
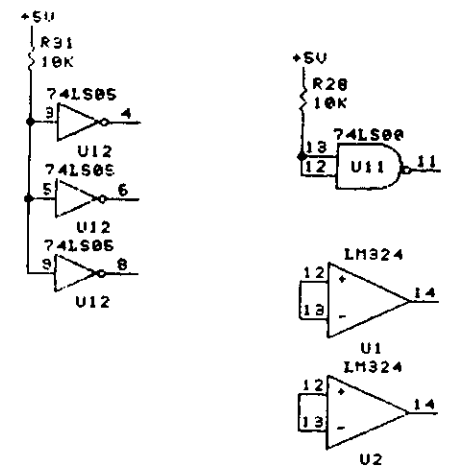


ANDROBOT, INC. 			
TITLE TOPO BATTERY MONITOR			
SIZE	CODE	NUMBER	REV
B		11-010175-001	A
DATE	10/16/93	SHEET 2 OF 2	

REVISIONS				
ZONE	LTC	DESCRIPTION	DATE	APUD
	A	REV. 10/11/83	10/11/83	LH
	B	REV. 11/5/83	11/5/83	LH

IC TABLE							
IC TYPE	REF DESIGNATOR	QTY	+5V	BND	-5V	+12	+24
8021	UR	1	40	20			
2764	U9	1	26	14			
6116	U7	1	24	12			
4013	U6	1	14	07			
4071	U4, U10	2	14	07			
4584	U3	1	14	07			
74LS00	U11	1	14	07			
74LS05	U12	1	14	07			
74LS373	U5	1	20	10			
LM324	U1, U2	2	04	11			
LM7805	UR1	1	03	02		01	
SG3635	Q1, Q2, Q3, Q4	4					01

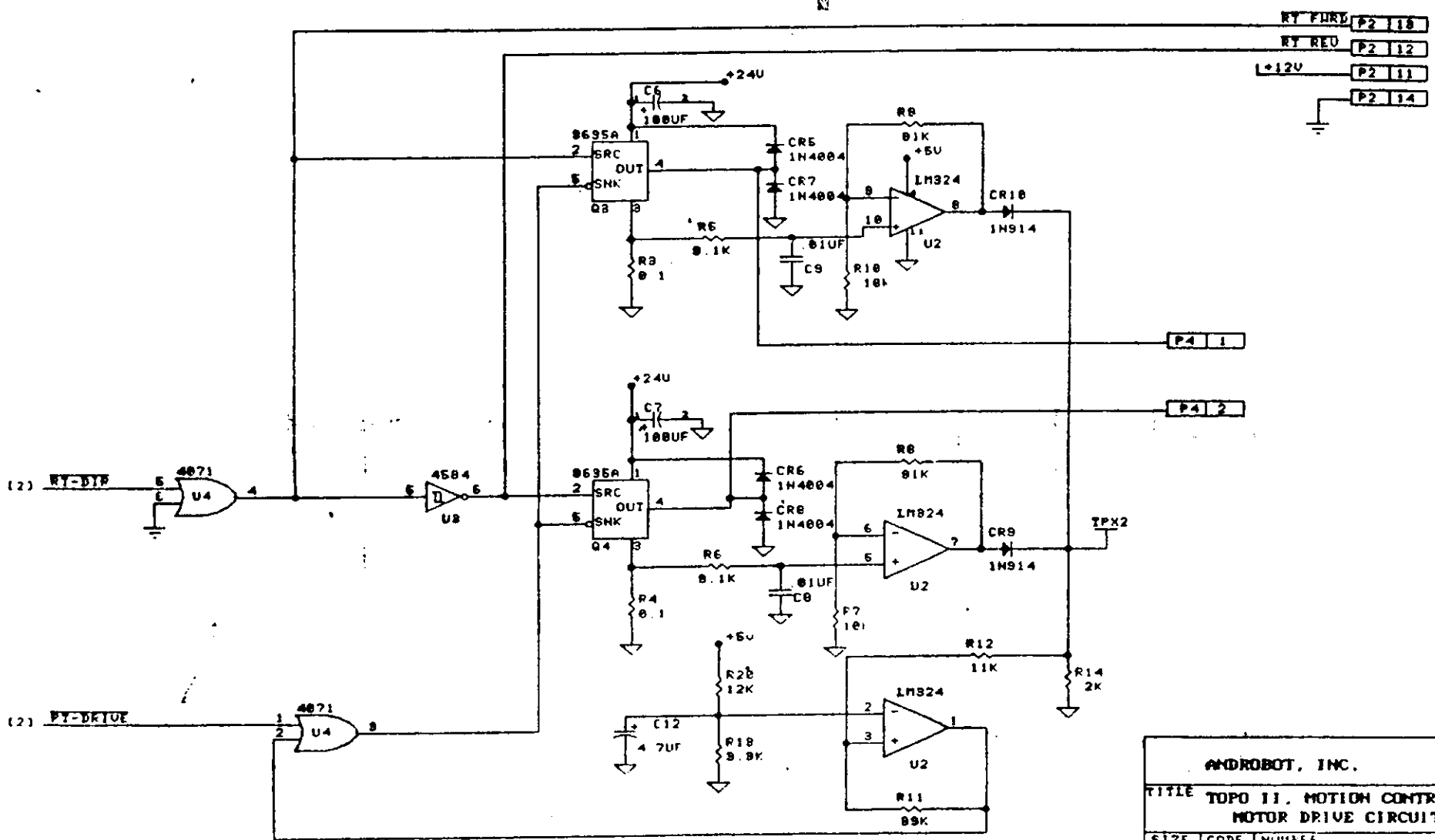


MAR 28 1984

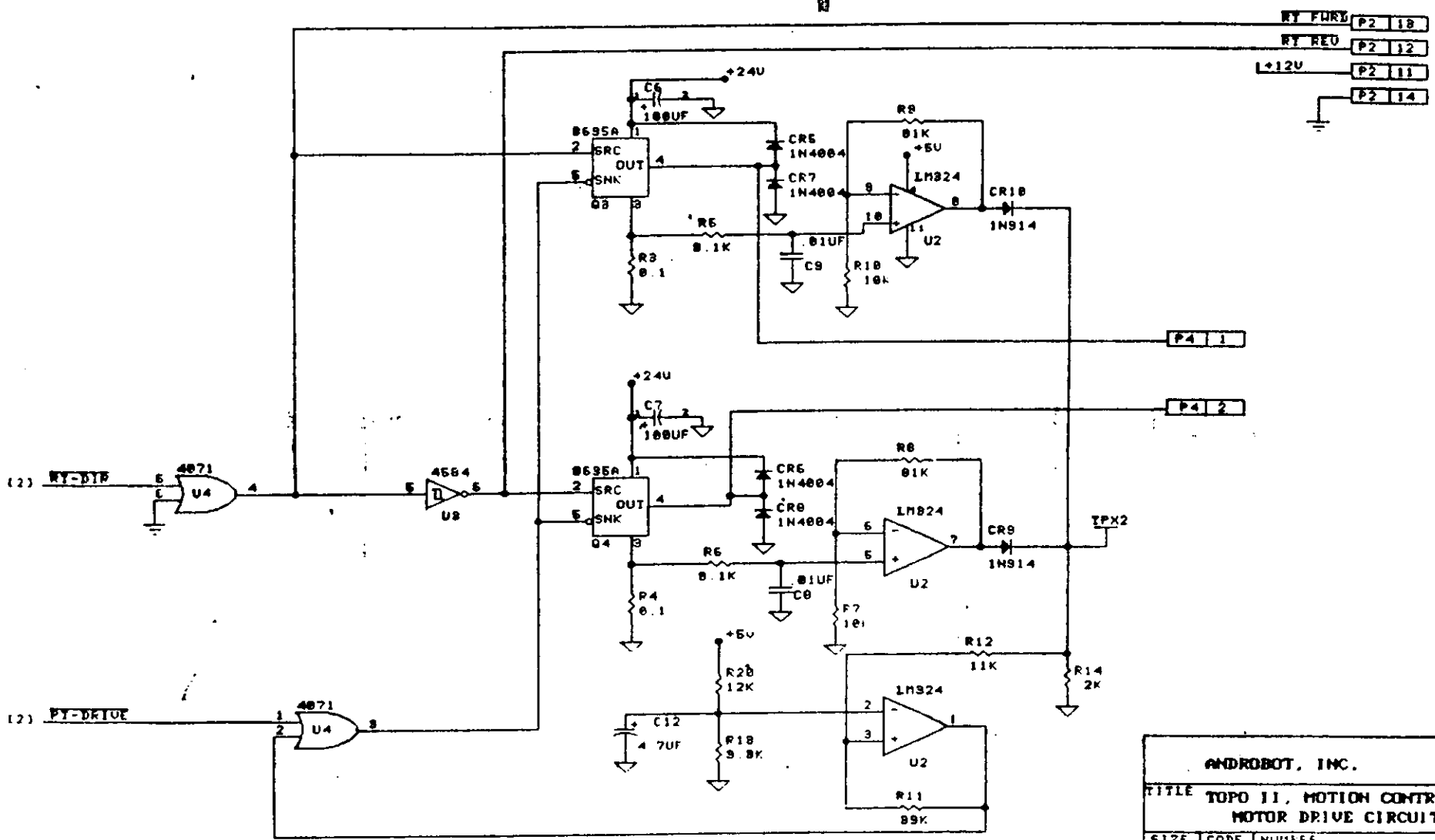
PRE-PRODUCTION RELEASE

NOTE
 1 ALL BYPASS CAPACITORS ARE .1UF IN VALUE.
 2 DESIGNATORS FOR CAPS ARE C14 THRU C23.

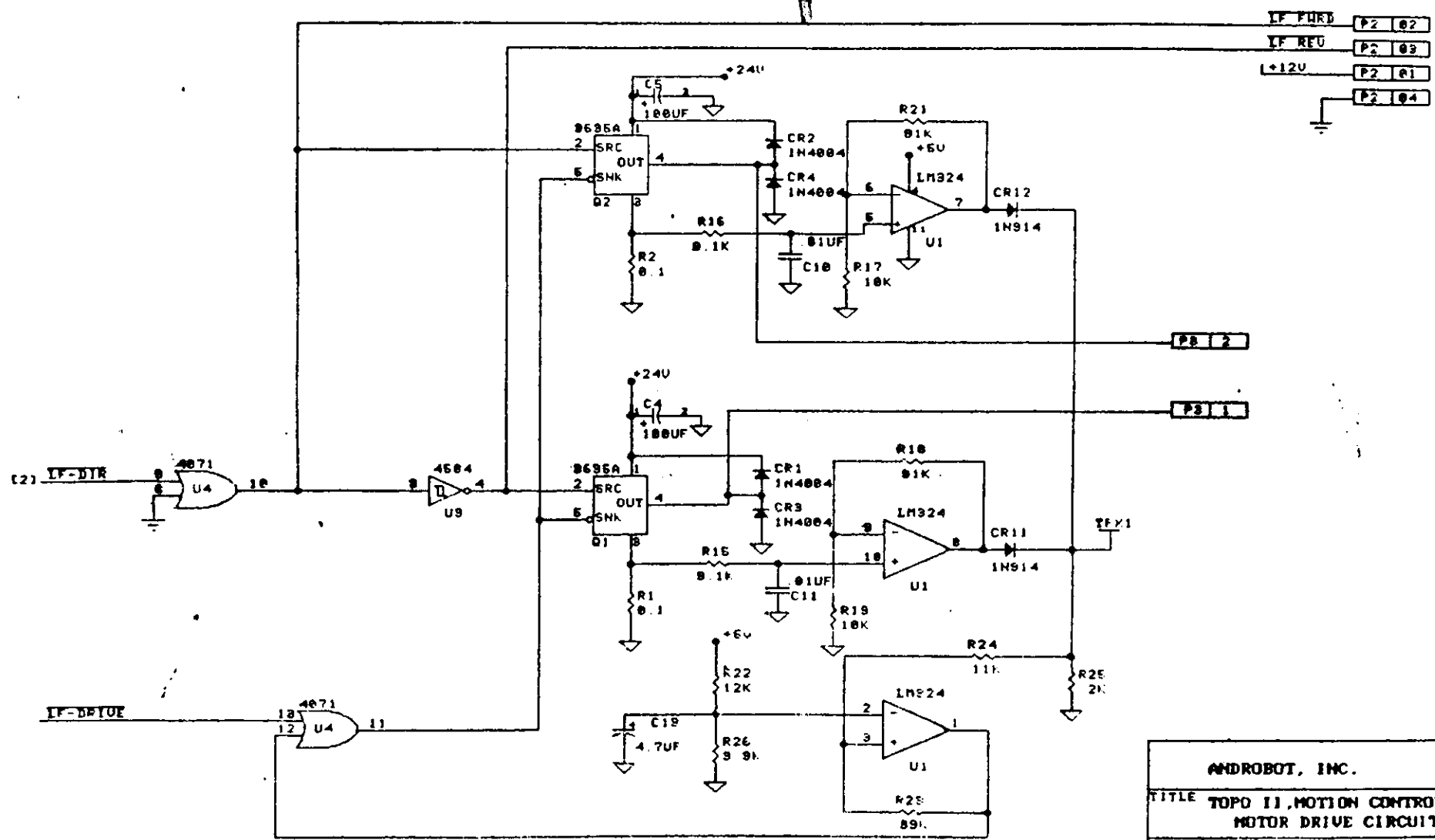
DATE	11/5/83	ANDROBOT, INC.		
DWN	JV	TITLE		
APUD		TOPO 11, MOTION CONTROL CPU		
ENGRB		COVER SHEET		
LNKR		SIZE	CODE	NUMBER
		B		11-010200-001
				REV
				B
		SHEET 1 OF 6		



ANDROBOT, INC.			
TITLE TOPO 11, MOTION CONTROL CPU MOTOR DRIVE CIRCUIT #1			
SIZE	CODE	NUMBER	REV.
B		11-010200-001	A
DATE 10.11.68		SHEET 4 OF 5	

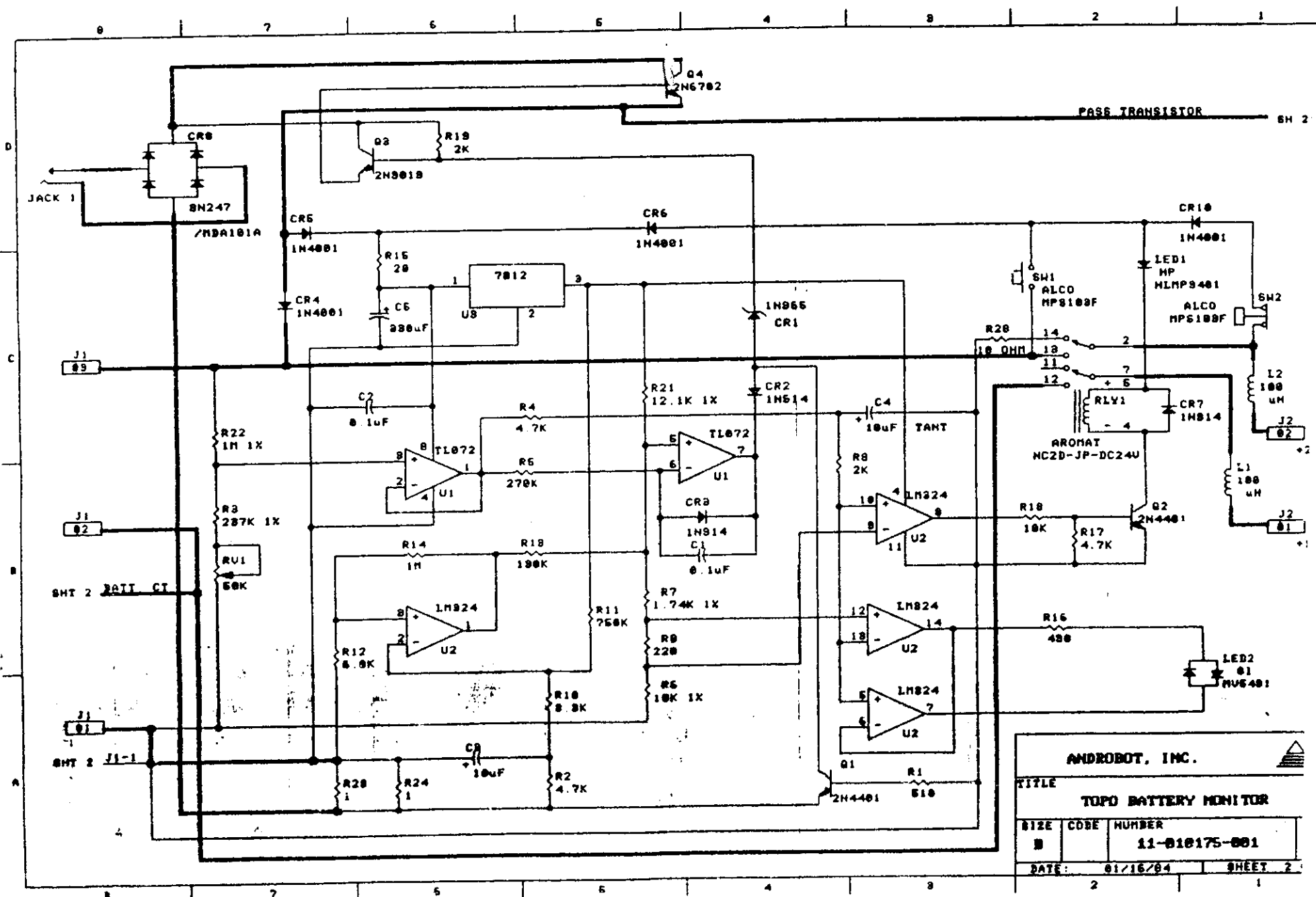


ANDROBOT, INC.			
TITLE TOPO 11, MOTION CONTROL CPU MOTOR DRIVE CIRCUIT #1			
SIZE	CODE	NUMBER	FE.
B		11-818200-001	A
DATE 10.11.66		SHEET 4 OF 6	



IF PHRD	P2	02
IF REU	P2	03
+12V	P2	01
	P2	04

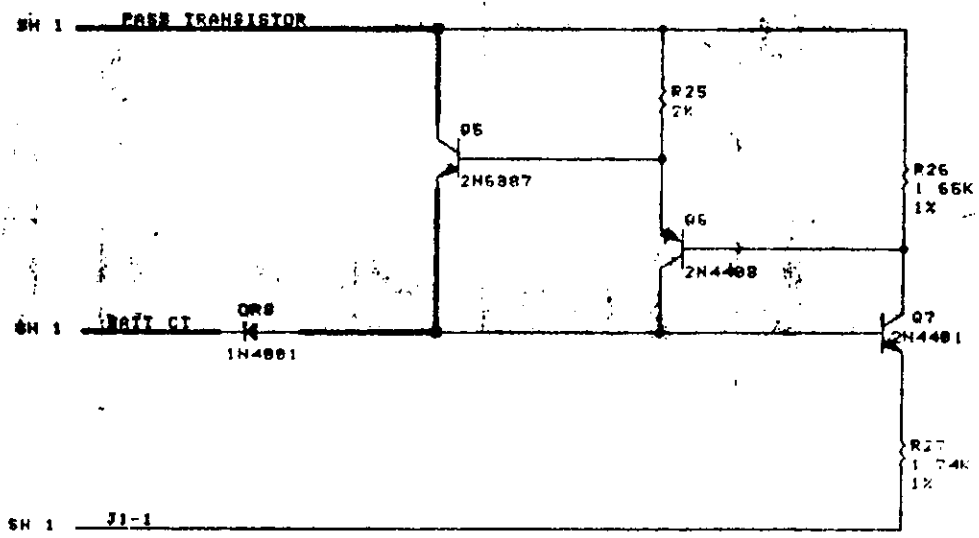
ANDROBOT, INC.			
TITLE TOPD 11, MOTION CONTROL CPU MOTOR DRIVE CIRCUIT #2			
SIZE	CODE	NUMBER	REV
B		11-010280-001	A
DATE 10/11/73		SHEET 5 OF 6	



ANDROBOT, INC.		
TITLE		
TOPO BATTERY MONITOR		
SIZE	CODE	NUMBER
B		11-010175-001
DATE:		01/16/84
		SHEET 2

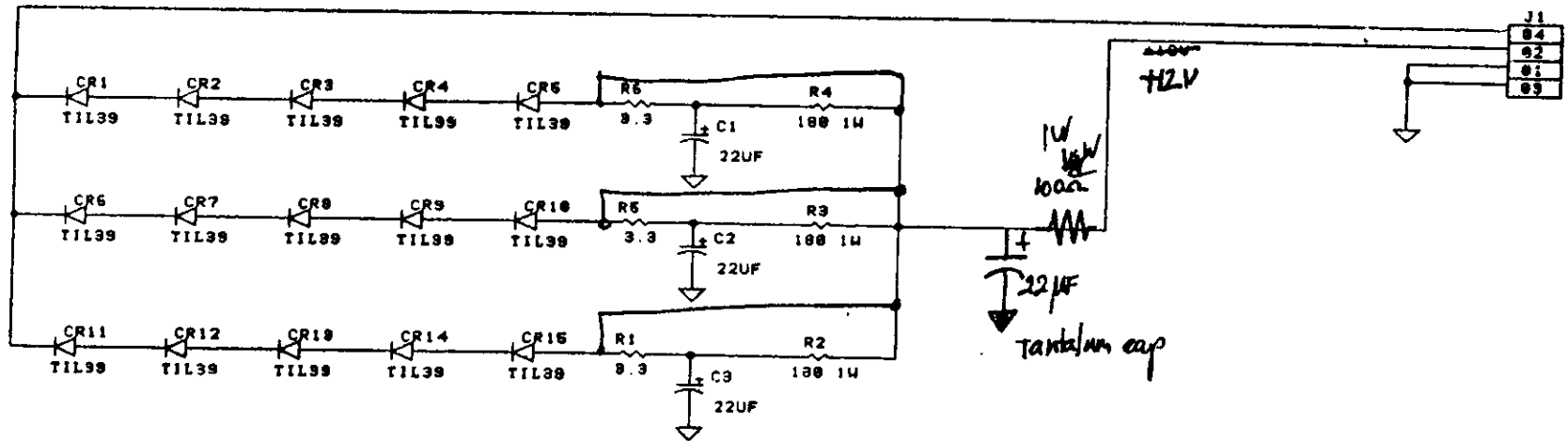
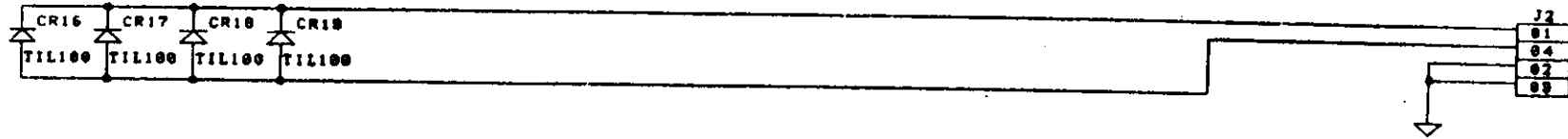
PRE PRODUCTION RELEASE MAR 28 1984


REVISIONS				
NO.	DATE	DESCRIPTION	BY	APPR.



DATE	12/05/83
BY	J. YOUNG
APP'D	
APPR	
ENGR	
CHK	

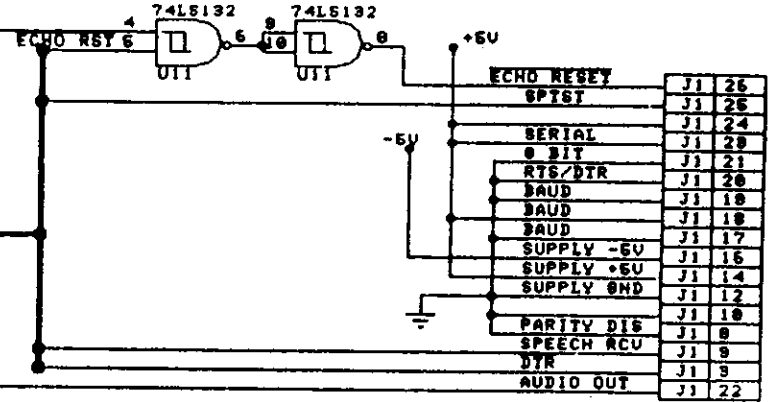
ANDROBOT, INC.			
TITLE			
TOPU BATTERY MONITOR			
REV		DATE	
B		11-010174-001	D



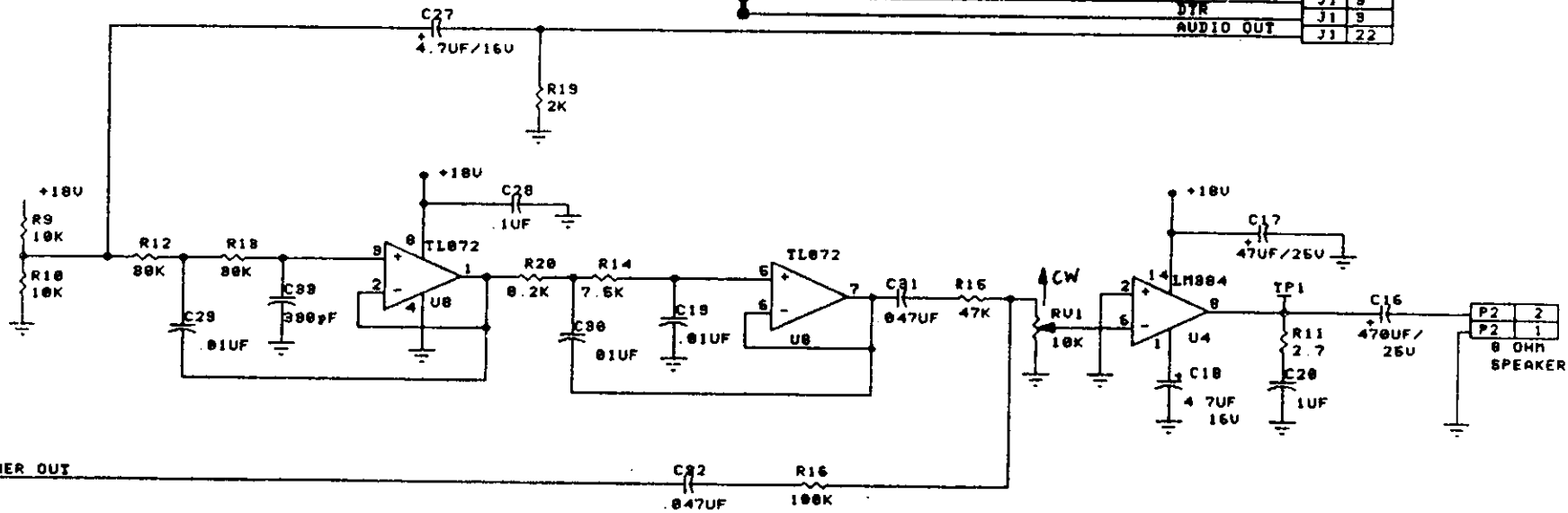
ANDROBOT, INC. 			
TITLE MOBILE TRANCEIVER SENSOR			
SIZE B	CODE	NUMBER 11-010369-001	REV A
DATE 10/10/83	SHEET 1 OF 1		

(16) TEST RESEY

(12) CONTROL BUS



(13) TIMER OUT



PRE-PRODUCTION RELEASE

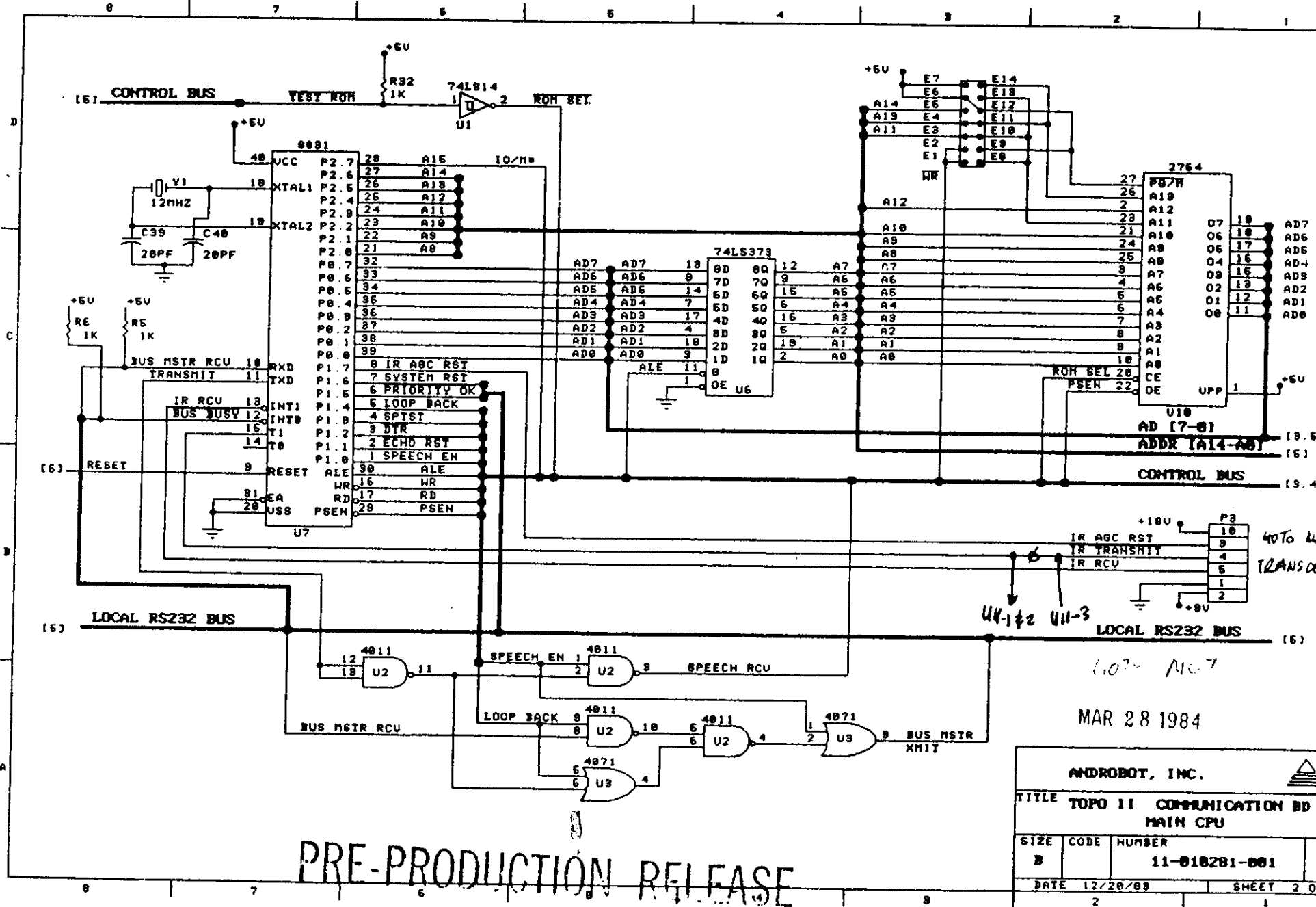
MAR 28 1984

ANDROBOT, INC.

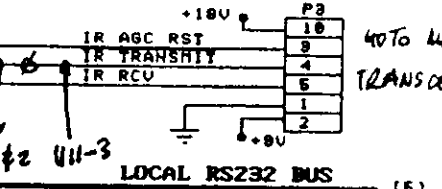
TITLE TOPO II COMMUNICATION BD
ECHO SPEECH MODULE INTERFACE

SIZE	CODE	NUMBER	R
B		11-010201-001	

DATE 12/20/83 SHEET 4 OF



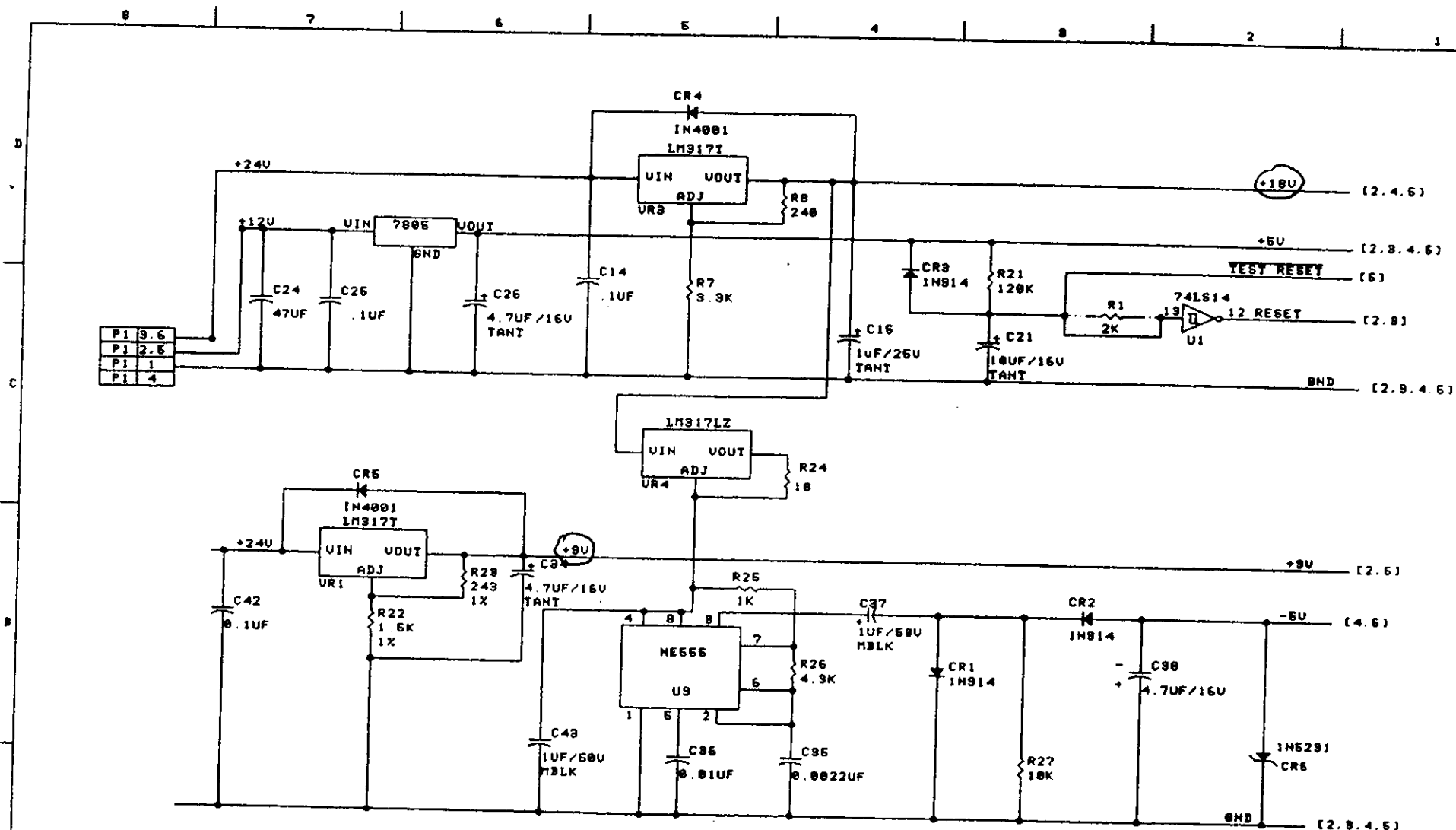
PRE-PRODUCTION RELEASE



607-1107

MAR 28 1984

ANDROBOT, INC.			
TITLE TOPO II COMMUNICATION BD MAIN CPU			
SIZE	CODE	NUMBER	R
B		11-010201-001	
DATE 12/20/88		SHEET 2 OF 2	



P1	3	6
P1	2	5
P1	1	
P1	4	

NOTES

- IF R1 IS INSTALLED THEN THE TRACE ON CIRCUIT SIDE OF BOARD MUST BE CUT BETWEEN SOLDER PADS OF R1 (SEE NOTE ON ASSEMBLY DWG. FOR EXACT PLACE OF CUT)

MAR 28 1984

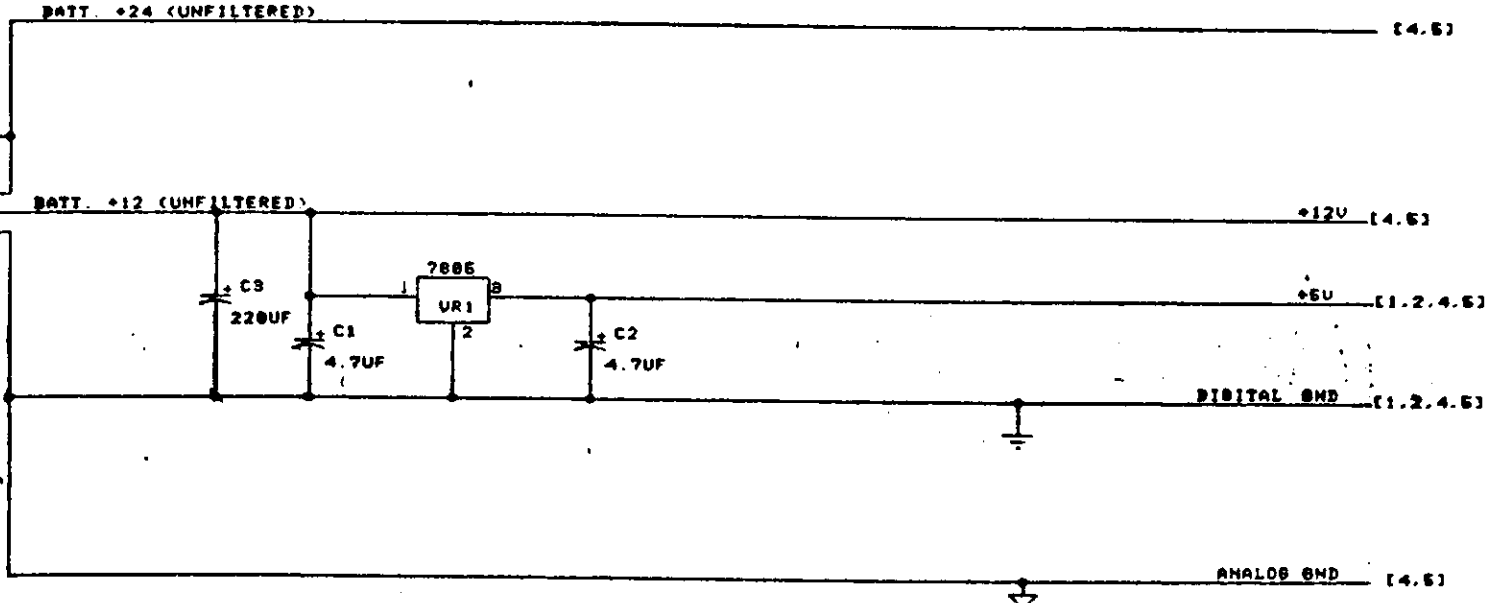
ANDROBOT, INC.


TITLE TOPO II COMMUNICATION BOARD
POWER SUPPLY & RESET

SIZE	CODE	NUMBER
B		11-818281-001

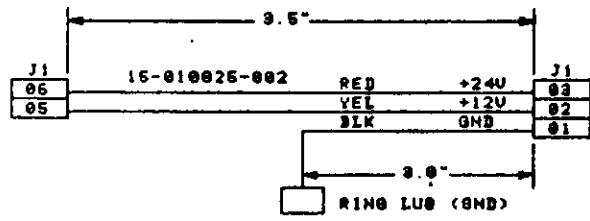
DATE	12/28/83	SHEET	6 OF 6
------	----------	-------	--------

P1	6
P1	5
P1	4
F1	9
P1	2
F1	1

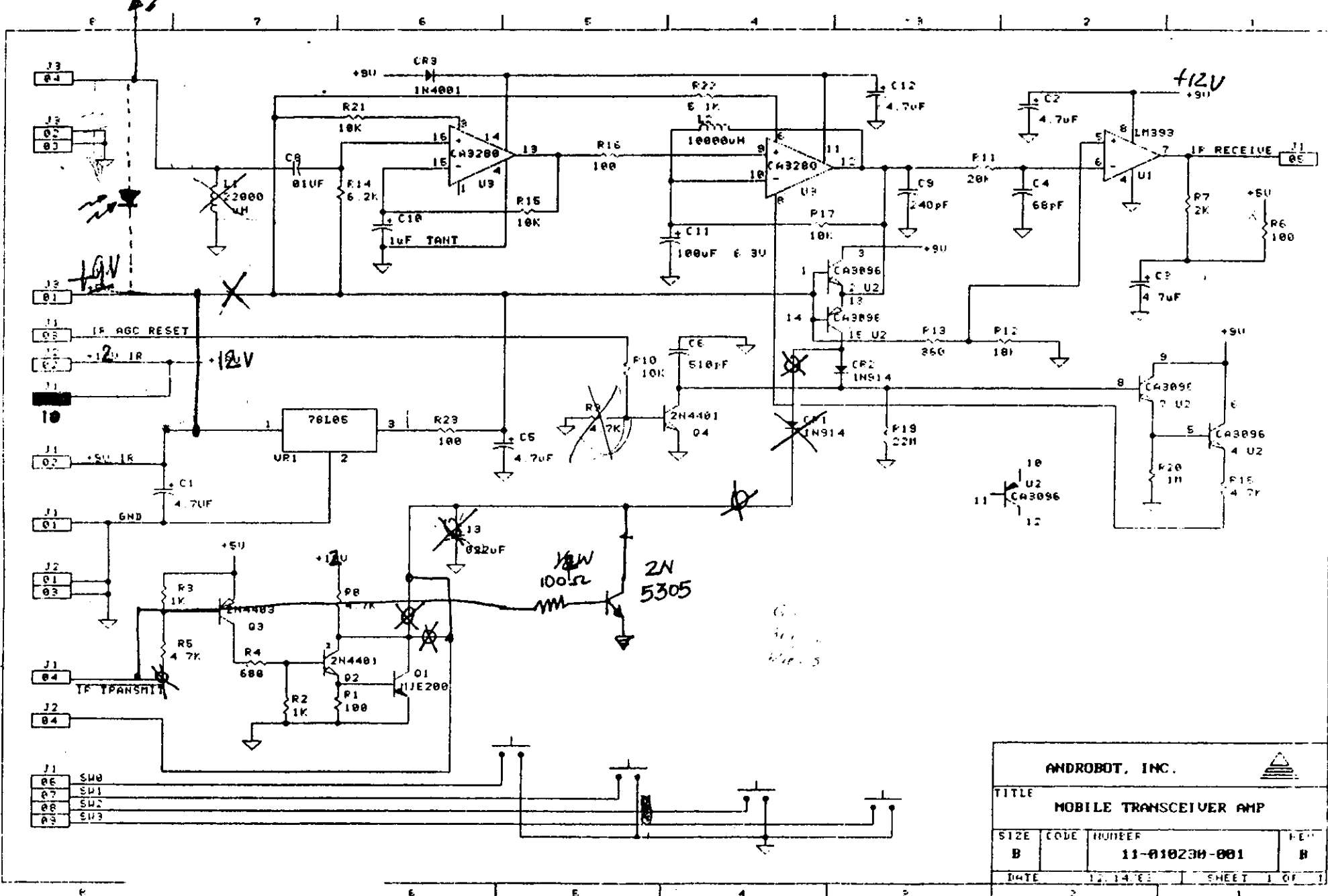


ANDROBOT, INC. 		
TITLE TOP0 11, MOTION CONTROL CPU POWER SUPPLY		
SIZE B	CODE	NUMBER 11-010200-001
DATE 10/11/87	SHEET 1 OF 1	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APUD



DATE	10/20/89			ANDROBOT, INC.	
DWN	T. SAKAGITO				
APUD	TITLE				A
ENGRG	TOPD II				
CHKR	POWER DISTRIBUTION HARNESS ASS'Y				
	SIZE	CODE	NUMBER	REV	
	B		15-010025-002	A	
SHEET 2 OF 2					

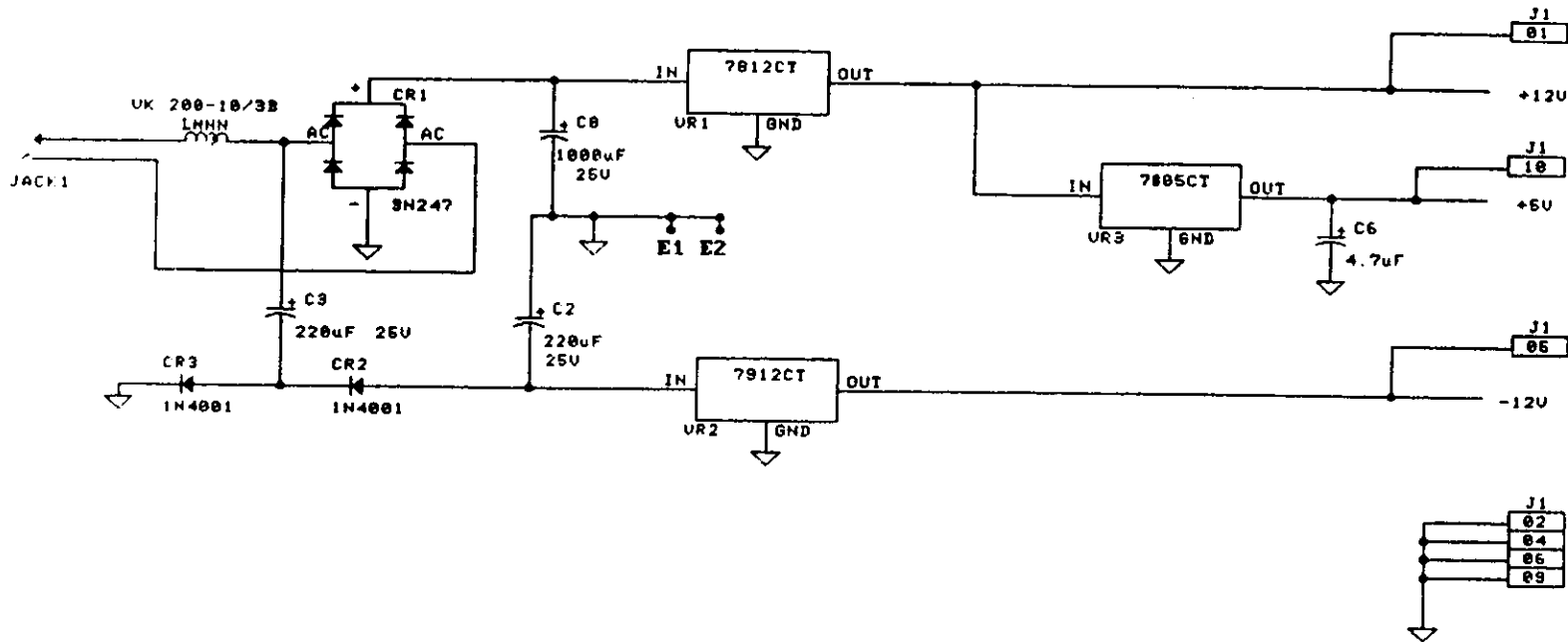


ANDROBOT, INC.




TITLE			
MOBILE TRANSCIEVER AMP			
SIZE	CODE	NUMBER	REV
B		11-010230-001	B
DATE	12, 14, 83	SHEET 1 OF 1	

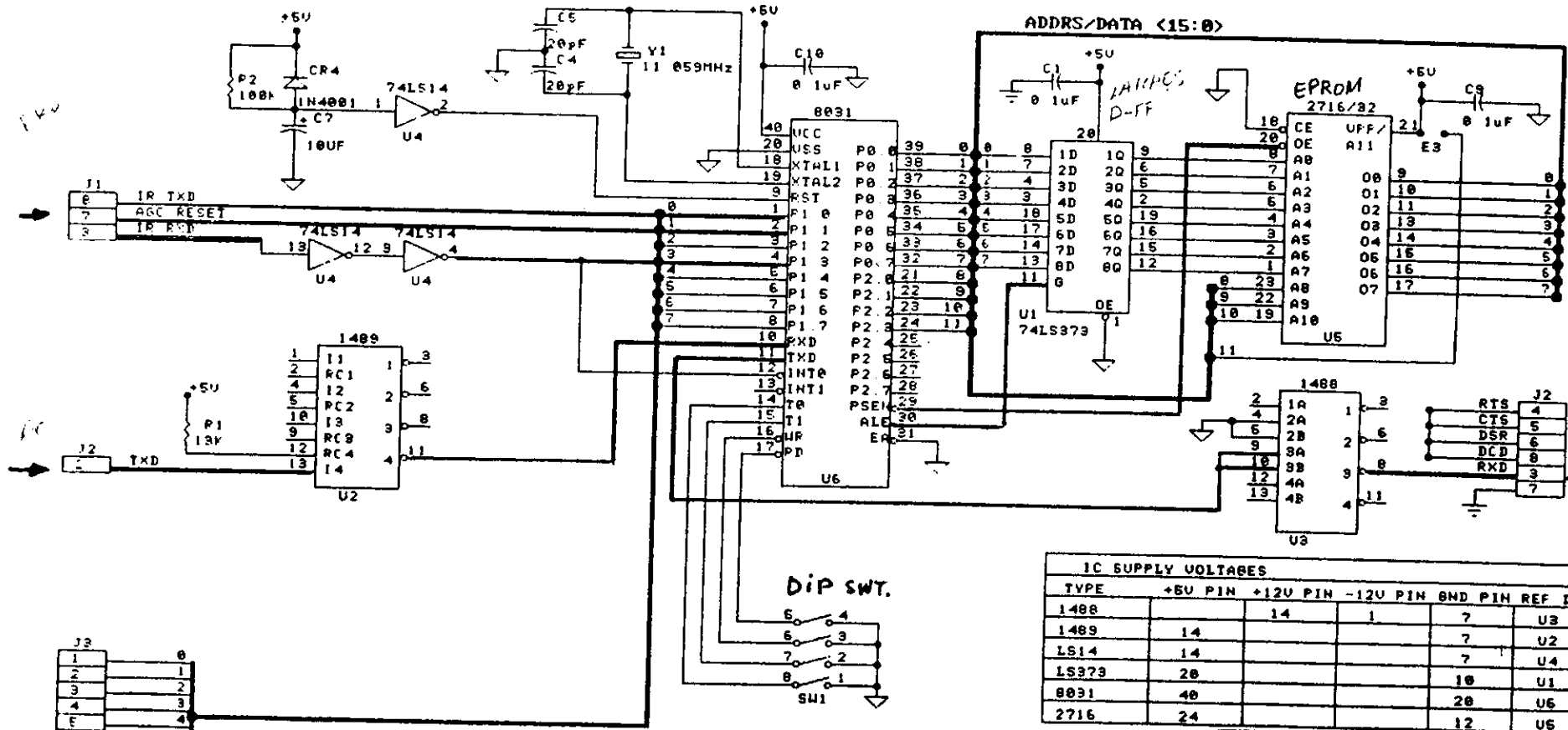
REVISTORS			
LTR	DESCRIPTION	DATE	APPUL
A	PRE-PROD REL. ECO 00020	10-26-83	LH
B	REVISE PER ECO 00030. SMT 2. ZONE B12	11-02-83	LH
C	RELOCATE 9 PIN CONN. ECO 00036	11-09-83	LH
D	PEU SMT 2. ECO 00054	11-30-83	J YOUNG
E	REVISED PER ECO 00092	1-30-84	JY



PRE-PRODUCTION RELEASE
MAR 28 1984

DATE:	11-03-83	ANDROBOT, INC. 		
DUN:	J. K.	TITLE		
CHK:	J. YOUNG	MOST DATA LINK DIGITAL		
APPUL:	L. HANDBOR	SIZE	CODE	NUMBER
DOC:		B		11-010233-001
CONT:		DATE	11/29/83	REV
				E
			SHEET	1 OF 2

PRE-PRODUCTION RELEASE



IC SUPPLY VOLTAGES					
TYPE	+5V PIN	+12V PIN	-12V PIN	GND PIN	REF DES
1488		14		7	U3
1489	14			7	U2
LS14	14			7	U4
LS373	28			10	U1
8031	48			28	U6
2716	24			12	U5

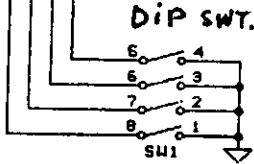
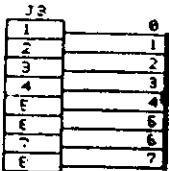
MAR 28 1984

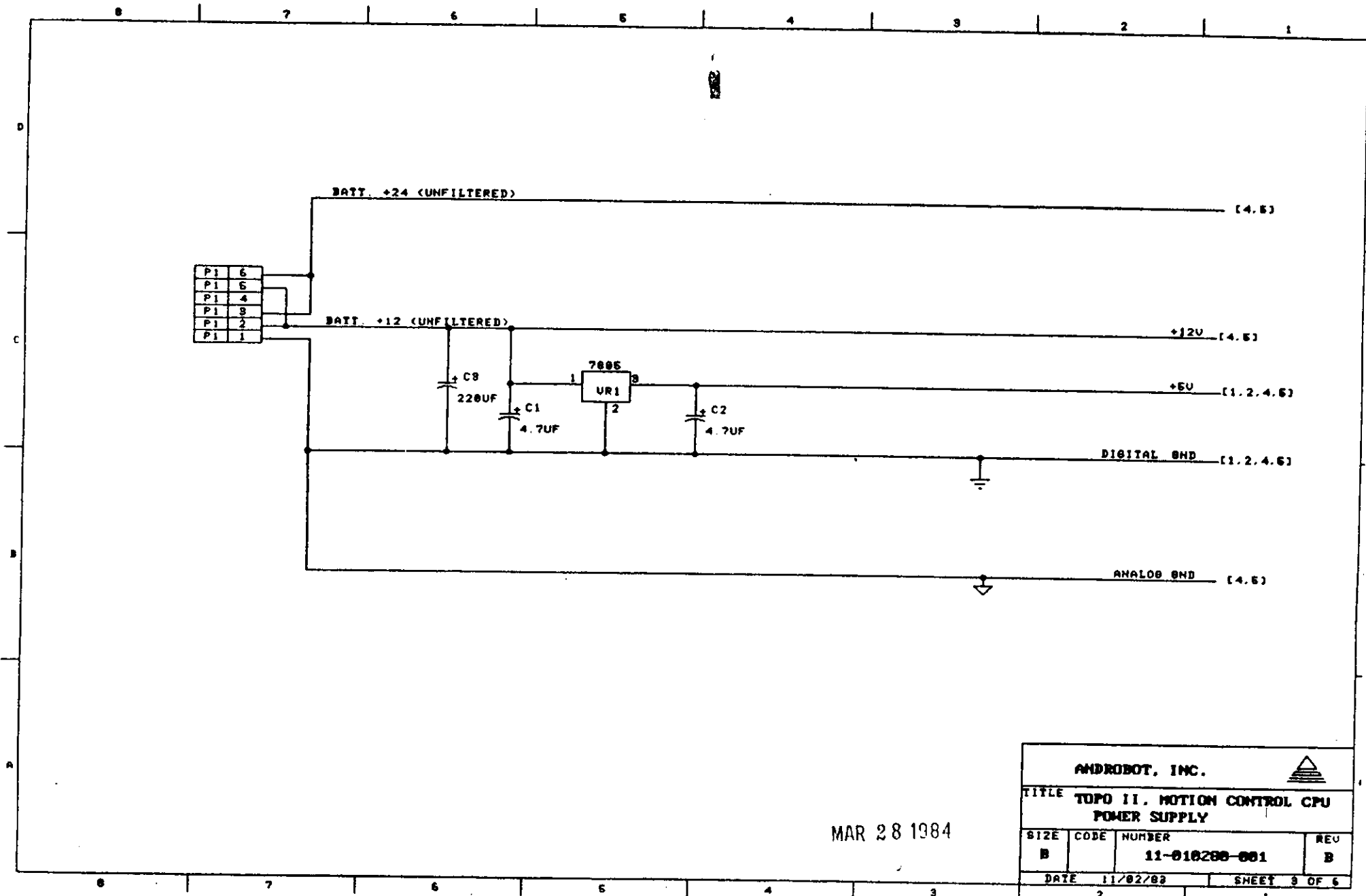
ANDROBOT, INC.

TITLE
HOST DATA LINK DIGITAL


SIZE B	CODE 11-810233-001	NUMBER 11-29-83	REV E
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DATE: 11-29-83 SHEET 2 OF 2

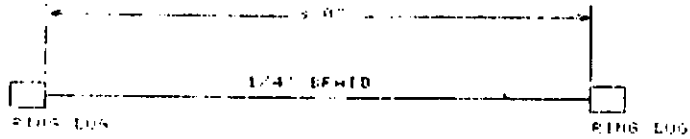




MAR 28 1984

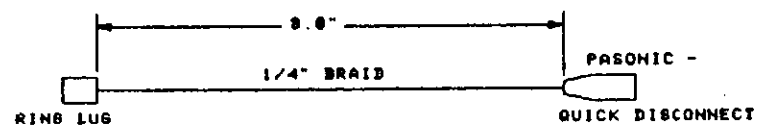
ANDROBOT, INC. 			
TITLE TOPO II, MOTION CONTROL CPU POWER SUPPLY			
SIZE	CODE	NUMBER	REV
B		11-010200-001	B
DATE 11/02/83		SHEET 3 OF 6	

PRE-PRODUCTION RELEASE




DATE	10 12 81	ANDROBOT, INC.	
BY	T. M. HOFF	TITLE	
CHKD		TOPO II	
APP'D		CAGE/CHASSIS GROUND STRAP	
DATE		SIZE	CODE
CHK'D		B	
DATE		NUMBER	REV
		15-010029-001	A
		SHEET 1 OF 1	

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APUD

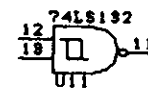
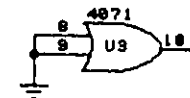
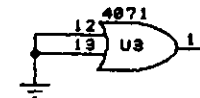


DATE	10/19/89
DWN	T. SAKAMOTO
APUD	
ENGR	
CHKR	

ANDROBOT, INC. 			
TITLE TOPO II BATTERY GROUND STRAP			
SIZE	CODE	NUMBER	REV
B		15-01830-001	A
SHEET 1 OF 1			

REVISIONS			
LTR	DESCRIPTION	DATE	APUD
A	PRE-PROD ECO 00019	10/21/83	L.H.
B	REVISED ECO 00032	11/09/83	L.H.
C	REVISED ECO 00068	12/09/83	L.H.
D	REVISED ECO 00072	12/16/83	L.H.
E	REVISED ECO 00078	12/20/83	

IC TABLE							
IC TYPE	REF. DES.	+0U	+10	+5U	0ND	+24	+12
4011	U2			14	07		
4071	U8			14	07		
74LS192	U11			14	07		
74LS14	U1			14	07		
74LS978	U6			20	10		
2764	U10			20	14		
8091-A	U7			40	20		
8155	U5			40	20		
TL072	U8		00		04		
LM384	U4		14		7.8		
					10.4		
666	U8				01		
LM317T	UR1	U0U2				U1N	
LM317T	UR3		U0U2			U1N	
LM7006	UR2			09	02		01
LM317LZ	UR4		U1N				




NOTES

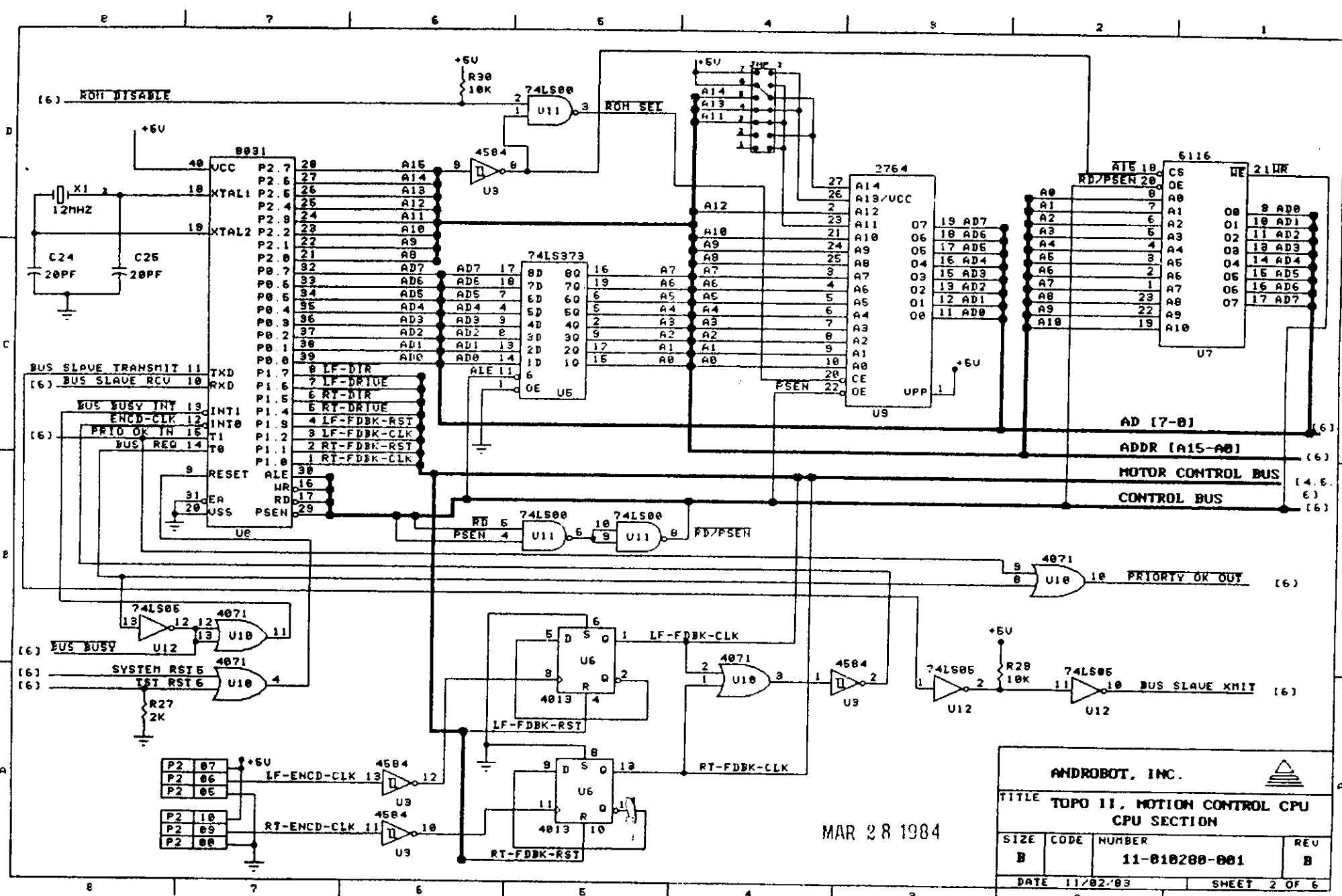
- 0.1uF BYPASS CAPS ARE C11-C19, C22, C29, C41, C44.
- OPTIONAL PARTS FOR U1 ARE: 74HC14 OR MC14584 HOWEVER IF A 14584 IS USED THE AUTO-TESTER CANNOT BE USED TO TEST ALL FUNCTIONS OF THE BOARD.
- IF EITHER OPTIONAL PART IS USED IN U1 THEN R1 MUST BE INSTALLED. (SEE SHT.06)

PRE-PRODUCTION RELEASE

MAR 28 1984

DATE	12/20/83	ANDROBOT, INC. 		
DWN	J. YOUNG	TITLE		
APUD		TOPO II COMMUNICATION BD		
APUD		MAIN CPU UNUSED GATES, IC LIST		
ENGR		SIZE	CODE	NUMBER
CHKR		B		11-010281-001
				REL
				E

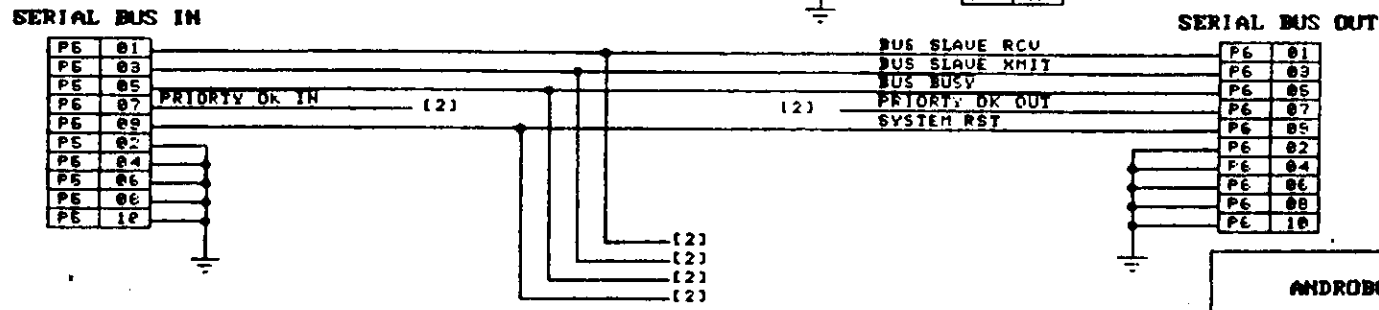
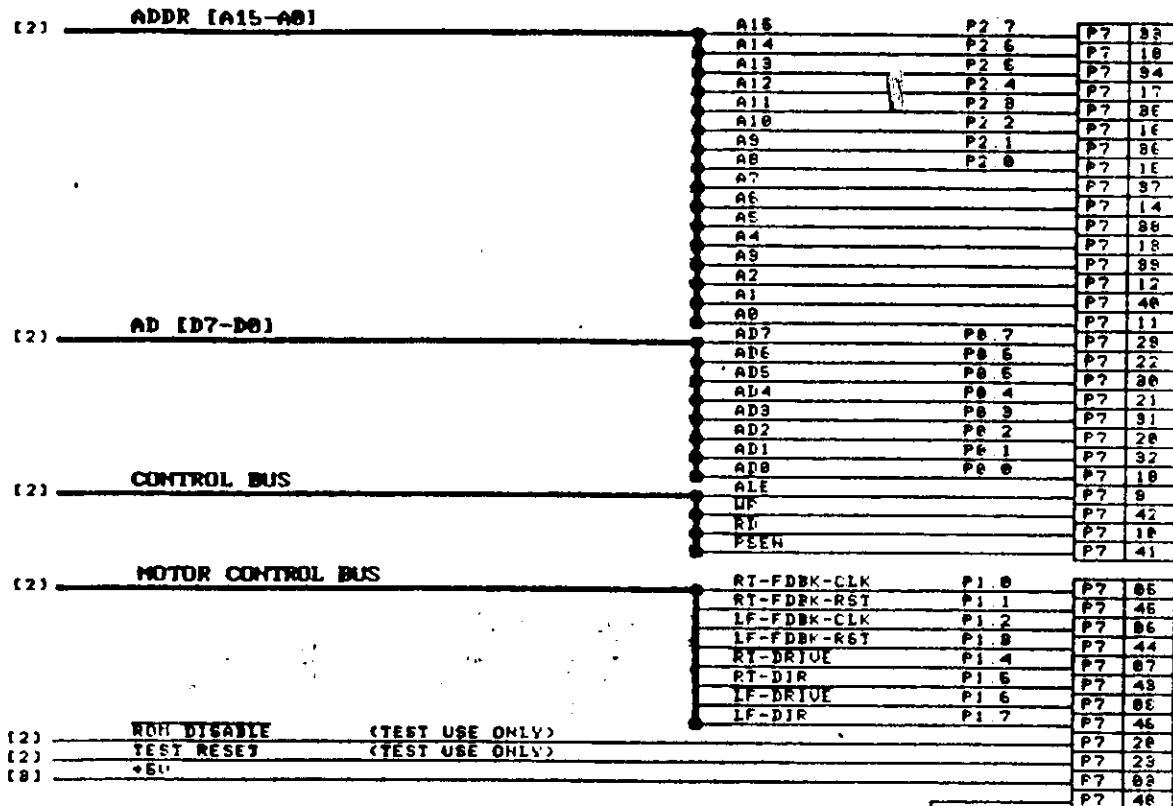
SHEET 1 OF 1



MAR 28 1984

ANDROBOT, INC.			
TITLE TOPO 11, MOTION CONTROL CPU			
CPU SECTION			
SIZE	CODE	NUMBER	REV
B		11-010200-001	B
DATE 11/02/83		SHEET 2 OF 6	

PRE-PRODUCTION RELEASE

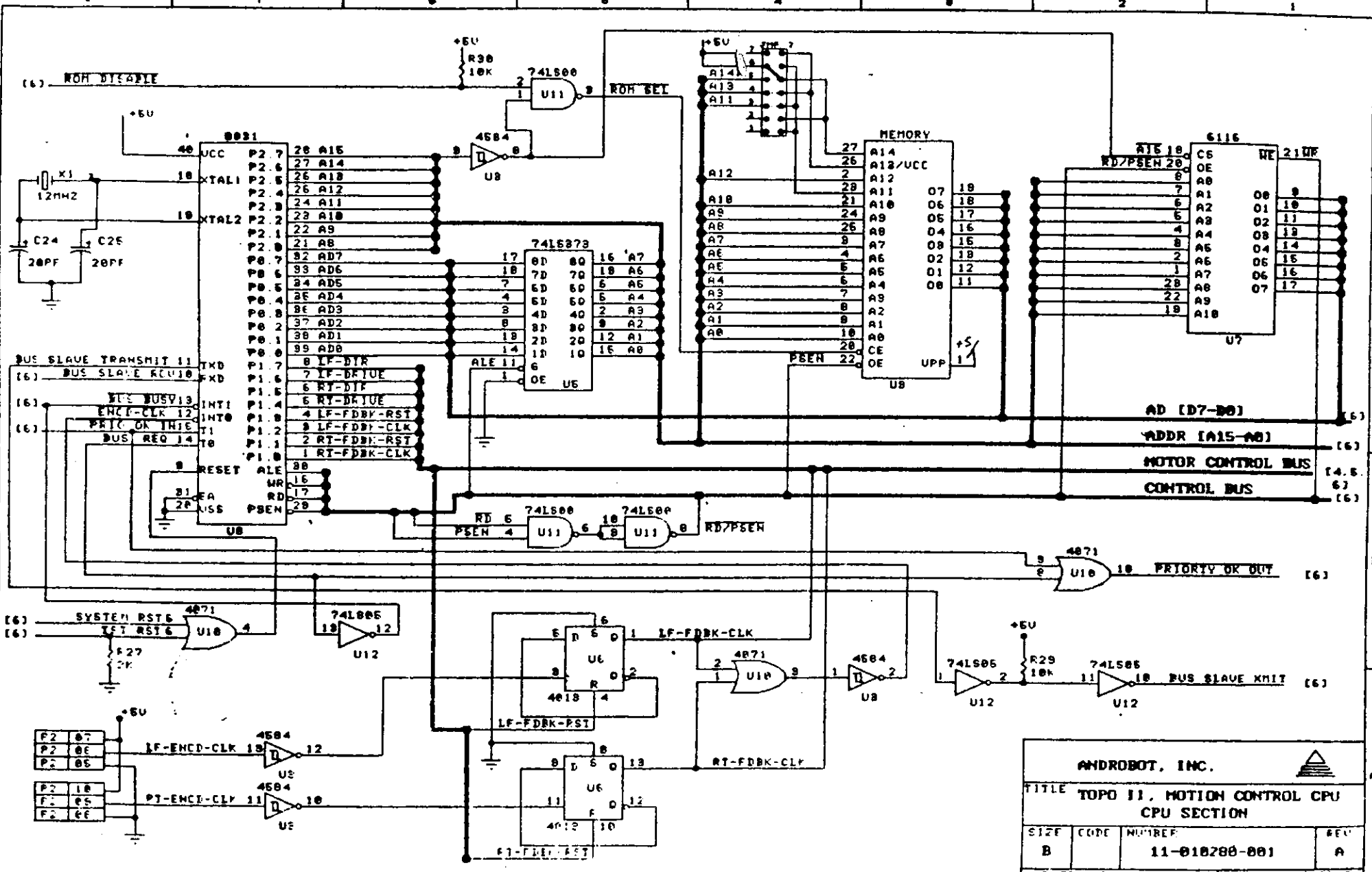


ANDROBOT, INC.

TITLE TOP0 11, MOTION CONTROL CPU CONNECTOR PINOUT

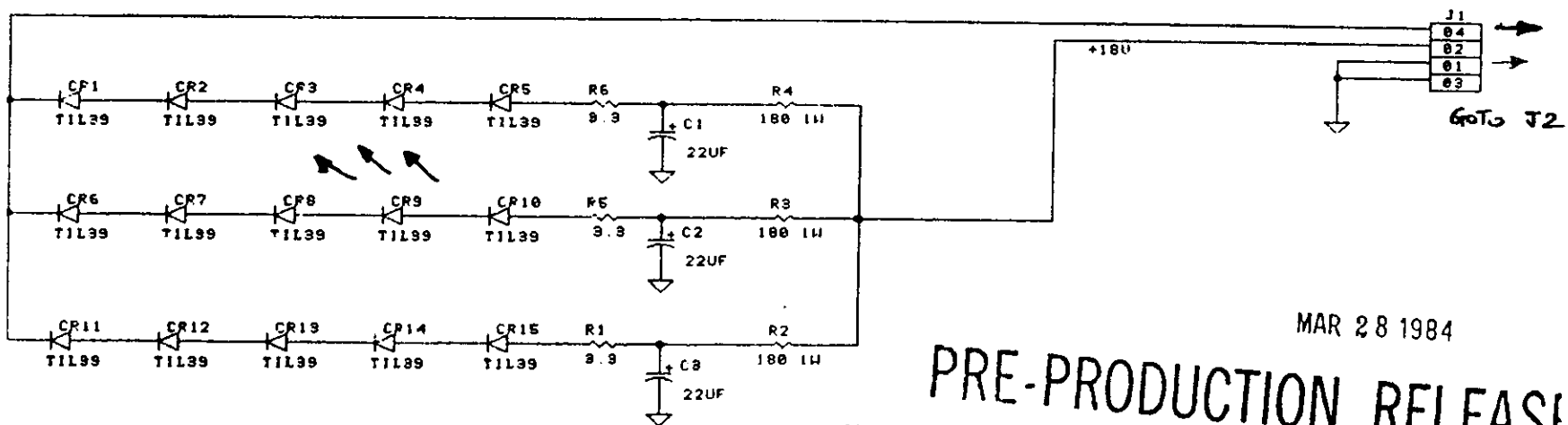
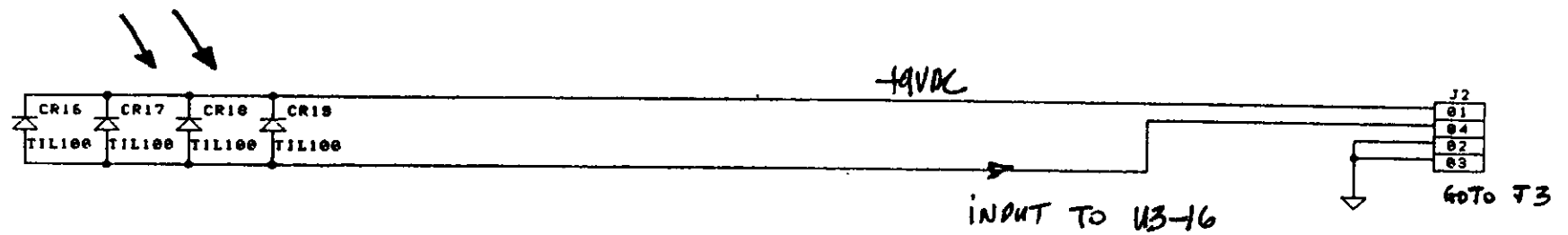
SIZE	CODE	NUMBERS	REV.
B		11-010200-001	A

DWT 10-11-83 SHEET 1 OF 1



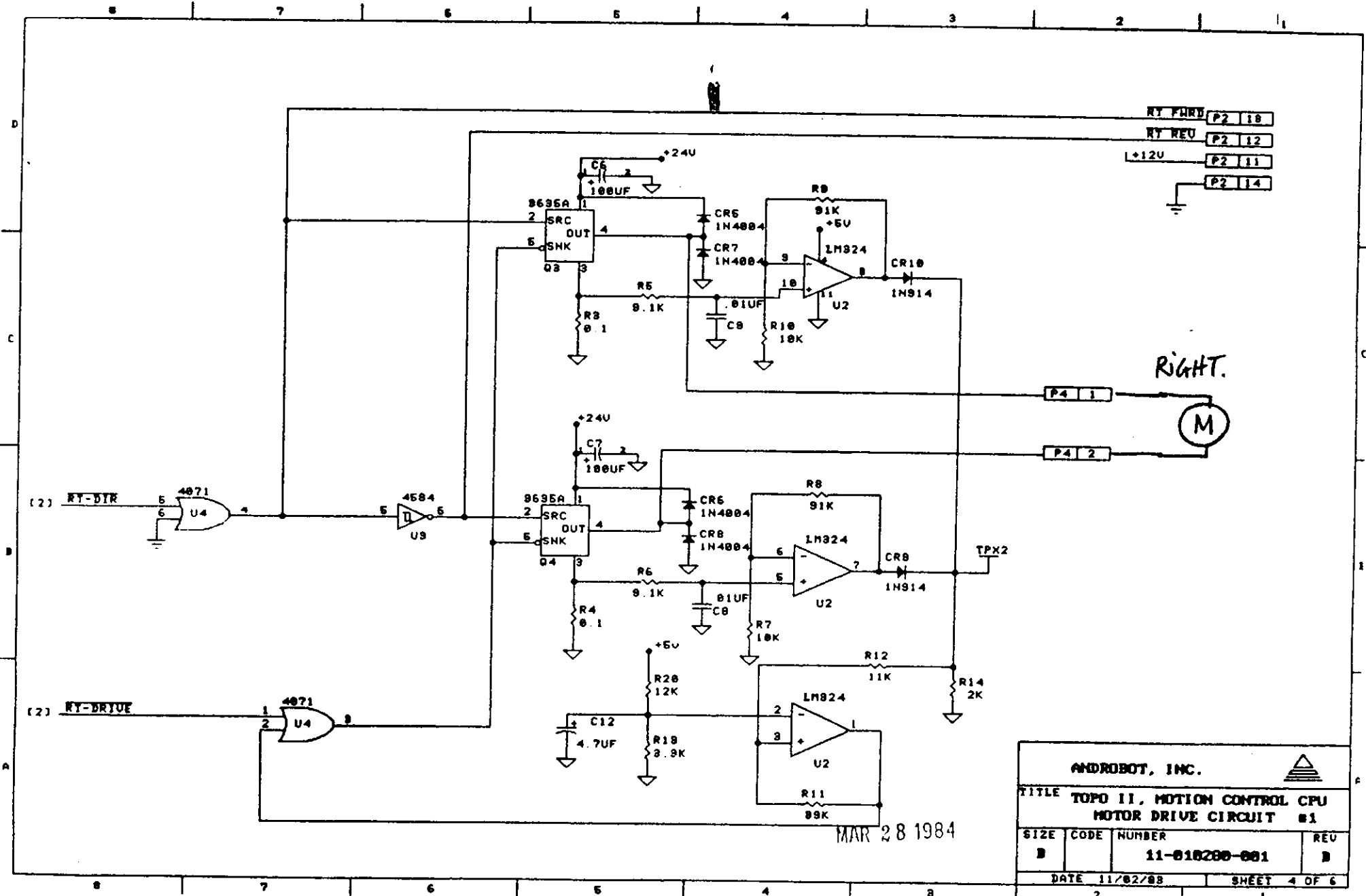
ANDROBOT, INC.			
TITLE TOPO 11, MOTION CONTROL CPU CPU SECTION			
SIZE	CODE	NUMBER	REV
B		11-010200-001	A
DATE	10/11/83	SHEET 2 OF 6	

REVISIONS			
LTR	DESCRIPTION	DATE	APUD
A	PRE-PROD REL ECO 00015	10/21/83	L.H.
B	REVISIE ECO 00000	01/17/84	
C	ECO 00001	1/30/84	JR




PRE-PRODUCTION RELEASE

DATE	01/30/84	ANDROBOT, INC.		
DWII	J YOUNG	TITLE		
APUD		MOBILE TRANCEIVER SENSOR		
APUD		SIZE	CODE	NUMBER
ENGF6		B		11-010369-001
CHKR				REVISION
				C
SHEET 1 OF 1				

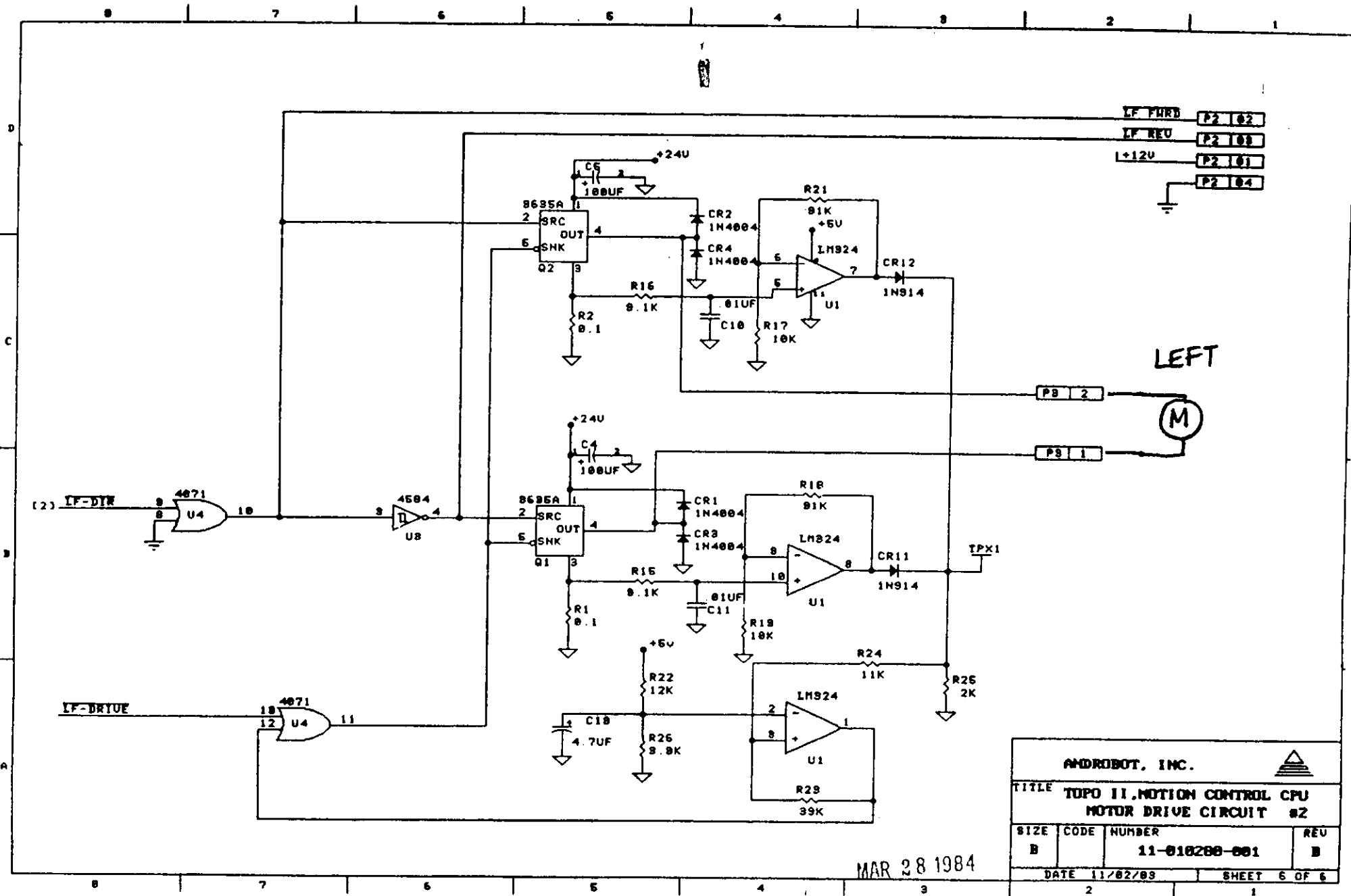



RIGHT.

MAR 28 1984

ANDROBOT, INC. 			
TITLE TOPO 11, MOTION CONTROL CPU MOTOR DRIVE CIRCUIT #1			
SIZE B	CODE	NUMBER 11-010200-001	REV B
DATE 11/02/83		SHEET 4 OF 6	

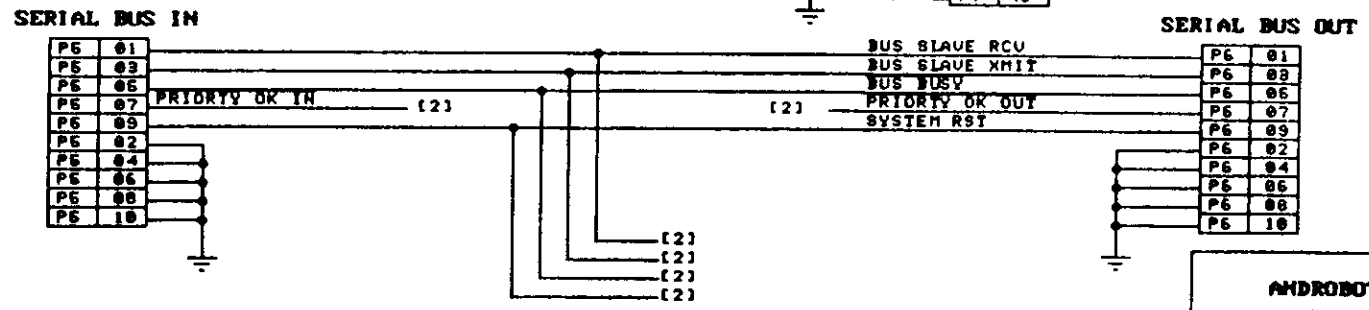
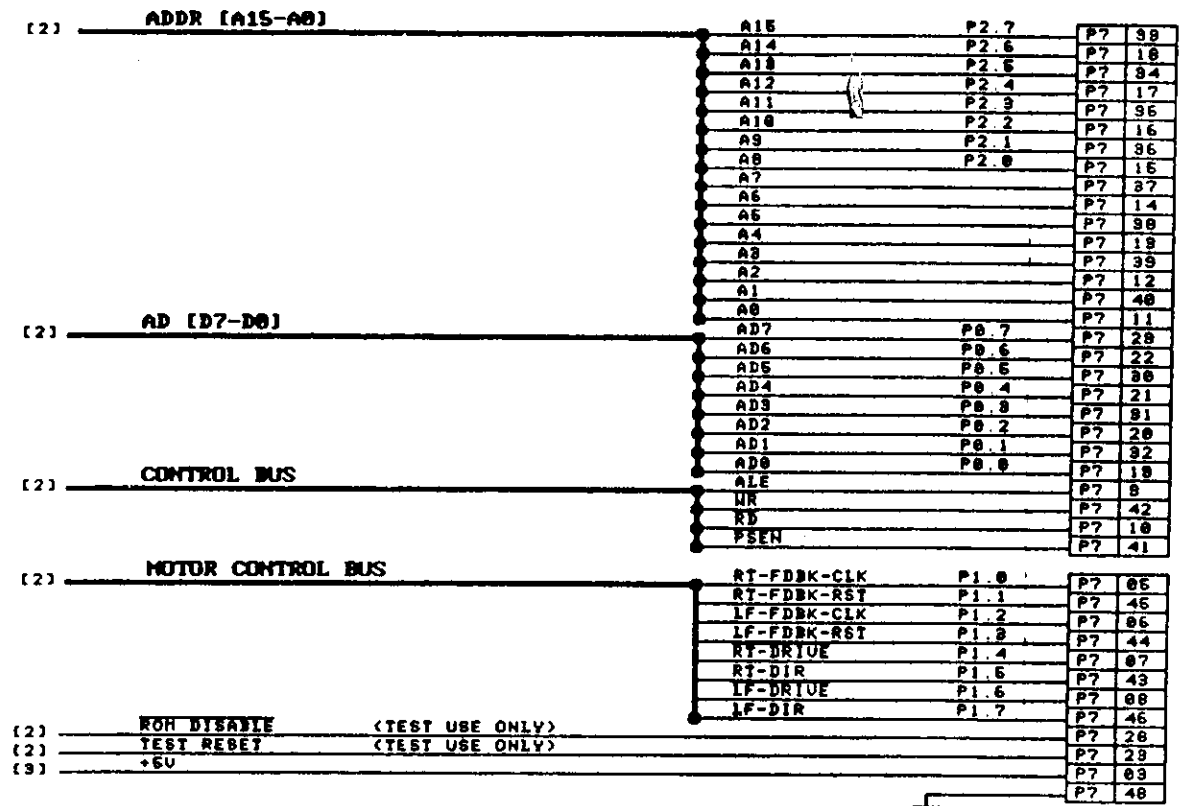
PRE-PRODUCTION RELEASE



ANDROBOT, INC. 			
TITLE TOPD 11, MOTION CONTROL CPU MOTOR DRIVE CIRCUIT #2			
SIZE	CODE	NUMBER	REV
B		11-010200-001	B
DATE 11/02/83		SHEET 6 OF 6	

MAR 28 1984

PRE-PRODUCTION RELEASE



ANDROBOT, INC.

TITLE TOPO II, MOTION CONTROL CPU CONNECTOR PINOUT

SIZE B	CODE	NUMBER 11-010200-001	REV B
DATE 11/02/88		SHEET 6 OF 6	

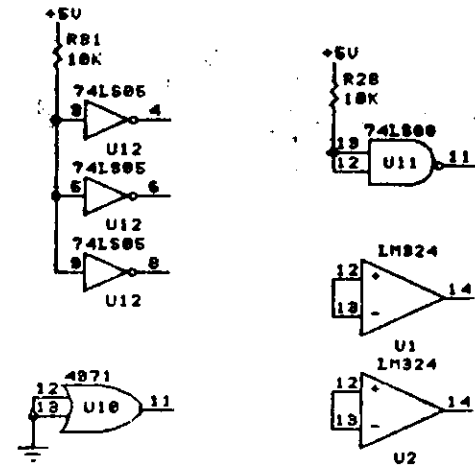
MAR 28 1984

PRE-PRODUCTION RELEASE

6 7 6 5 4 3 2 1

REVISIONS			
REF	DESCRIPTION	DATE	APP'D
A	PRV-PROD REL, ELD 00019	10/21/83	[Signature]

IC TABLE						
IC TYPE	REF DESIGNATOR	QTY	+5V	0V	-5V	+24
8R21	UF	1	40	20		
27E4	UF	1	20	14		
6116	U7	1	24	12		
4013	UE	1	14	07		
4071	U4, U10	2	14	07		
4504	U9	1	14	07		
74LS00	U11	1	14	07		
74LS05	U12	1	14	07		
74LS373	UE	1	20	10		
LM924	U1, U2	2	04	11		
LM7005	UR1	1	08	02	01	
869695	01, 02, 09, 04	4				01



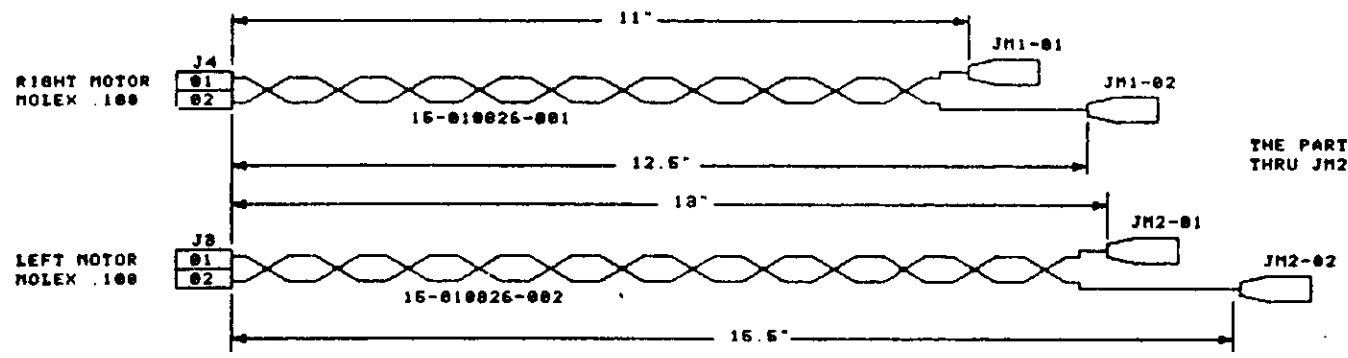
NOTE

- 1 ALL BYPASS CAPACITORS ARE .1UF IN VALUE.
- 2 DESIGNATORS FOR CAPS ARE C14 THRU C23.

DATE	10/21/83			ANDROBOT, INC.	
DESIGNER	[Signature]			TITLE	
APP'D				TOP0 11, MOTION CONTROL CPU COVER SHEET	
CHK'D	SIZE	CODE	NUMERICAL	REV	
USE ONLY	B		11-010200-001	A	
	D-TE	10 11/83	SHEET 1 OF 5		

6 7 6 5 4 3 2 1


REVISIONS				
ZONE	ITR	DESCRIPTION	DATE	APU



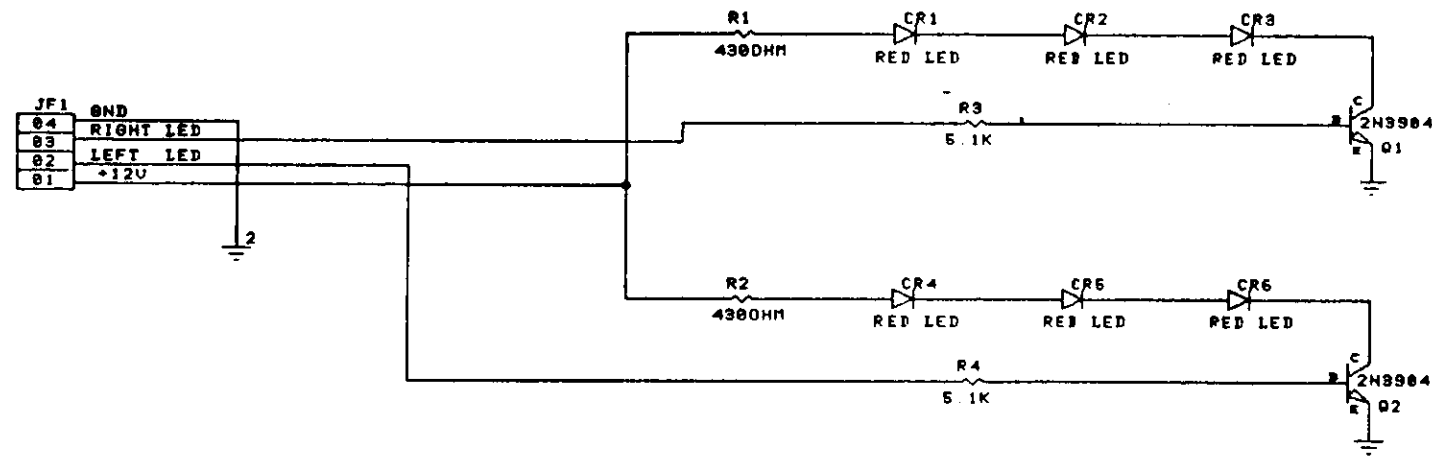
THE PART NUMBER FOR JM1-01 THRU JM2-02 IS DU18-100

WIRING NOTE


ITEM	DESIGNATOR	WIRE COLOR	LENGTH (IN.)	TERMINATION PT.	GUAGE
1	J4-01	RED	11.0	JM1-01	18
2	J4-02	BLACK	12.5	JM1-02	18
3	J3-01	RED	13.0	JM2-01	18
4	J3-02	BLACK	15.5	JM2-02	18

DATE	10/18/89	ANDROBOT, INC. 			
DDN	T SAKAMOTO				
AFUD					
APUD					
ENGRG	<i>[Signature]</i>	TITLE	TOPO II		
CHKR		MOTOR HARNESS ASSEMBLY			
		SIZE	CODE	NUMBER	REL
		B		15-010026-001,002	A

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APUD
A		PRE-PRODUCTION	11/21	TS

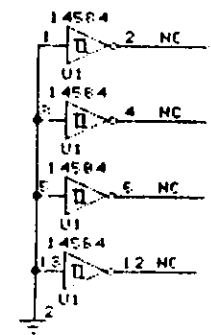
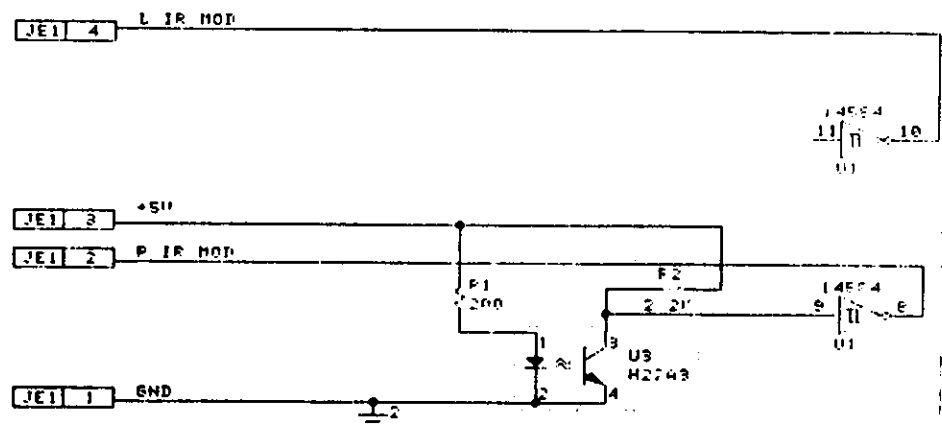


PRE-PRODUCTION RELEASE
MAR 28 1984

DATE	10/20/83	ANDROBOT, INC.		
DWN	T. SAKAMOTO			
APUD				
ENGR		TITLE		
CHKR		TOPO 11		
		FOOTLIGHT SCHEMATIC		
SIZE	B	CODE	NUMBER	REV
			11-818249-001	A
SHEET 1 OF 1				

REVISIONS			
LTG	DESCRIPTION	DATE	APP'D
A	PRE-PROD REL. ECU 00014		
A1	ECU 00014		

REVISIONS				
DATE	LTG	DESCRIPTION	DATE	APP'D
	A	PRE-PROD REL. ECU 00014	10/28/83	
	A1	ECU 00014	11/01/83	

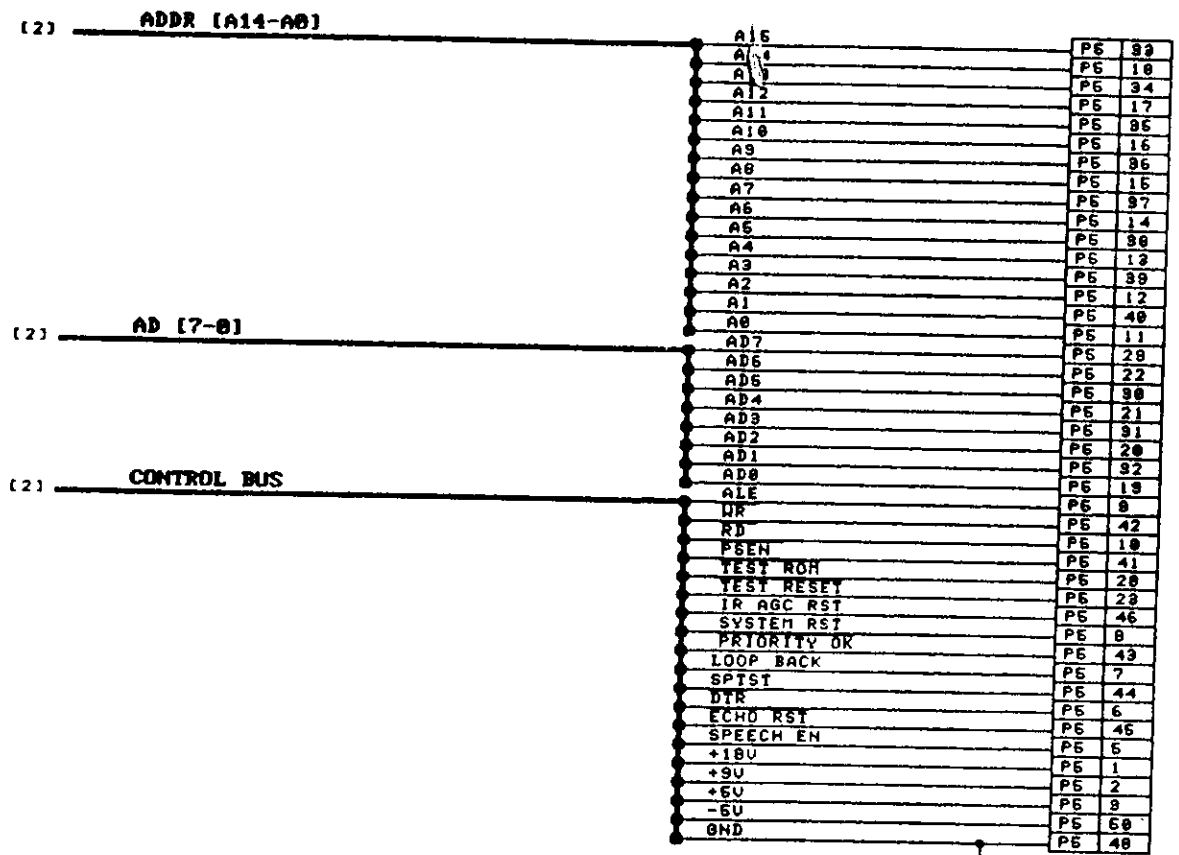


PRE-PRODUCTION RELEASE

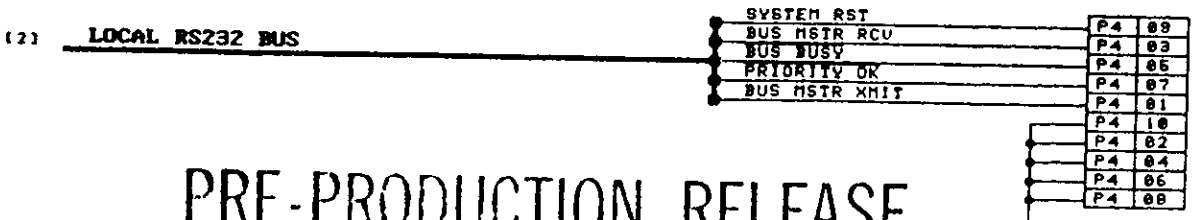
MAR 28 1984

DATE	10/28/83	ANDROBOT, INC.		
DATE	11/01/83	TITLE		
APP'D		TOP0 11		
ENGINEER		MOTOR ENCODER BRD.		
CHECK		SIZE	CODE	NUMBERS
		B		11-010757-001
				REV
				A1
				SHEET 1 OF

8 7 6 5 4 3 2 1



EDGE CONNECTOR
SPARE!



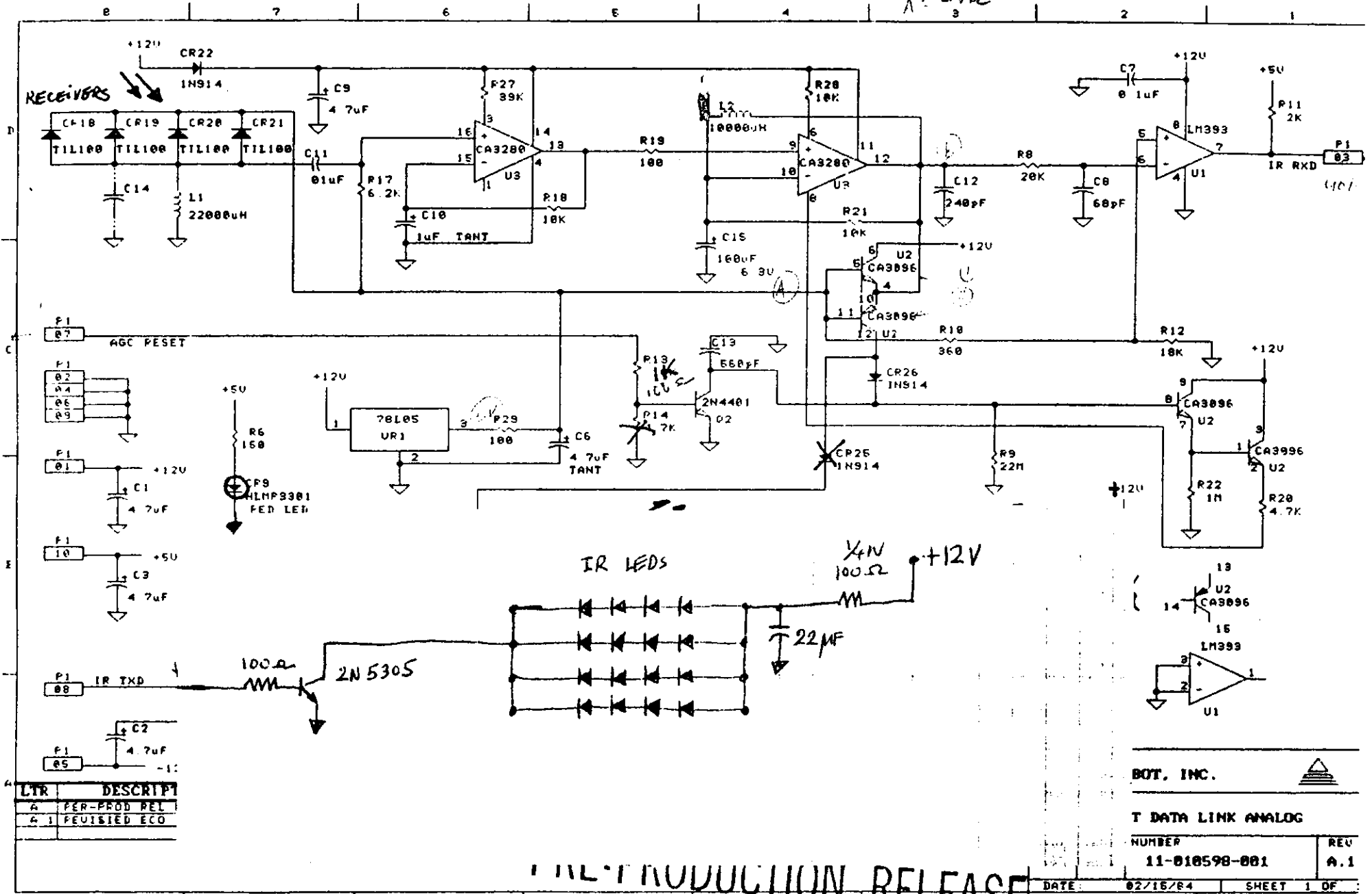
GOTO MOTION CONTROL BUS
MAR 28 1984

PRE-PRODUCTION RELEASE


ANDROBOT, INC.		
TITLE TOPO II COMMUNICATION I		
SERIAL BUS & TEST CONN. PINOUT		
SIZE	CODE	NUMBER
B		11-018281-001
DATE	12/28/83	SHEET 6
	2	1

8 7 6 5 4 3 2 1

APB 11-15-84
 A = E VDC



LTR	DESCRIPTION
A	PER-PROD REL
A 1	REVISED ECO

BOT, INC. 

T DATA LINK ANALOG

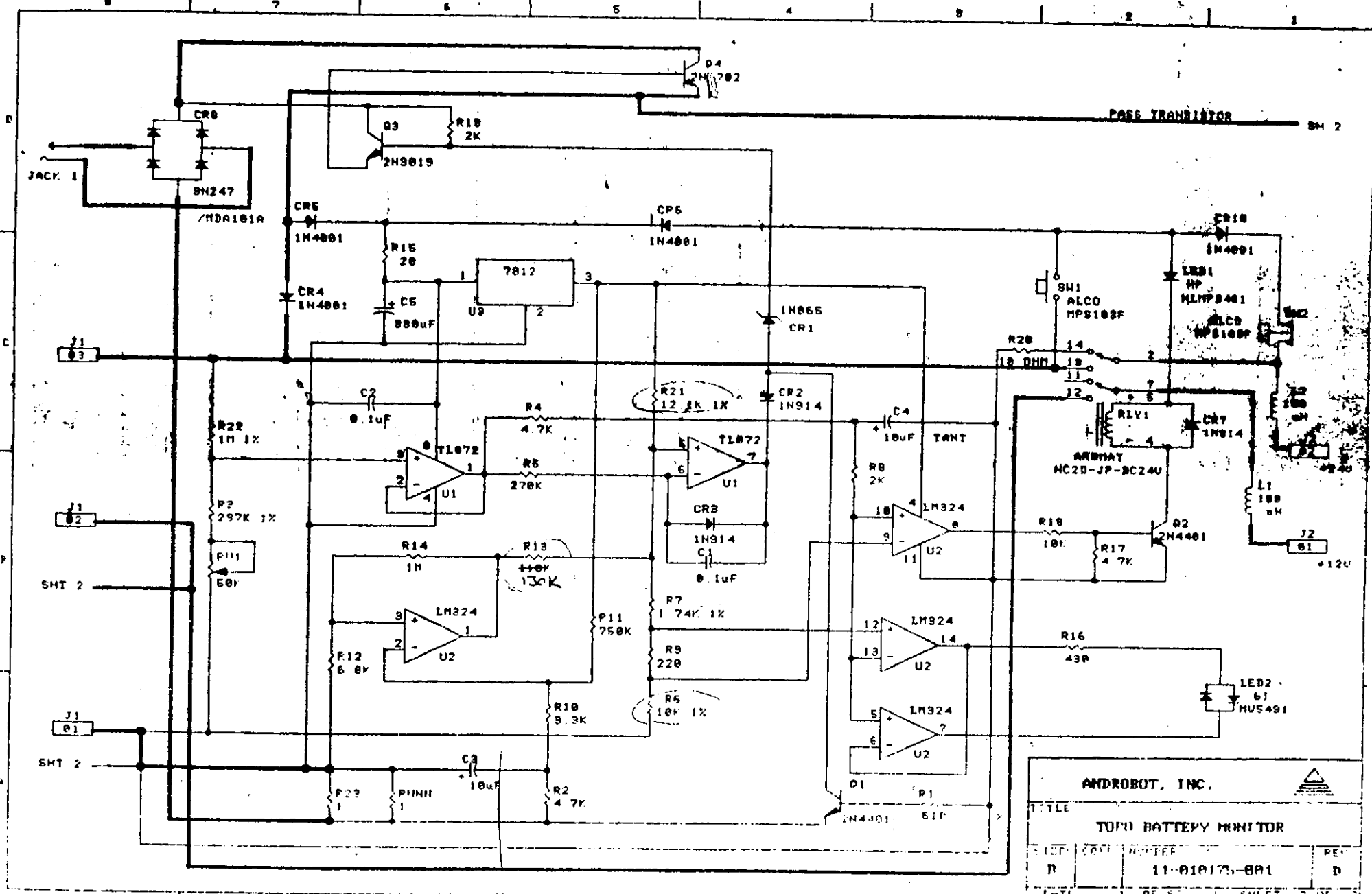
NUMBER	REV
11-010598-001	A.1

DATE: 02/15/84 SHEET 1 OF 1

REPRODUCTION RELEASE

⊗ CUT OPEN

24/8
 ⑤



PAGE TRANSISTOR 8M 2

ANDROBOT, INC.			
TITLE			
TOP BATTERY MONITOR			
REV	DATE	DESIGNER	PER
1		11-010173-001	D
INTL	2	DESIGN	SPEC

error code	cause
-----	-----
1100	Can't write and read one byte of value 0 at ram address 0.
1101	Can't write and read a value 1 in bit 0 addr 0
1102	Can't write and read a value 1 in bit 1 addr 0
1103	Can't write and read a value 1 in bit 2 addr 0
1104	Can't write and read a value 1 in bit 3 addr 0
1105	Can't write and read a value 1 in bit 4 addr 0
1106	Can't write and read a value 1 in bit 5 addr 0
1107	Can't write and read a value 1 in bit 6 addr 0
1108	Can't write and read a value 1 in bit 7 addr 0
1110	Can't write and read a pattern into/out of ram at addresses 0-FFH.
1111	Can't read the previous pattern back from ram addresses 0-FFH.
2001	All odd bytes are of value 0.
2002	All even bytes are of value 0.
3101	The pull-ups on ports B & C look like grounds.
3102	The ports A and C report something other than value 0 when port B is output with value 0.
3103	The ports A and C report something other than the test pattern output on port B.
3104	The ports A and B report something other than value 0 when port C is output with value 0.
3105	The ports A and B report something other than the test pattern output on port C.

COMMUNICATION BOARD TEST
NUMBER DEFINITIONS

23 MAY 1984

error code	cause
1100	Can't write and read one byte of value 0 at ram address 0.
1101	Can't write and read a value 1 in bit 0 addr 0
1102	Can't write and read a value 1 in bit 1 addr 0
1103	Can't write and read a value 1 in bit 2 addr 0
1104	Can't write and read a value 1 in bit 3 addr 0
1105	Can't write and read a value 1 in bit 4 addr 0
1106	Can't write and read a value 1 in bit 5 addr 0
1107	Can't write and read a value 1 in bit 6 addr 0
1108	Can't write and read a value 1 in bit 7 addr 0
1110	Can't write and read a pattern into/out of ram at addresses 0-FFH.
1111	Can't read the previous pattern back from ram addresses 0-FFH.
2001	All odd bytes are of value 0.
2002	All even bytes are of value 0.
3101	The pull-ups on ports B & C look like grounds.
3102	The ports A and C report something other than value 0 when port B is output with value 0.
3103	The ports A and C report something other than the test pattern output on port B.
3104	The ports A and B report something other than value 0 when port C is output with value 0.
3105	The ports A and B report something other than the test pattern output on port C.

COMMUNICATION BOARD TEST NUMBER DEFINITIONS

23 MAY 1984

ANDROBOT TOPO I/O

Solder Side (Corrected) Component Side

