ⚡ MOTOR GROUND
 3. ALL RESISTOR VALUES ARE IN OHMS, 1/4W

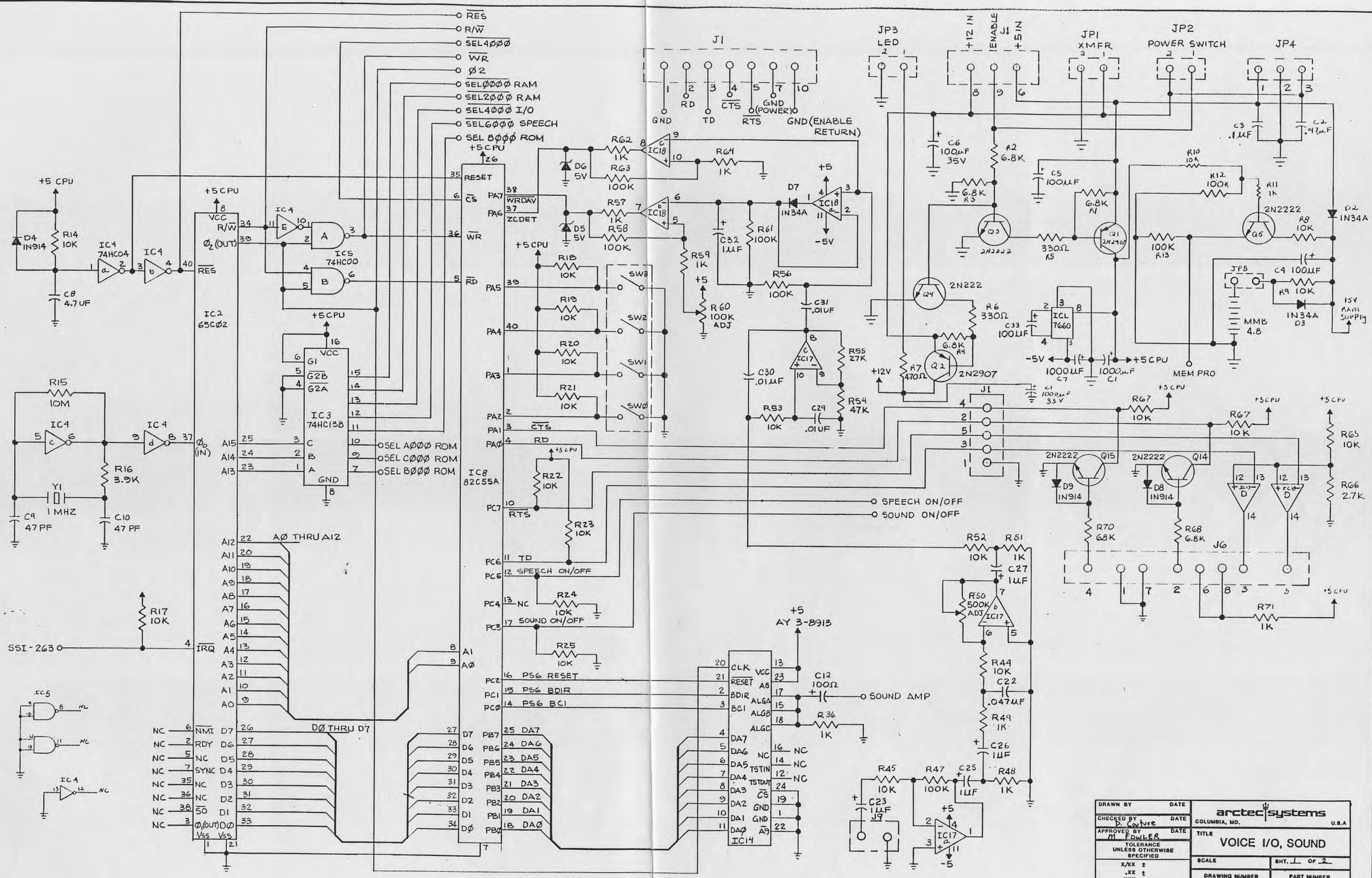
CONTRACT NO.		DATE	
DRAWN CHK M FOWLER		TITLE SCHEMATIC PROCON (PROPULSION CONTROLLER)	
ENG J WILSON		SIZE D	
PRD J LEWIS		DRAWING NO 7	
MFC		REV A	
PARTS CONT		SCALE	
LOG		SHEET 1 OF 1	
P.A.			
RELEASE			



DRAWN BY T. HEMELT		DATE 10/31/84	arctec systems COLUMBIA, MD. U.S.A.	
CHECKED BY S. WOLFF		DATE 11/6/84		
APPROVED BY M. J. ...		DATE	TITLE SSS BOARD CONNECTORS	
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	SMT. OF	
X/XX 1		DRAWING NUMBER	PART NUMBER	
X/XX 2		8		
X/XX 3				
AMBLAR 1				
REVISION	DATE	SUPERSEDED BY	SUPERSEDES	PRICE PER ASSEMBLY



DRAWN BY	DATE	arctec systems
CHECKED BY	DATE	
APPROVED BY	DATE	COLUMBIA, MD. U.S.A.
TOLERANCE UNLESS OTHERWISE SPECIFIED		TITLE
X/XX ±		SCALE
.XX ±		SHT. 1 OF 1
.XXX ±		DRAWING NUMBER
ANGULAR ±		PART NUMBER
REVISION #	DATE	SUPERSEDED BY
		SUPERSEDES
		PIECES PER ASSEMBLY



DRAWN BY		DATE		arctec systems COLUMBIA, MD. U.S.A.	
CHECKED BY		DATE			
APPROVED BY		DATE		TITLE	
TOLERANCE		UNLESS OTHERWISE SPECIFIED		SCALE	
X/XX ±		.XX ±		.XXX ±	
ANGULAR ±		DRAWING NUMBER		PART NUMBER	
REVISION #		DATE		SUPERSEDED BY	
SUPERSEDES		SUPERSEDES		PIECES PER ASSEMBLY	