

# **RODGERS ORGAN COMPANY**

**MODEL 770 TECHNICAL MANUAL**

**SUPPLEMENT**

**PRELIMINARY**

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1963

1960

1958

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5006-301

5024-300

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## 770 FLOATING 16' PIANO

The 16' Piano may play in either the Pedal or Great Division.

To select the division:

1. Press and hold the SET piston.
2. Press the Piano 16' tab (it will start flashing).
3. Press a key on the Great keyboard or the pedalboard (the tab will stop flashing).

The selected division does not change on General Cancel, nor when the Power is turned off and on again.

When the 16' Piano is in the Pedal, and the Harpsichord stop is on, the Harpsichord plays at both 8' and 4' in the Pedal (if the Piano 16' tab is on) and/or the Great (if the Piano 8' tab is on). Otherwise the Harpsichord plays at 8' and/or 4' depending on the setting of the Piano 16' and Piano 8' tabs.

## PIANO SET-UP

### I. PIANO TUNING ADJUST (All operations done to the fully stuffed keyer).

ORGAN MUST BE TUNED

- A. Disable "Organ Tuning Control" (located on keyboard panel) by pushing the knob in.
- B. Set R196 for 14.9 VDC (take measurement from the mounting tab of Q196).
- C. Set R138 (range) for 2.65 VDC (measurement taken from arm of pot to ground).
- D. Set R134 (tune) for 6.1 VDC (same as above).
- E. Set R154 (tracking) for 1.8 VDC (same as above).
- F. Set R123 (balance) to mid pot.
- G. With a clip lead, ground the top of R14, Note #25 (ROC 5014-001) or Note #37 (ROC 5014-002). This should allow Note #25 to sound continuously when the 8' Piano stop is on.
- H. Turn on the Great 8' Principal and the 8' Piano, depress Note #25 (middle C) and "zero beat" the two notes by adjusting R138.
- I. Next, pull out the "Organ Tuning Control" and adjust to the extreme flat position. Once again, "zero beat" the two notes by adjusting R154.
- J. Adjust "Organ Tuning Control" to the extreme sharp position and "zero beat" by adjusting R134.
- K. Repeat steps H, I, and J until Note #25 of the 8' Principal and 8' Piano track evenly over the full range of the "Organ Tuning Control".

### II PIANO SUSTAIN ADJUST

#### A. Bias adjust (pot R117):

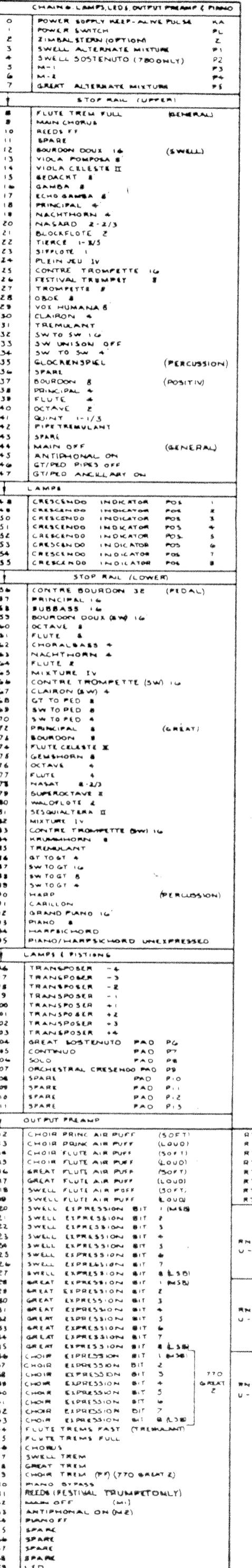
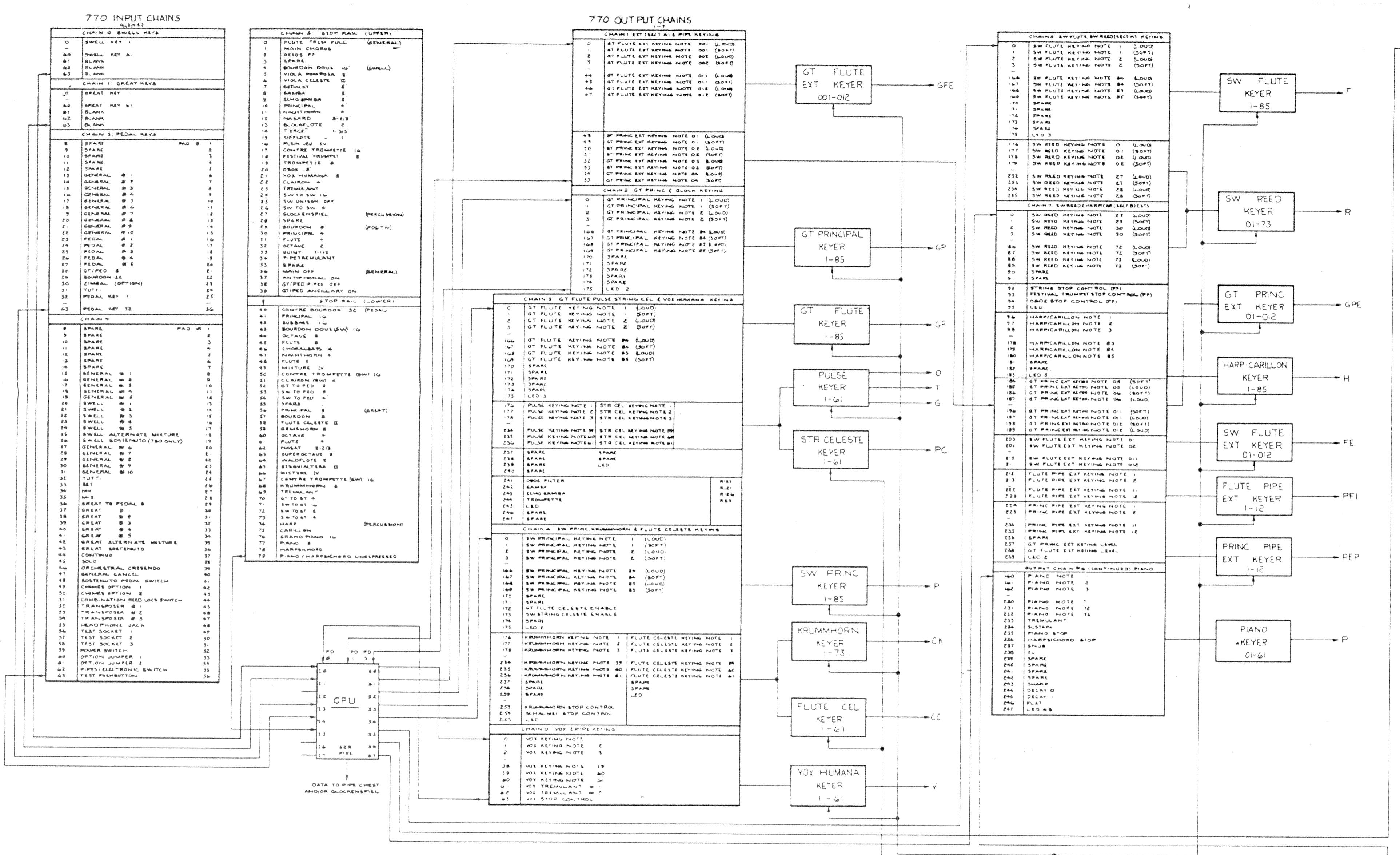
The bias adjust pot will affect the sustain length. Adjust it by turning on the 8' Piano stop and adjusting the bias pot (R117) until you hear notes sounding without playing the keys. Then back off the pot until this singing sound stops - then add just a touch more or to suit.

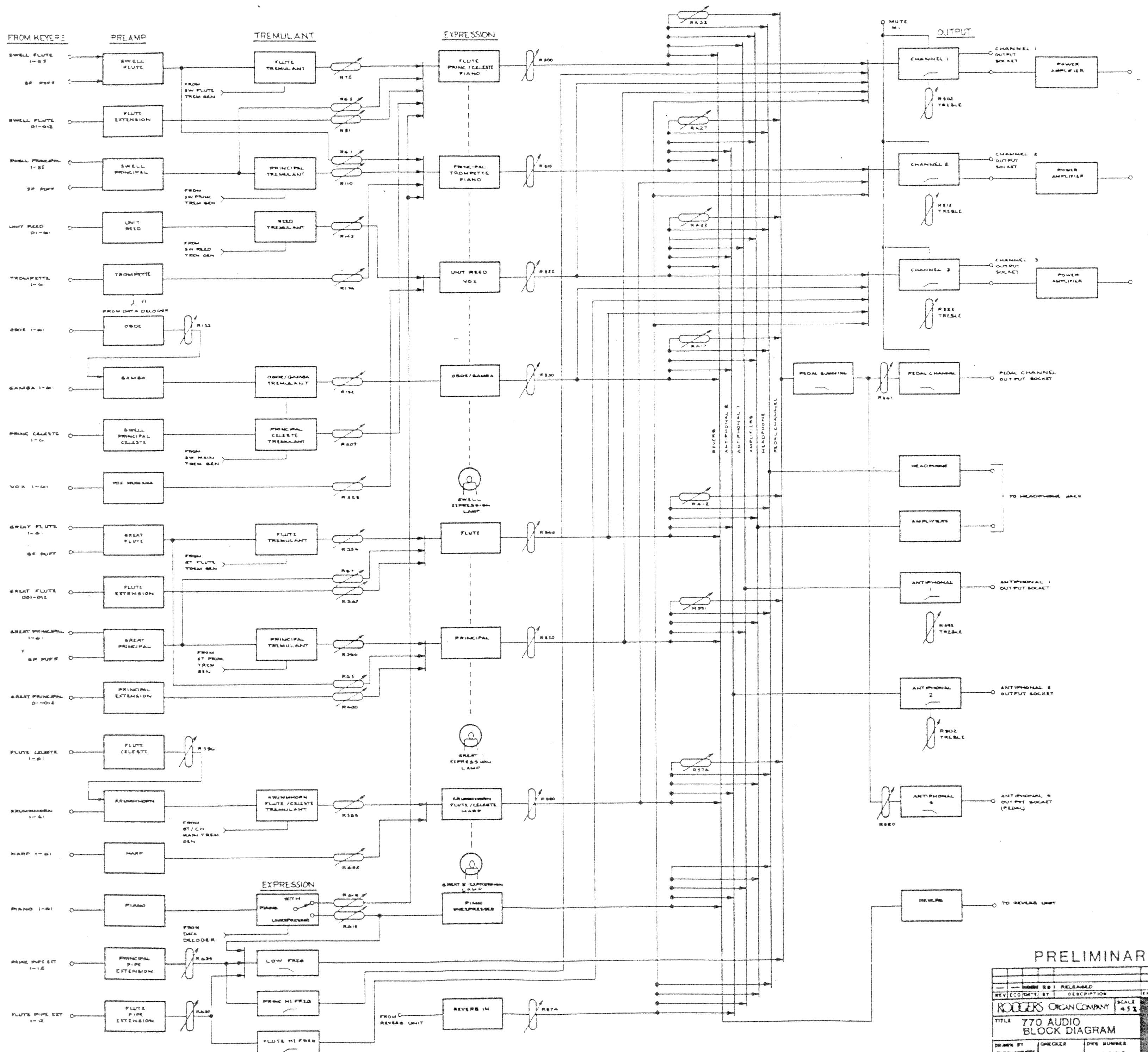
## II PIANO SUSTAIN ADJUST (continued)

- B. Foot switch feed through pot (R122):  
When the foot switch located on the expression shoe is engaged a singing sound will occur without keys being played. Adjust R122 until this stops.

## III PIANO VOICING

- A. R177: Harpsichord level adjust.
- B. R202: Bass adjust (set approximately mid position).
- C. R205: Treble adjust (set approximately mid position).
- D. R207: Is a factory adjustment (set at 1/4 pot).
- E. R174: Harpsichord pluck adjust (set at slightly under half pot).
- F. R63 and R73: are factory adjustments for the pluck frequency.



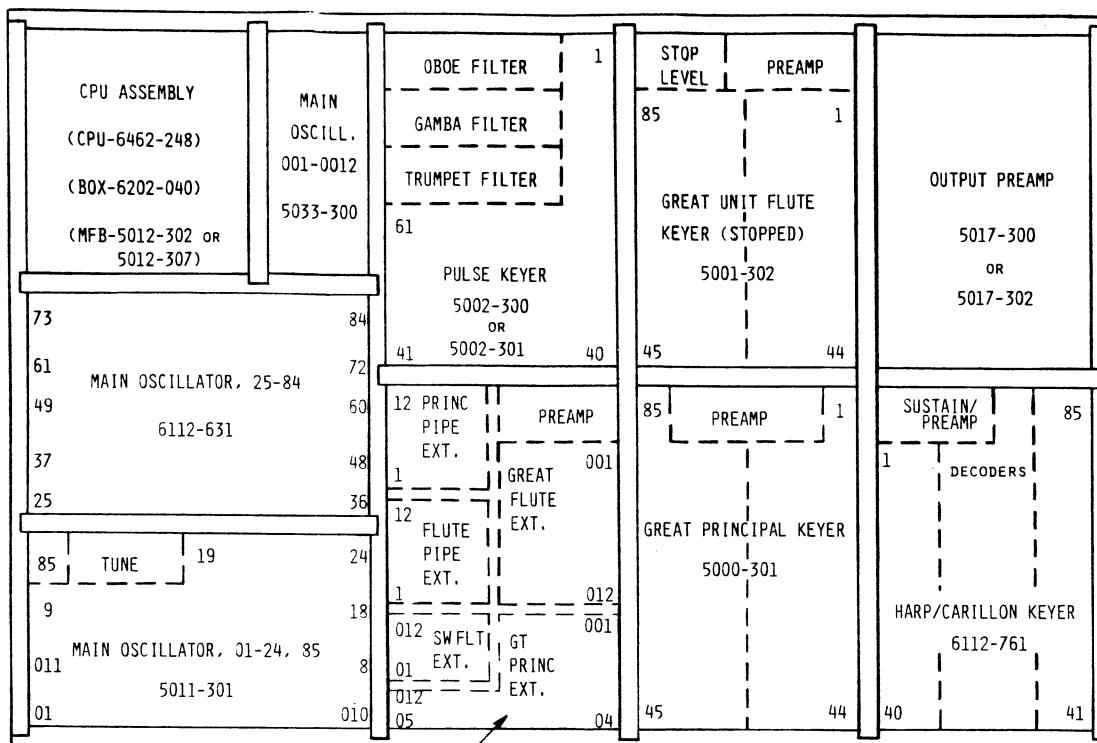


## PRELIMINARY

DRAWN BY		RELEASABLE	
REV/ECC'D DATE BY		DESCRIPTION	
		ELEC APYL ME APYL	
<b>RODGERS ORGAN COMPANY</b>			
SCALE 45%			
<b>TITLE</b> <b>770 AUDIO</b> <b>BLOCK DIAGRAM</b>			
DRAWDN BY	CHECKED BY	DRAFT NUMBER	
RODGERS COMPANY		1983	

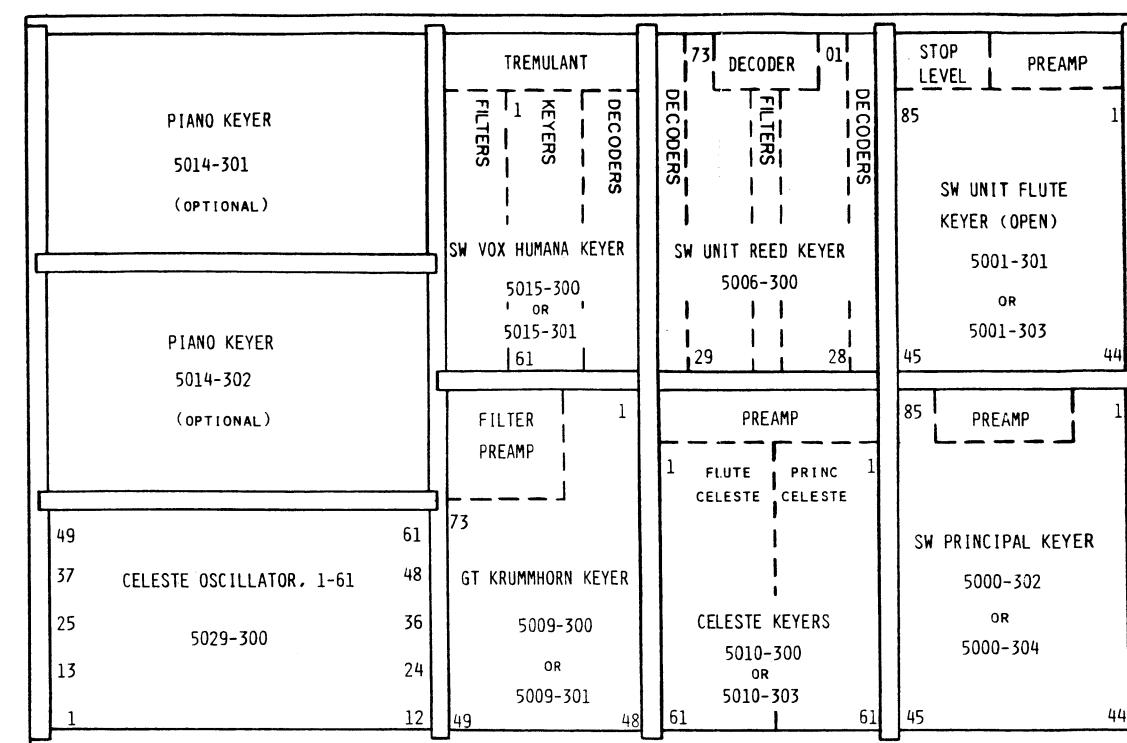
PIVOT

RACK #1



PIVOT

RACK #2



PIVOT

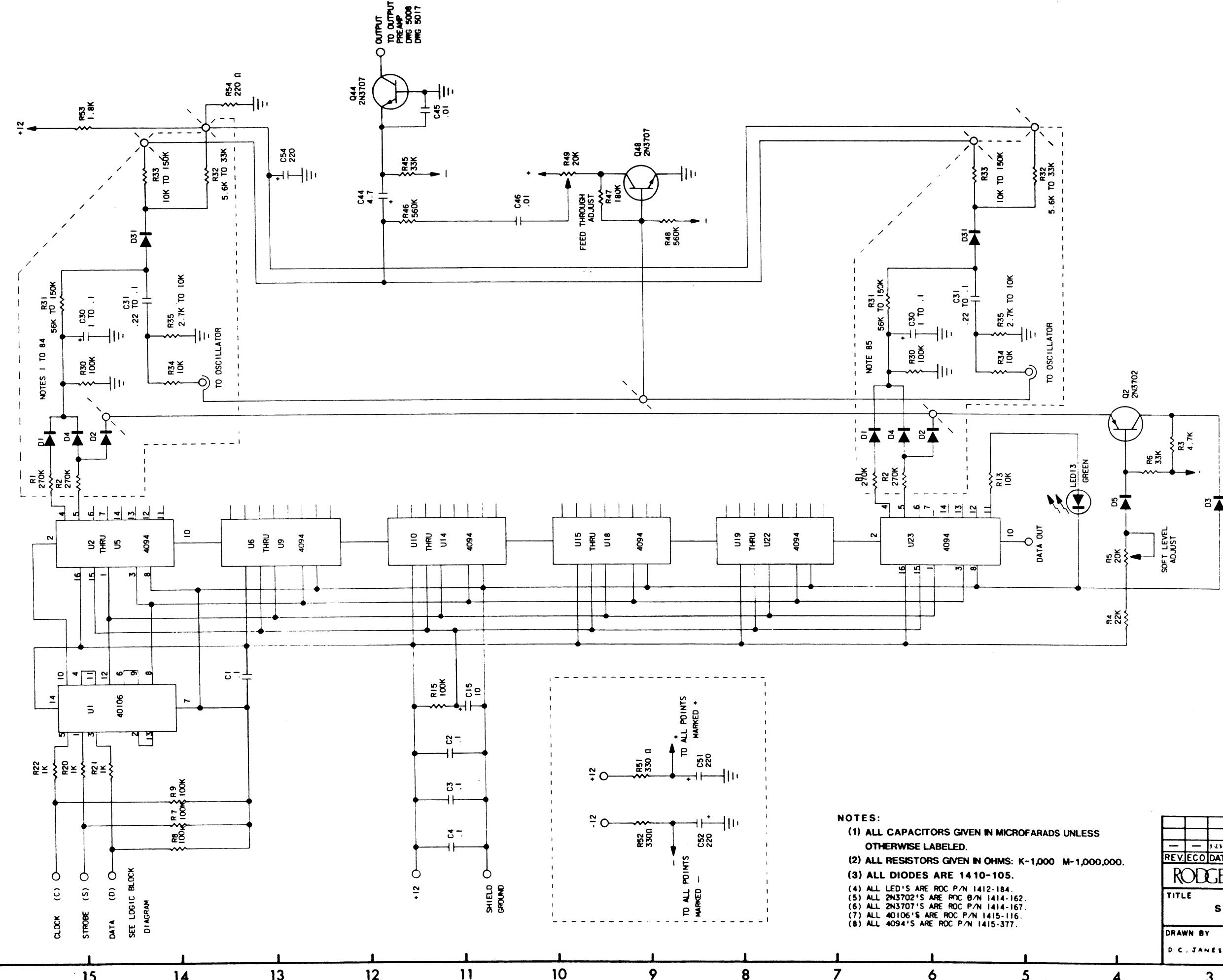
COMPONENT SIDE

EXTENSION KEYER  
5003-301  
OR  
5003-303

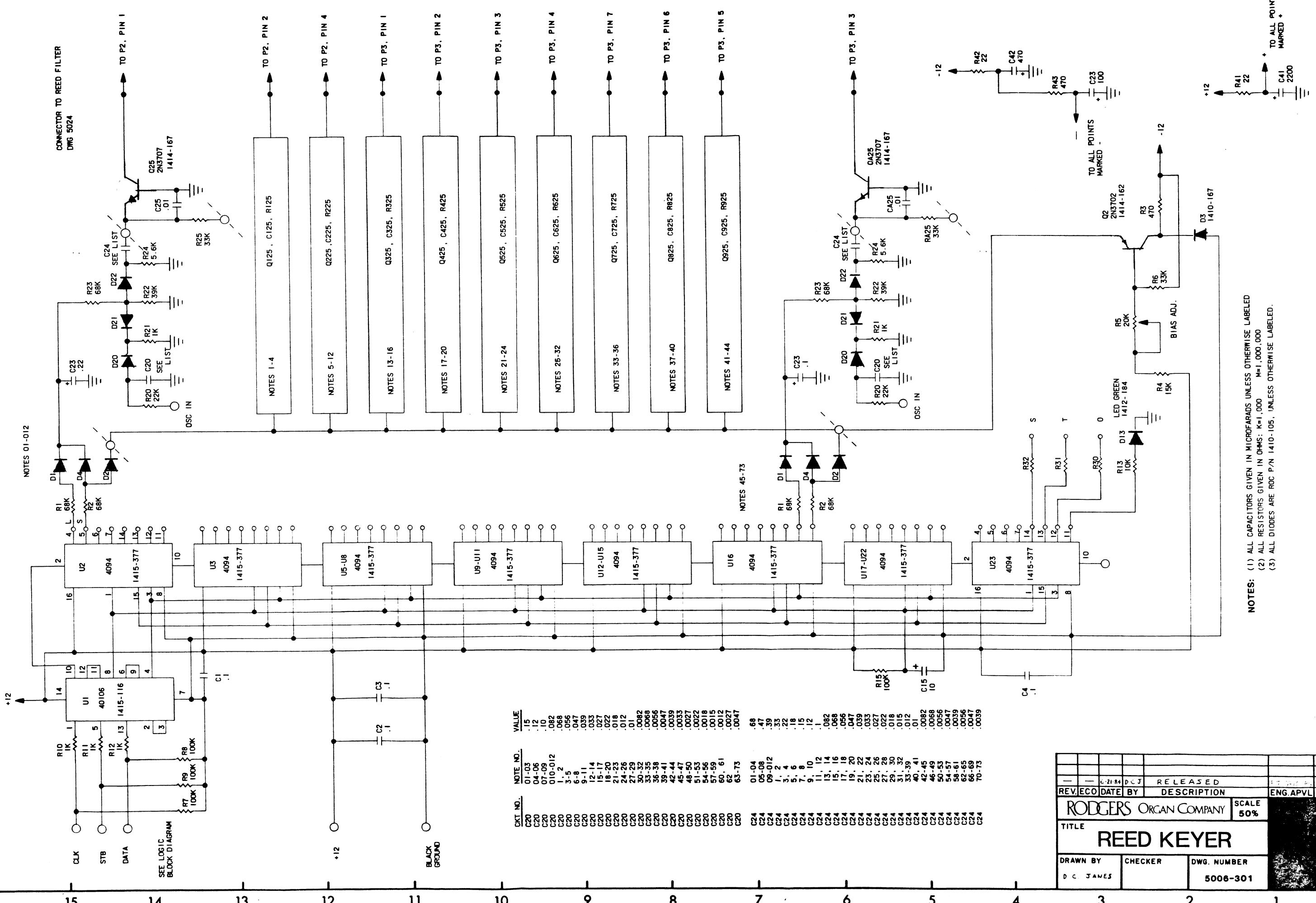
COMPONENT SIDE

—	7/8/83	RD	RELEASED	RLB	11-30-83
REV.	ECO	DATE	BY	DESCRIPTION	ENG. APVL
TITLE				F.S. APVL	
770 RACK ASSEMBLY					
DRAWN BY	CHECKER	DWG. NUMBER			
R. DOUGHERTY	S. CHALK 7-15-83	1988			

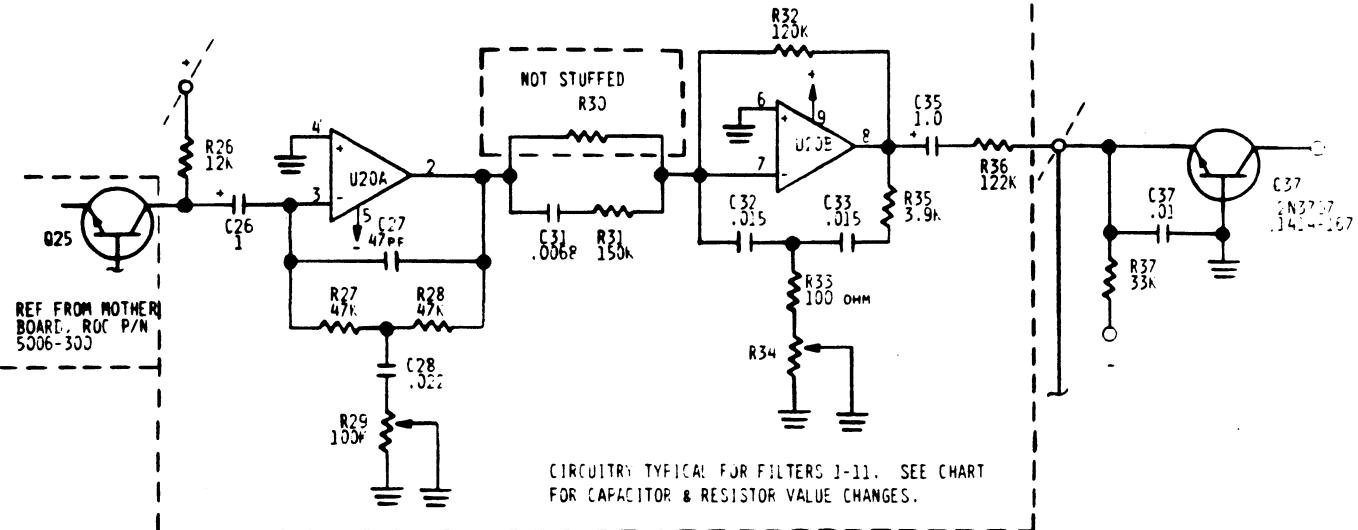
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



REV.	ECO	DATE	BY	RELEASED
TITLE				DESCRIPTION
RODGERS ORGAN COMPANY				SCALE 50%
DRAWN BY	CHECKER	DWG. NUMBER		APVL
D. C. JONES		5000-304		APVL



FILTER #1



FILTER	NOTES	DESC	PART #
1	Q1-012	P2, PIN 1	C28
2	1-6	P2, PIN 2	C128
3	7-12	P2, PIN 4	C328
4	13-17	P2, PIN 1	C328
5	18-22	P2, PIN 3	C428
6	23-27	P2, PIN 5	C528
7	28-32	P3, PIN 4	C628
8	33-37	P3, PIN 7	C728
9	38-42	P3, PIN 8	C828
10	43-47	P3, PIN 5	C928
11	48-73	P3, PIN 3	C1A28

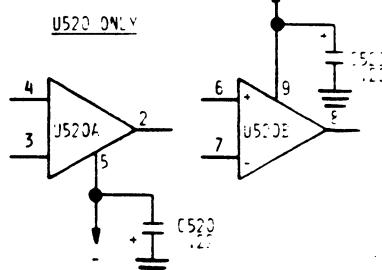
PART #	FILTER #	DESC	R35	R335	R435	R535	R635	R735	R835	R935	RA35
C35	1	.047									
C135	2	.047	R35								
C235	3	.047	R135								
C335	4	.047	R235								
C435	5	.047	R335								
C535	6	.033	R435								
C635	7	.033	R535								
C735	8	.033	R635								
C835	9	.033	R735								
C935	10	.022	R835								
CA35	11	.022	R935								

C31	1	.0368	R36	1	27K
C131	2	.0368	R136	2	35K
C231	3	.0347	R236	3	47K
C331	4	.0347	R336	4	47K
C431	5	.0347	R436	5	47K
C531	6	.0347	R536	6	47K
C631	7	.0347	R636	7	47K
C731	8	.0347	R736	8	47K
C831	9	.0347	R836	9	47K
C931	10	.0347	R936	10	56K
CA31	11	.0347	RA36	11	82K

C32	1	.015	R31	1	150K
C132	2	.015	R131	2	150K
C232	3	.015	R231	3	100K
C332	4	.015	R331	4	100K
C432	5	.012	R431	5	100K
C532	6	.012	R531	6	100K
C632	7	.01	R631	7	100K
C732	8	.01	R731	8	100K
C832	9	.01	R831	9	100K
C932	10	.0047	R931	10	150K
CA32	11	.0047	RA31	11	150K

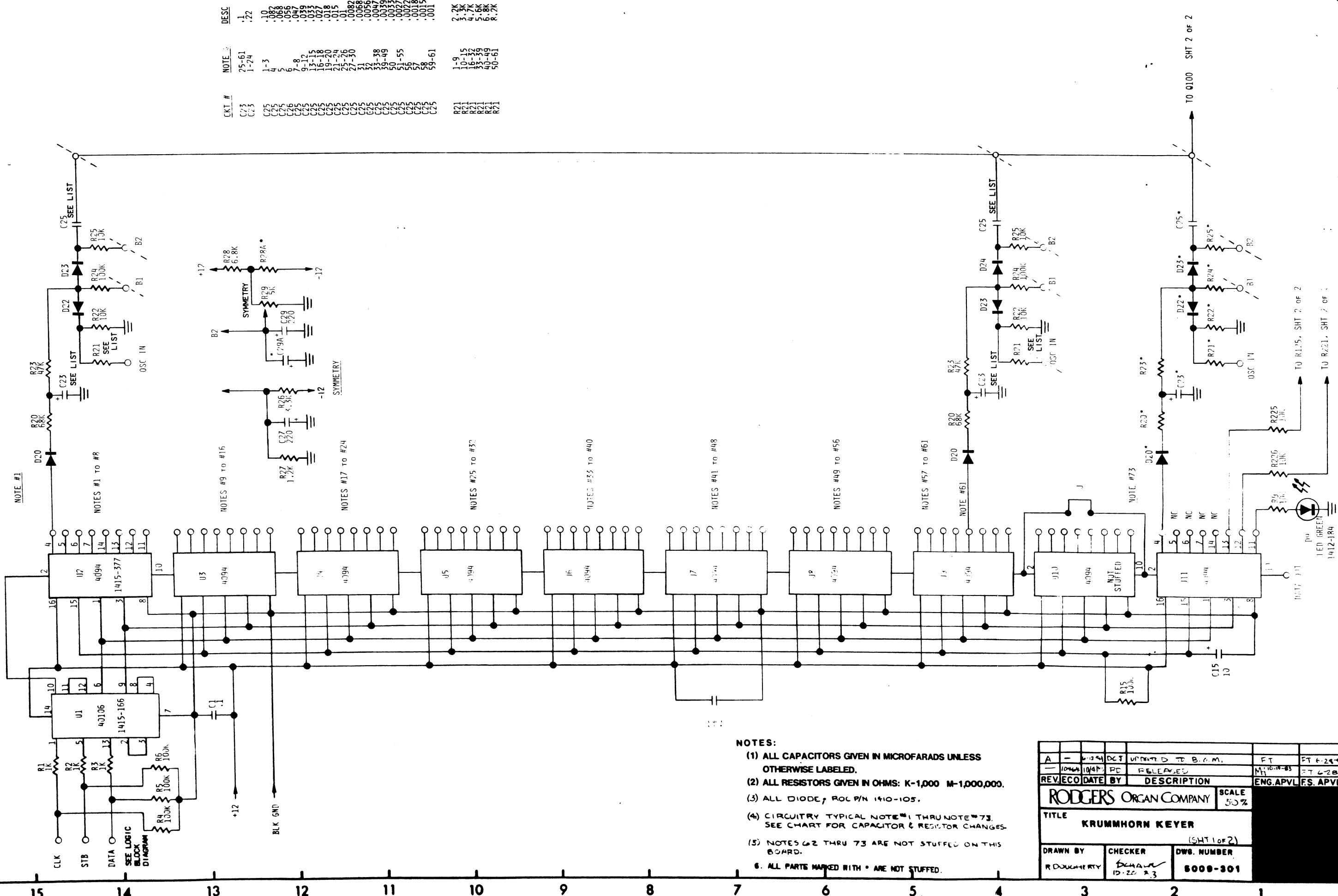


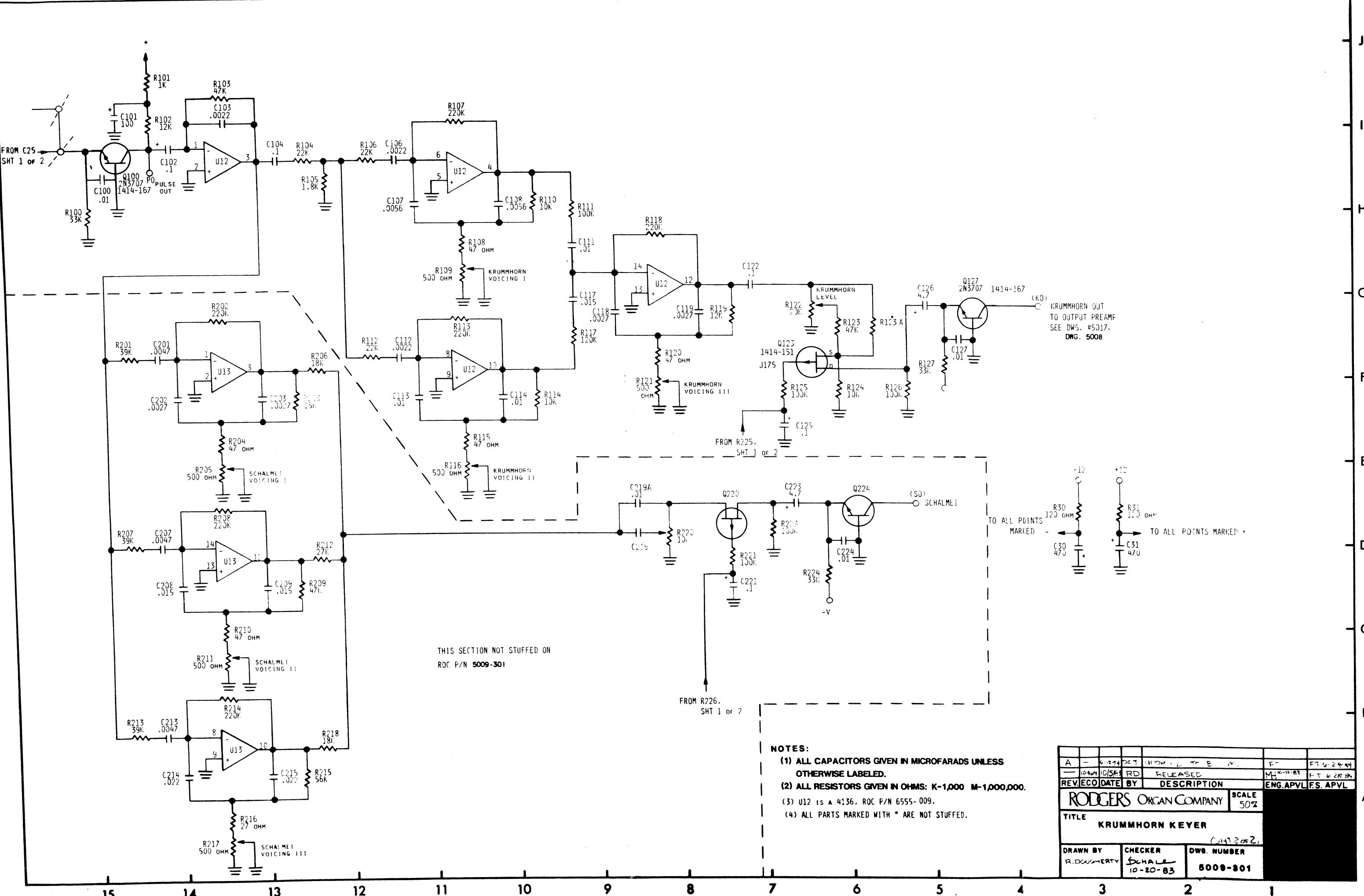
PART #	FILTER #	DESC
R32	1	120K
R132	2	140K
R232	3	140K
R332	4	120K
R432	5	120K
R532	6	120K
R632	7	120K
R732	8	120K
R832	9	120K
R932	10	120K
RA32	11	120K

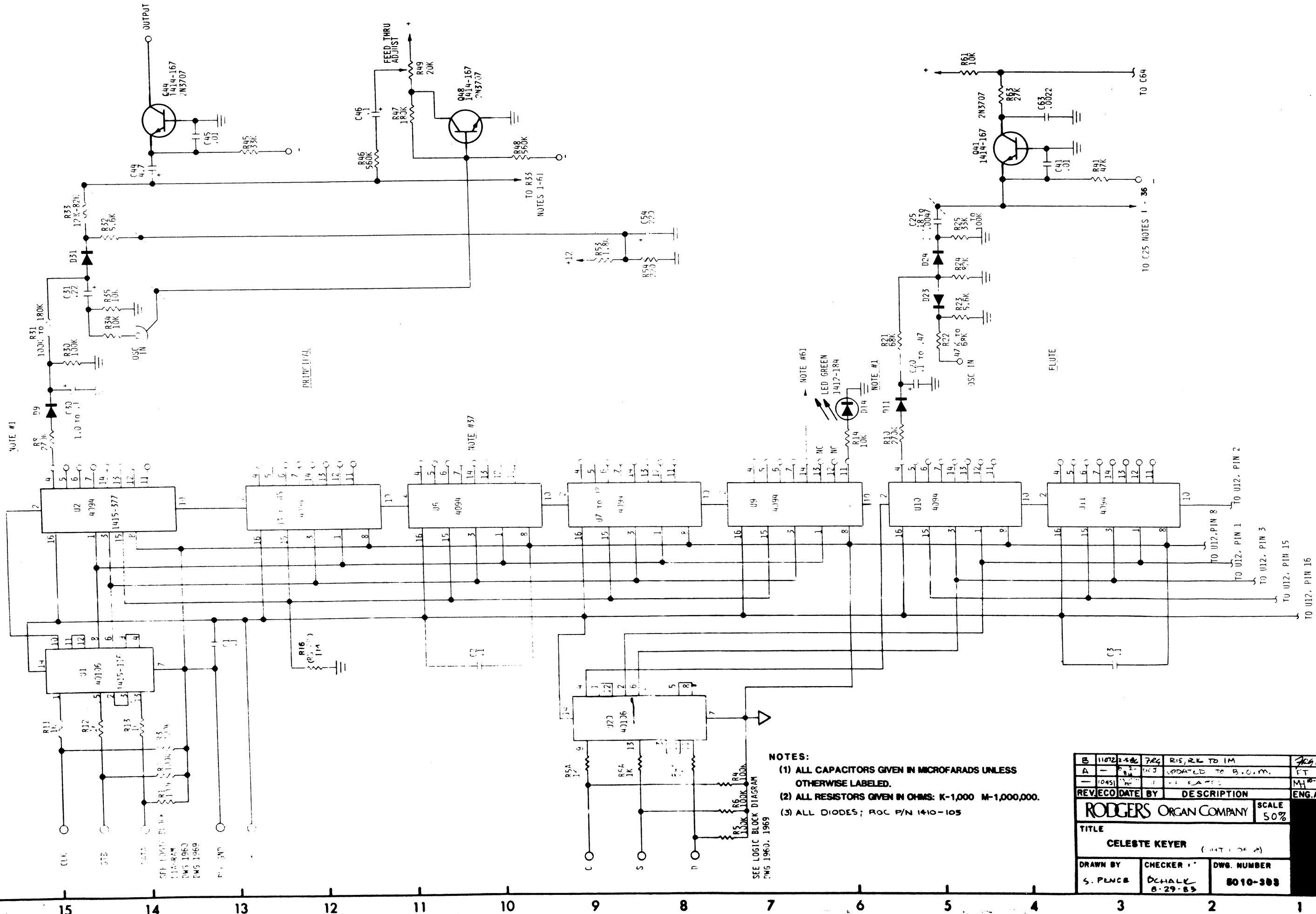
# PRELIMINARY

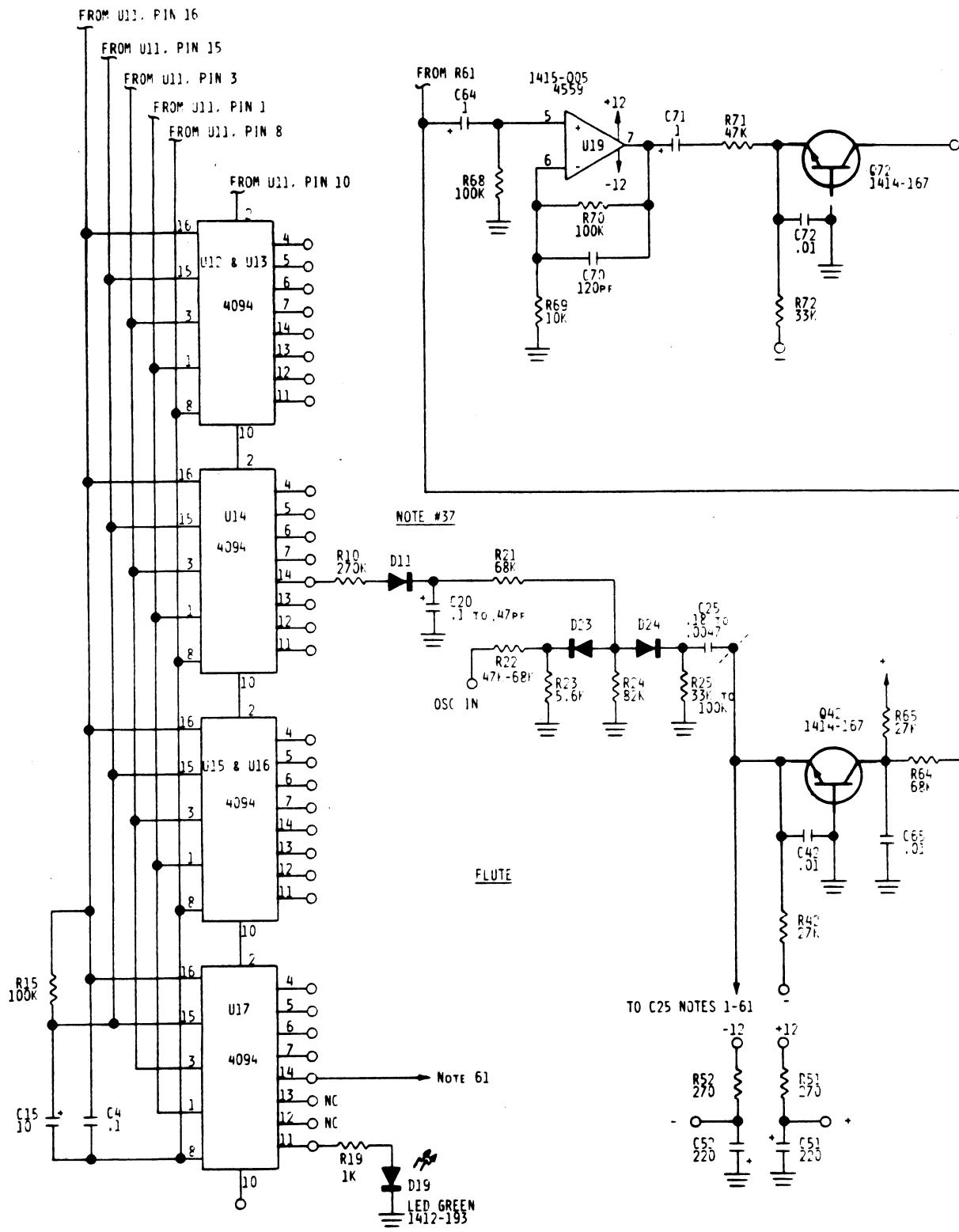
10/85	RD	RELEASED	
REV. ECO DATE	BY	DESCRIPTION	ENG. APVL F.S. APVL
RODGERS ORGAN COMPANY			SCALE 50%
TITLE			
770 REED KEYER FILTER			
DRAWN BY	CHECKER	DWS. NUMBER	
R. DOUGHERTY	SCHALEY 10-20-83	6024-300	

- NOTES:
- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.
  - (2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.
  - (3) REPRESENTATIVE FOR FILTER #1 TO #11. THE COMPONENT VALUES ARE THE SAME, EXCEPT WHERE GIVEN.







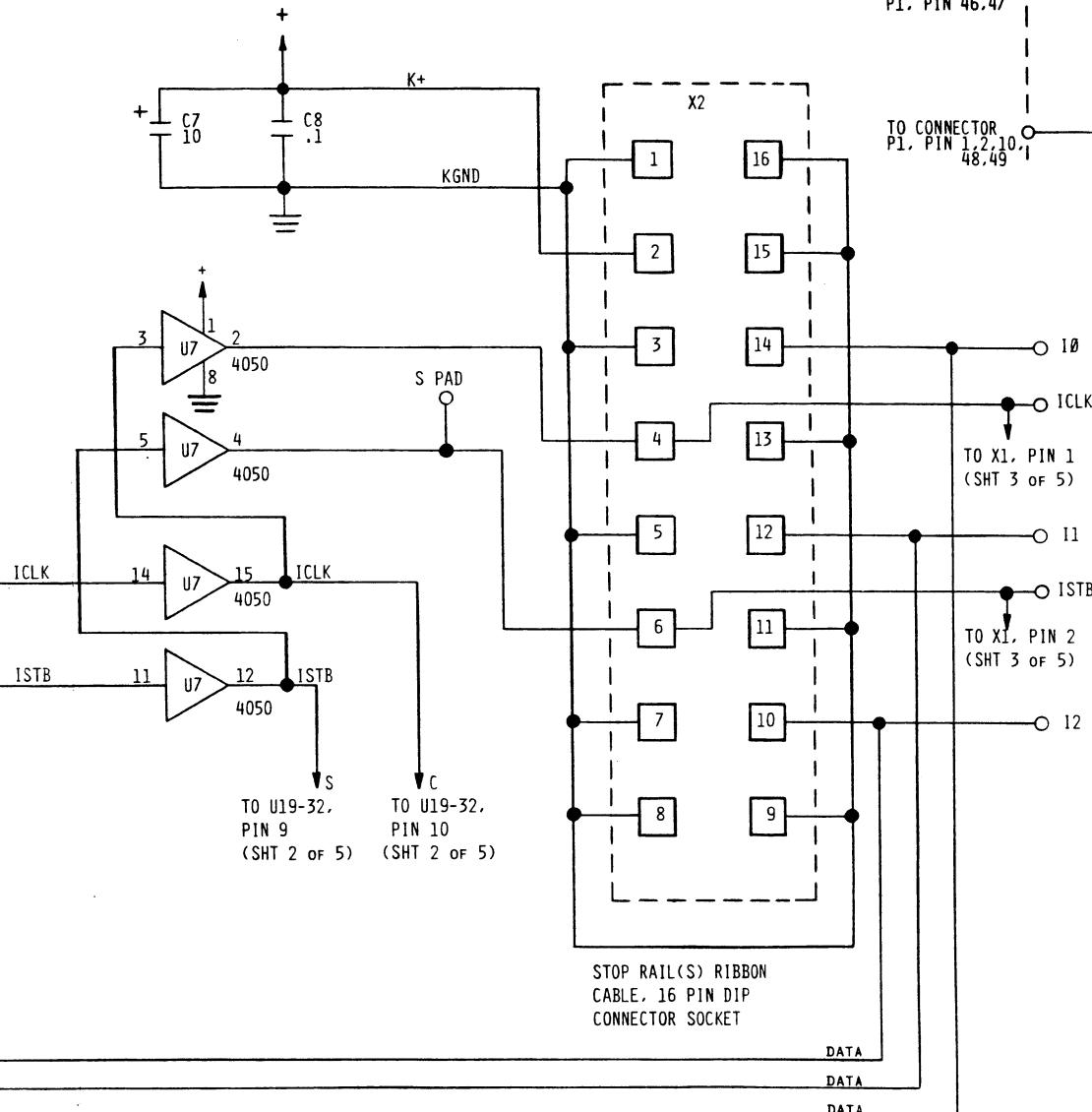
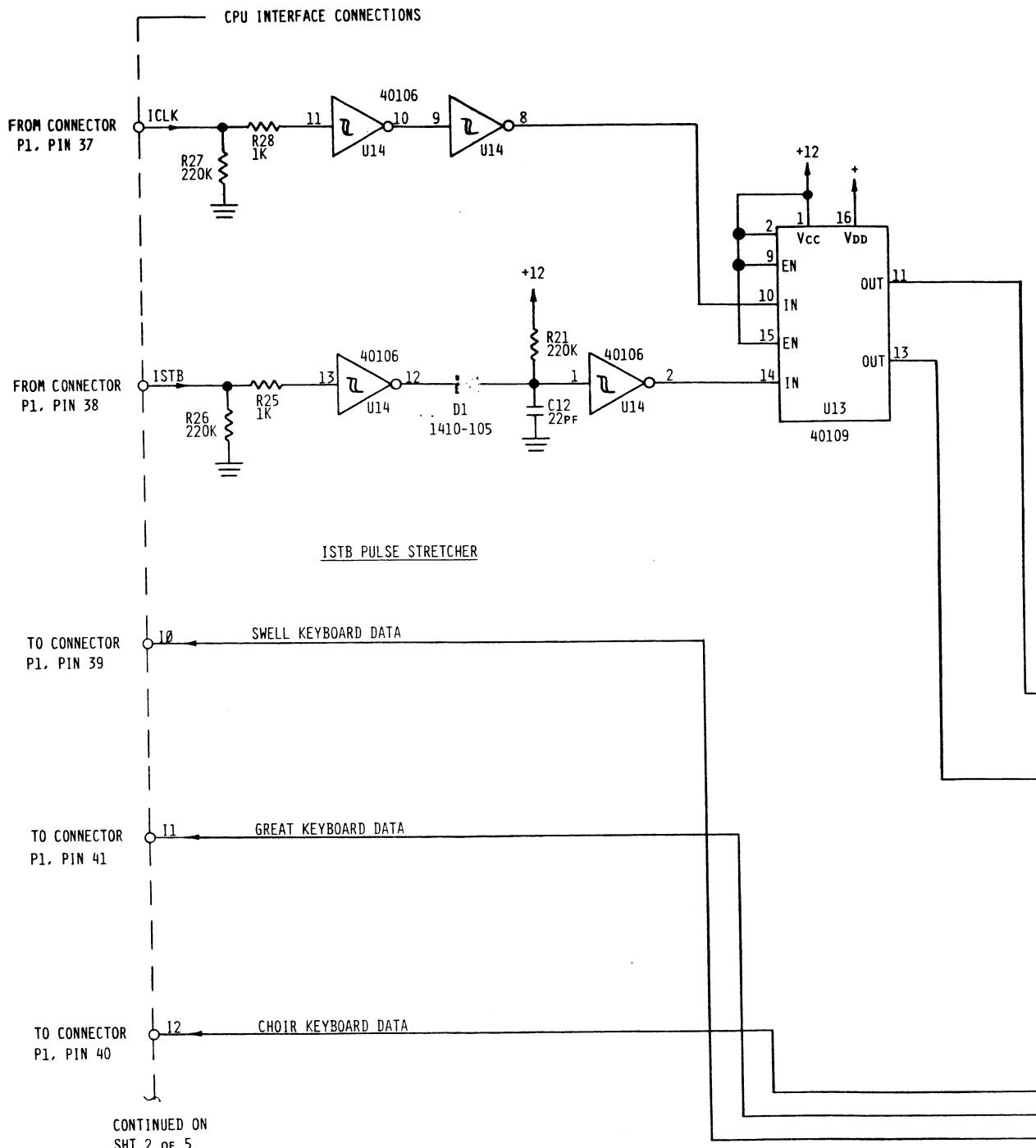


**PRELIMINARY**

**NOTES:**

- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.
- (2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.

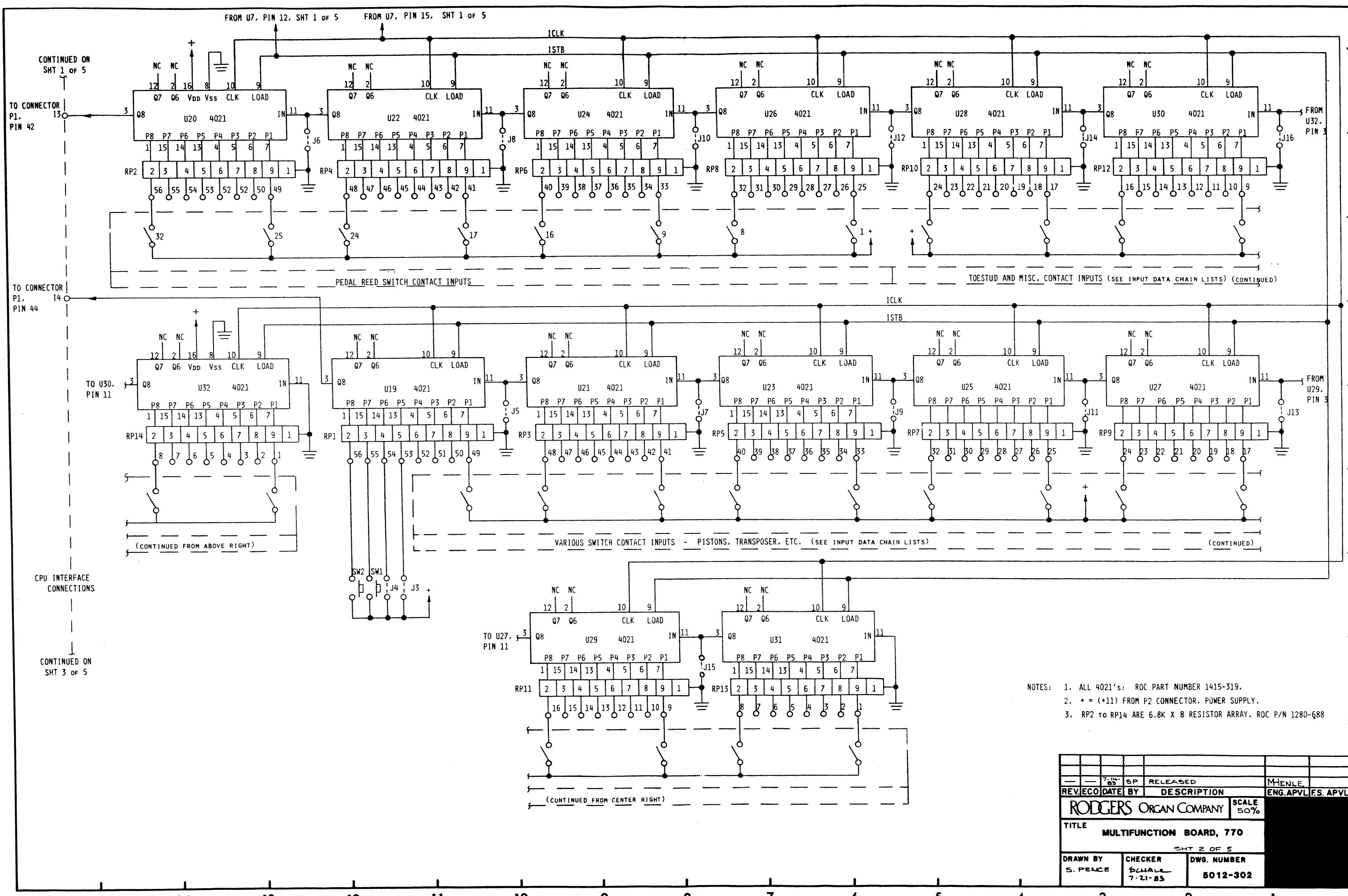
1-10 SP		RELEASED		M 10-10-85	
REV. ECO DATE	BY	DESCRIPTION		ENG. APVL F.S. APVL	
RODGERS ORGAN COMPANY				SCALE 50%	
TITLE CELESTE KEYER SHT 2 OF 2					
DRAWN BY S. PENCE	CHECKER SCHALD 9-1-83	DWS. NUMBER 5010-300			

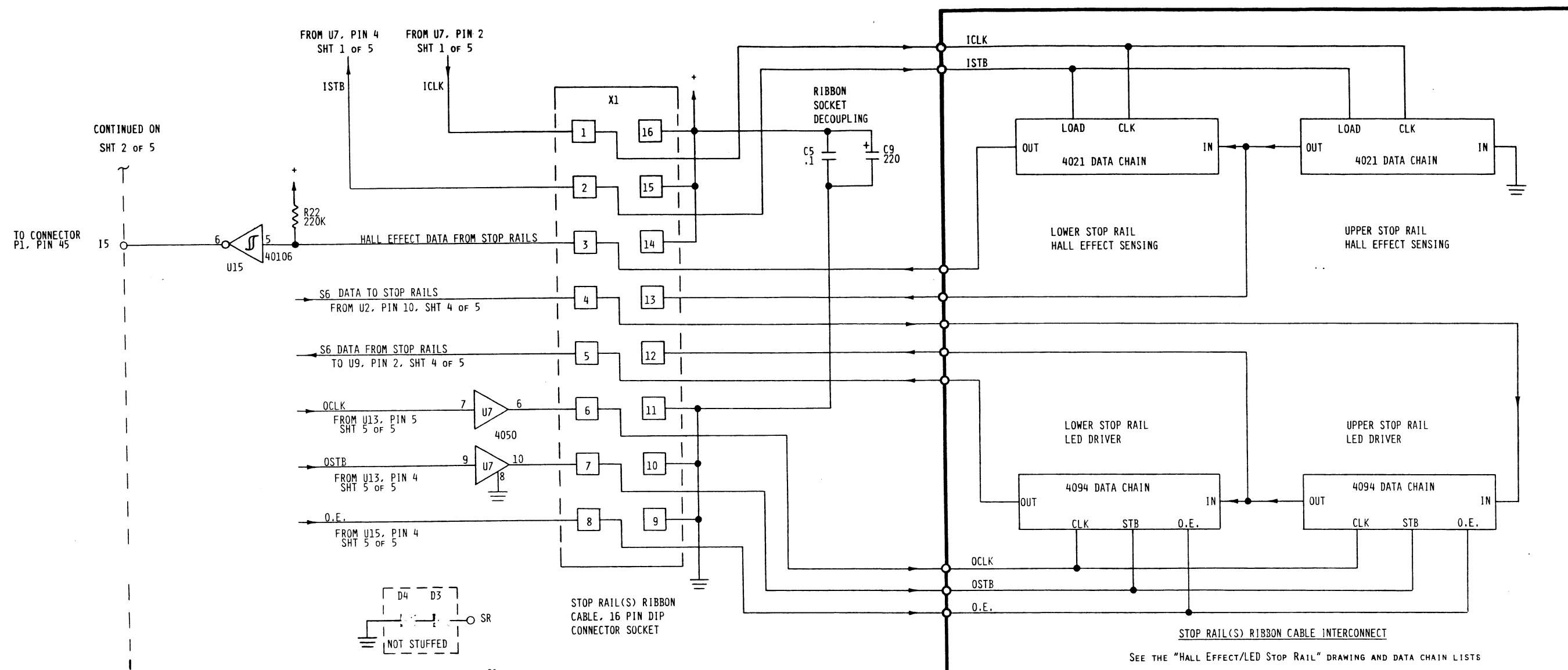


**NOTES:**

- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.
- (2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.
- (3) + = (+11) FROM P2 CONNECTOR POWER SUPPLY.
- (4) ++ IS FROM P2 CONNECTOR, POWER SUPPLY, VOLTAGE SENSE.
- (5) ALL 40106's: ROC P/N 1415-116.
- (6) ALL 4050's: ROC P/N 1415-321.
- (7) ALL 40109's: ROC P/N 1415-006.

REV	ECHO	DATE	RELEASED BY	DESCRIPTION	SCALE
—	—	7-14-83	SP	RELEASER	MHENLE
				DESCRIPTION	ENG/APVL F.S. APVL
				RODGERS ORGAN COMPANY	50%
				TITLE	MULTIFUNCTION BOARD, 770
				SHT	1 of 5
			DRAWN BY	CHECKER	DWG. NUMBER
			SUSAN PENCE	EDWARD	5012-302





NOTE

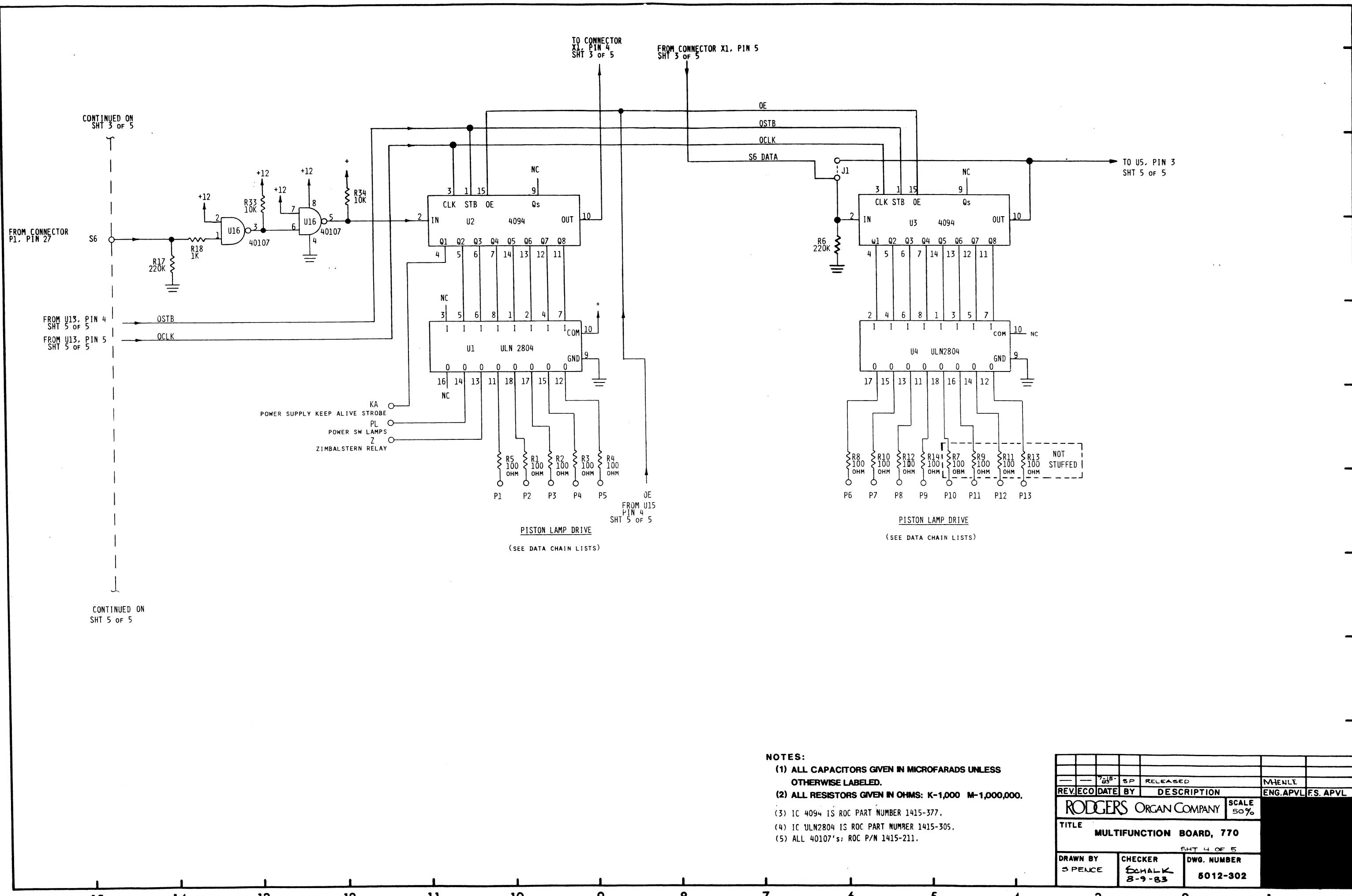
- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.**

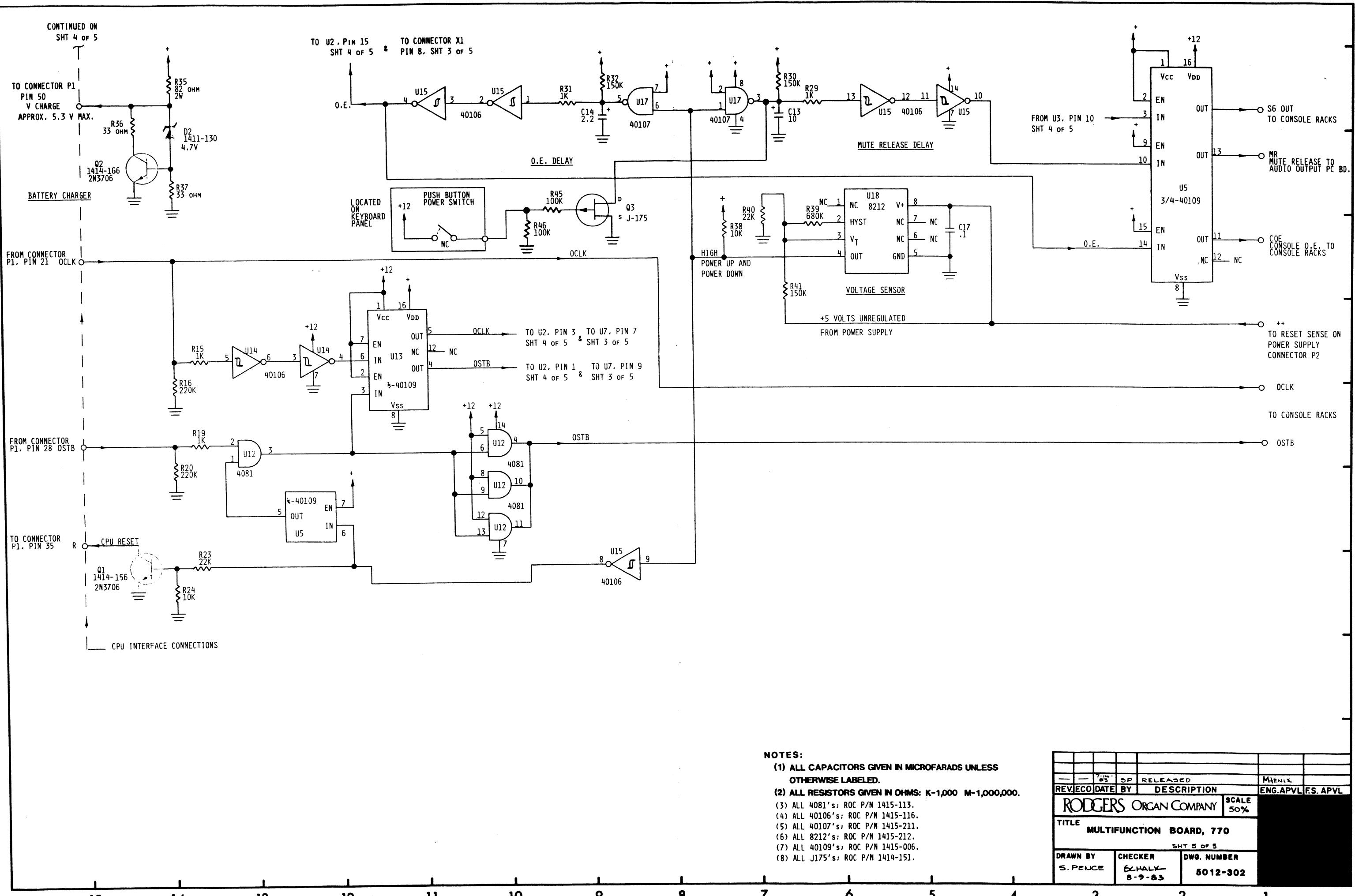
**(2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.**

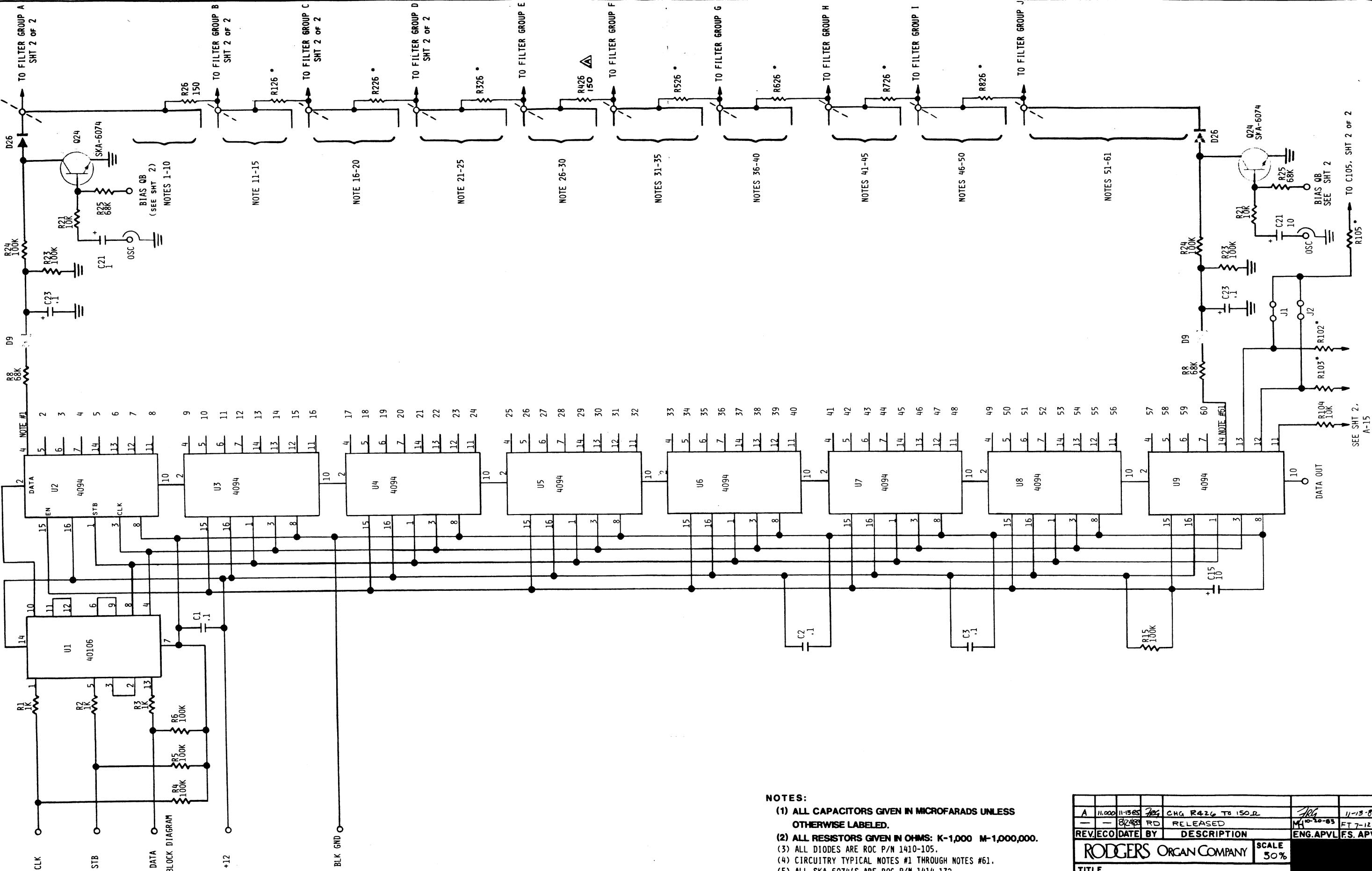
**(3) ALL 4050's; ROC P/N 1415-321.**

**(4) ALL 40106's; ROC P/N 1415-116.**

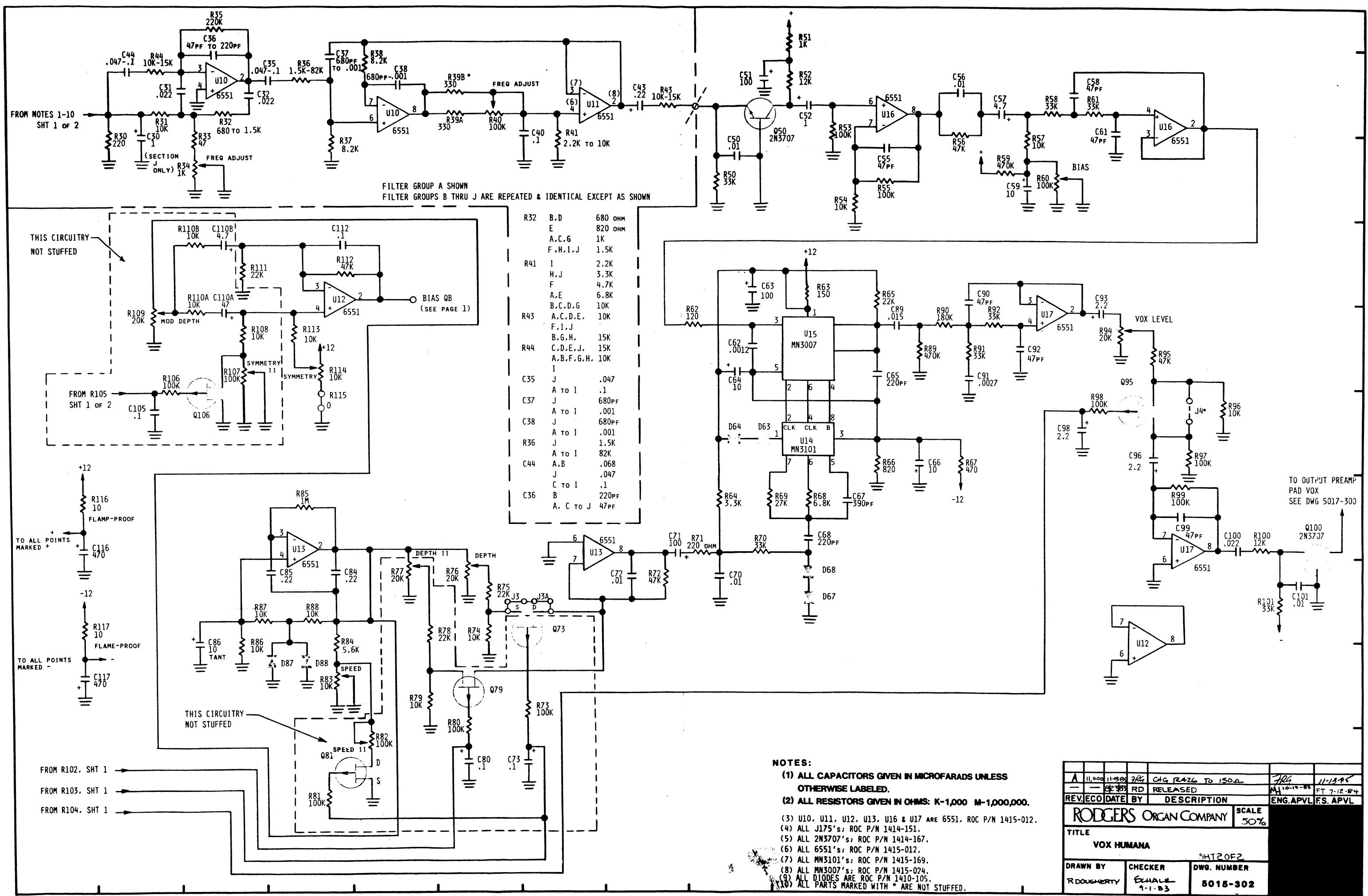
—	—	7-15- 83	SP	RELEASED	MENKE
REV.	ECO	DATE	BY	DESCRIPTION	ENG. APVL
RODGERS ORGAN COMPANY					SCALE 50%
TITLE <b>MULTIFUNCTION BOARD, 770</b>					SHT. 3 OF 5
DRAWN BY S. PENCE	CHECKER <u>SCHALK</u> 7-21-83	DWG. NUMBER <b>5012-302</b>			

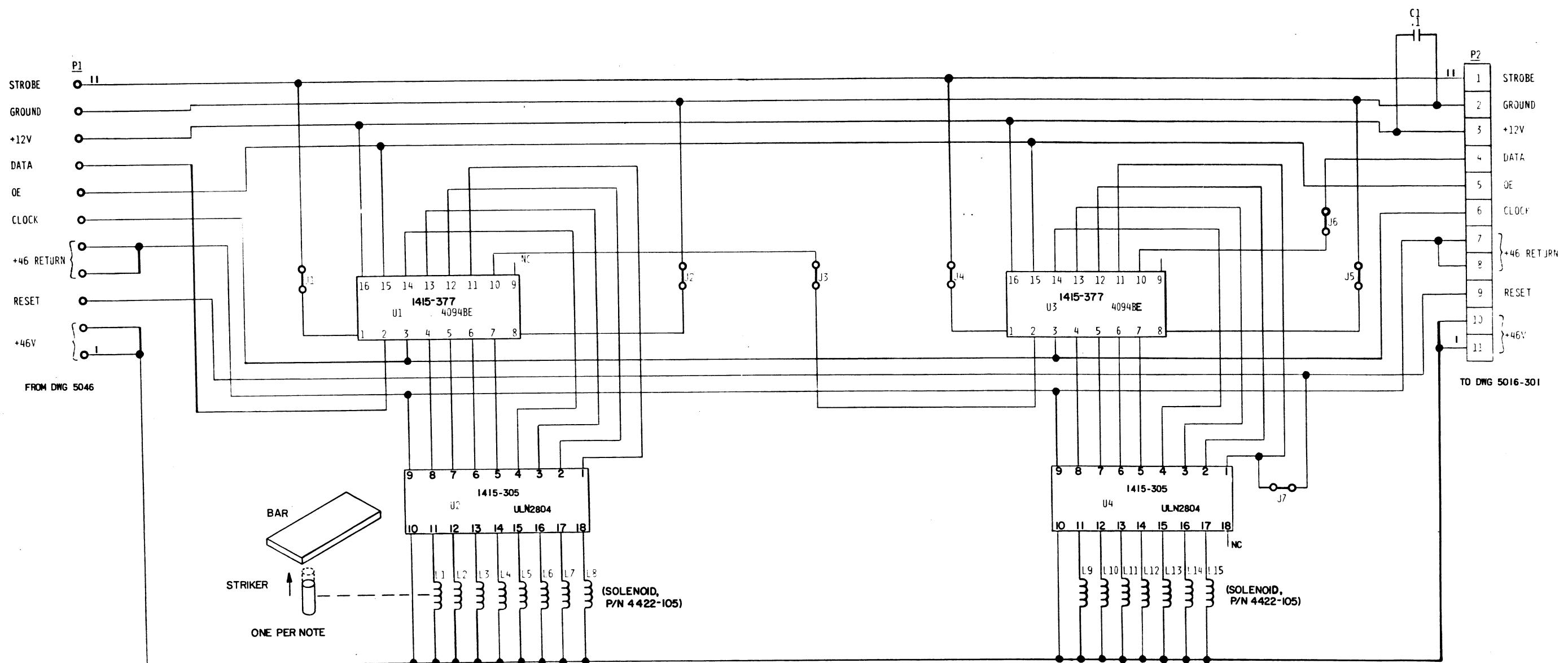






A	11.000	11-15-65	705	CHG R426 TO 150Ω	JRC	11-15-85
—	—	82483	RD	RELEASED	M10-20-85	FT 7-12-84
REV	ECO	DATE	BY	DESCRIPTION	ENG	APVL
RODGERS ORGAN COMPANY						SCALE
						50%
TITLE VOX HUMANA						SHT 1 OF 2
DRAWN BY	CHECKER	DWG. NUMBER				
R. DOUGHERTY	G. CHALE	5015-302				

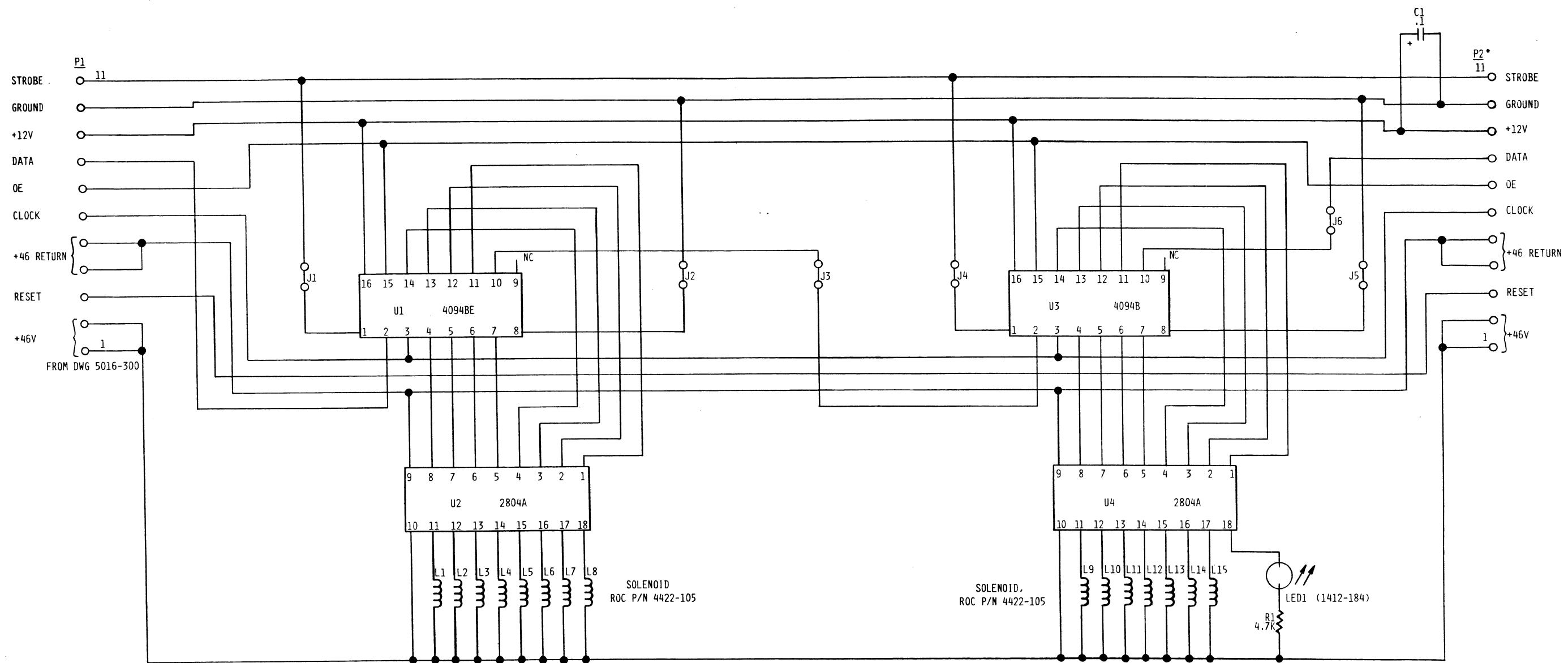




NOTES:

- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.
- (2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.

		RD	RELEASED	M HENLE FT 7-2-84
REV.	ECO	DATE	BY	DESCRIPTION
RODGERS ORGAN COMPANY				SCALE 50%
TITLE GLOCKENSPIEL DRIVER, EXTERNAL				
DRAWN BY R. DOUGHERTY	CHECKER S. HALEY 7-21-83	DWG. NUMBER 5016-300		



## **NOTES**

- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS  
OTHERWISE LABELED.**

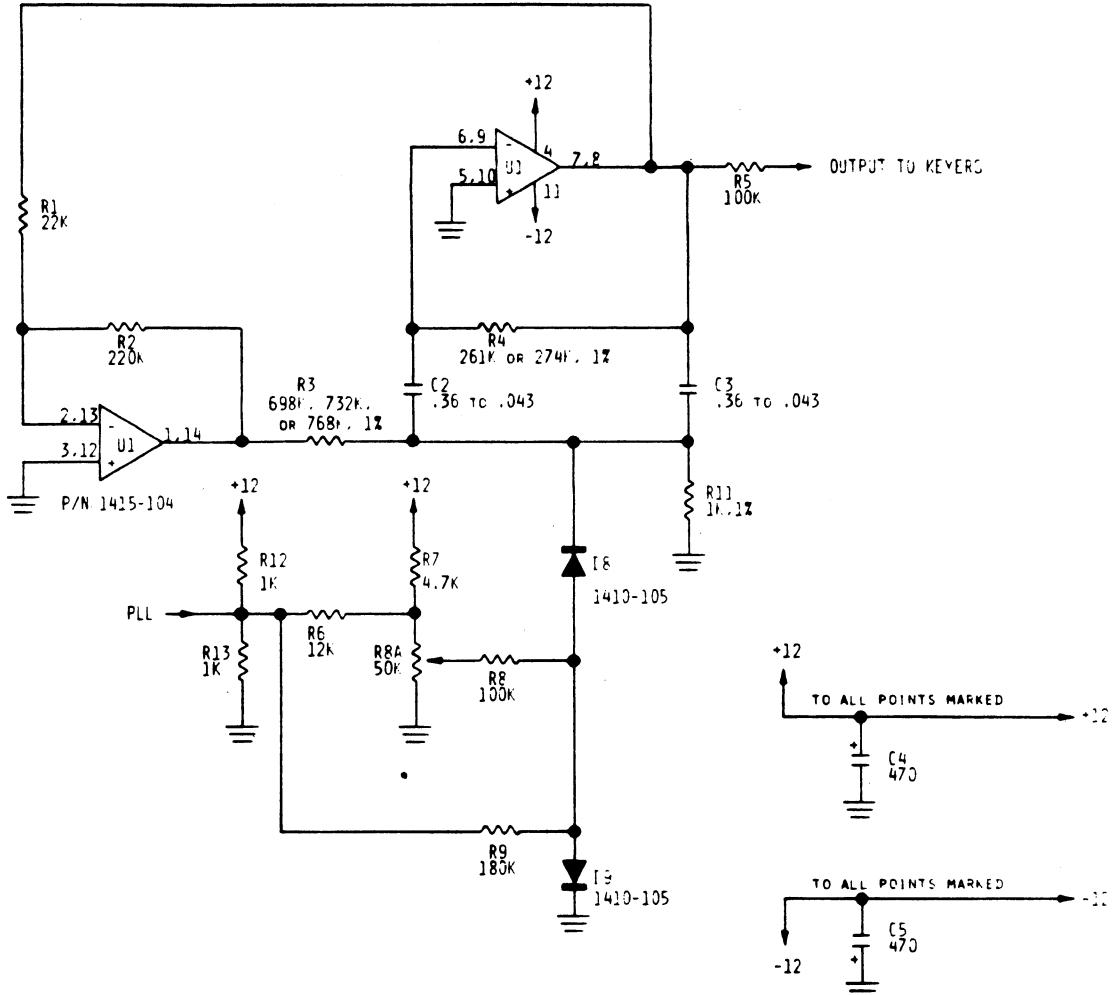
**(2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.**

**(3) ALL 4094'S ARE ROC P/N 1415-377.**

**(4) ALL 2804'S ARE ROC P/N 1415-305.**

**(5) ALL PARTS MARKED WITH \* ARE NOT STUFFED.**

—	—	9/15/89 RD	RELEASED	MHENLE FT 7-2-84
REV.	ECO	DATE	BY	DESCRIPTION
RODGERS ORGAN COMPANY				SCALE 50%
TITLE <b>GLOCKENSPIEL DRIVER</b>				
DRAWN BY	CHECKER	DWG. NUMBER		
R. DOUGHERTY	<u>SCHALK</u> 9-21-B3	5016-301		



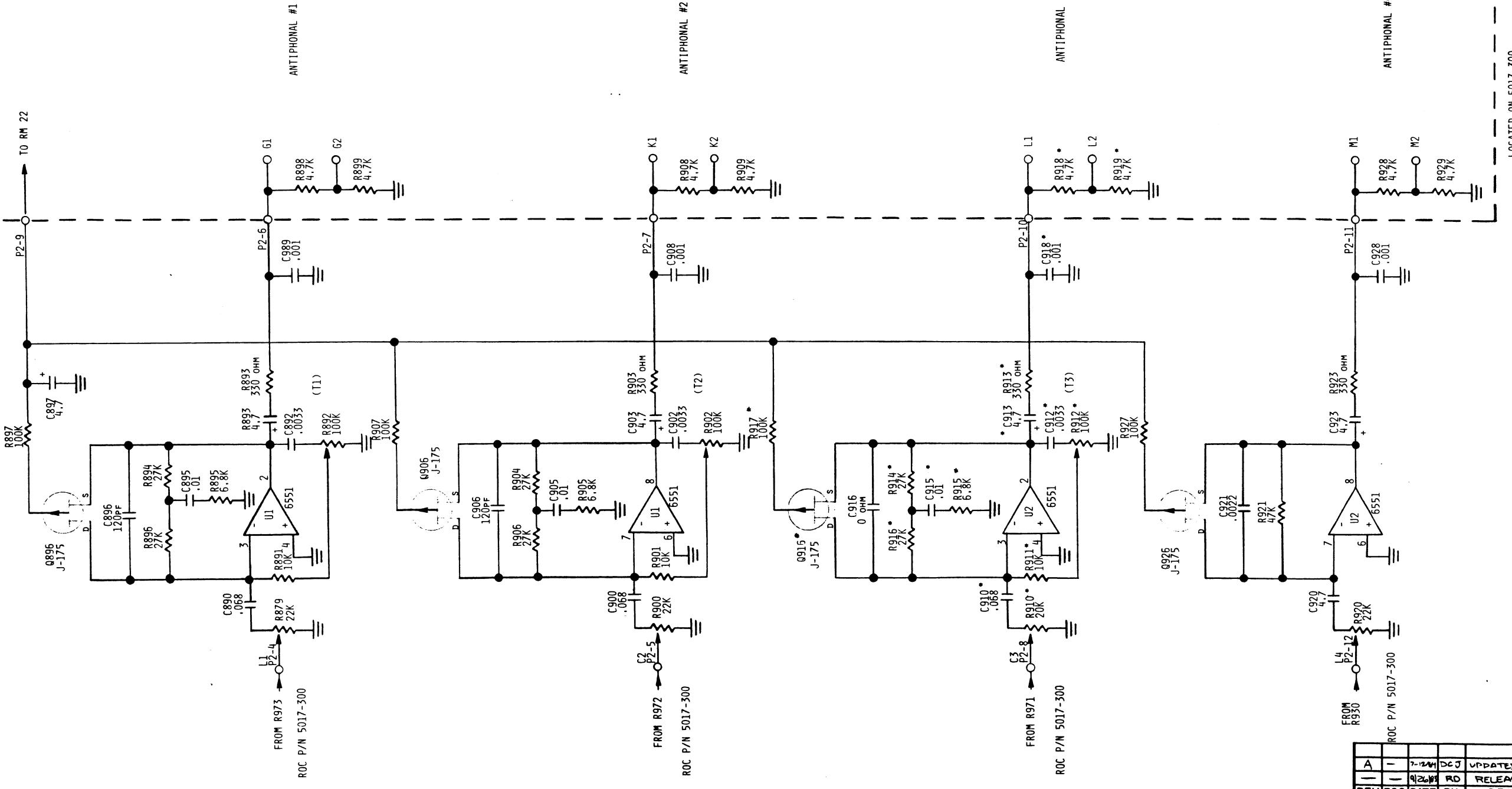
DECOUPLING

## PRELIMINARY

### NOTES:

- (1) ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.
- (2) ALL RESISTORS GIVEN IN OHMS: K-1,000 M-1,000,000.

SP	RELEASED	MHENRY
REV. ECO DATE BY	DESCRIPTION	ENG. APVL FS. APVL
RODGERS ORGAN COMPANY		SCALE 50%
TITLE		
OSCILLATOR, NOTES 001-0012		
DRAWN BY S. PENCE	CHECKER SCHAULK 8-16-63	DWG. NUMBER 5033-300



- NOTES: 1. ALL CAPACITORS GIVEN IN MICROFARADS UNLESS OTHERWISE LABELED.  
 2. ALL RESISTORS GIVEN IN OHMS. K-1,000 M-1,000,000  
 3. THIS CIRCUITRY IS PART OF THE OUTPUT PREAMP BOARD,  
 ROC P/N 5017-300.  
 4. ALL PARTS MARKED WITH \* ARE NOT STUFFED UNLESS  
 OTHERWISE SPECIFIED.  
 5. ALL J-175'S ARE ROC P/N 1414-151.  
 6. ALL 6551'S ARE ROC P/N 1415-012.

REV	ECO	DATE	BY	DESCRIPTION	SCALE
A	-	7-12-64	DCJ	UPDATED TO B.O.M	F T
—	—	9/26/68	RO	RELEASED	R Bagley FT 6-19-64

RODGERS ORGAN COMPANY

TITLE: ANTIPOHONAL CARD

DRAWN BY: R. DOUGHERTY

CHECKER: S. CHALK

DWG. NUMBER: 6037-300

LOCATED ON 5017-300

