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Sequential Circuits, Inc.
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TELEX: 364412 INTR

PRO-FX MODULE 514 MIXER
PRELIMINARY SERVICE DATA
Manual No. TN514-0
Issued: September, 1982

Nijverheidsweg 11c
3641 RP Mijdrecht
Netherlands
02979-6211
TELEX: 12721 SQNTL NL

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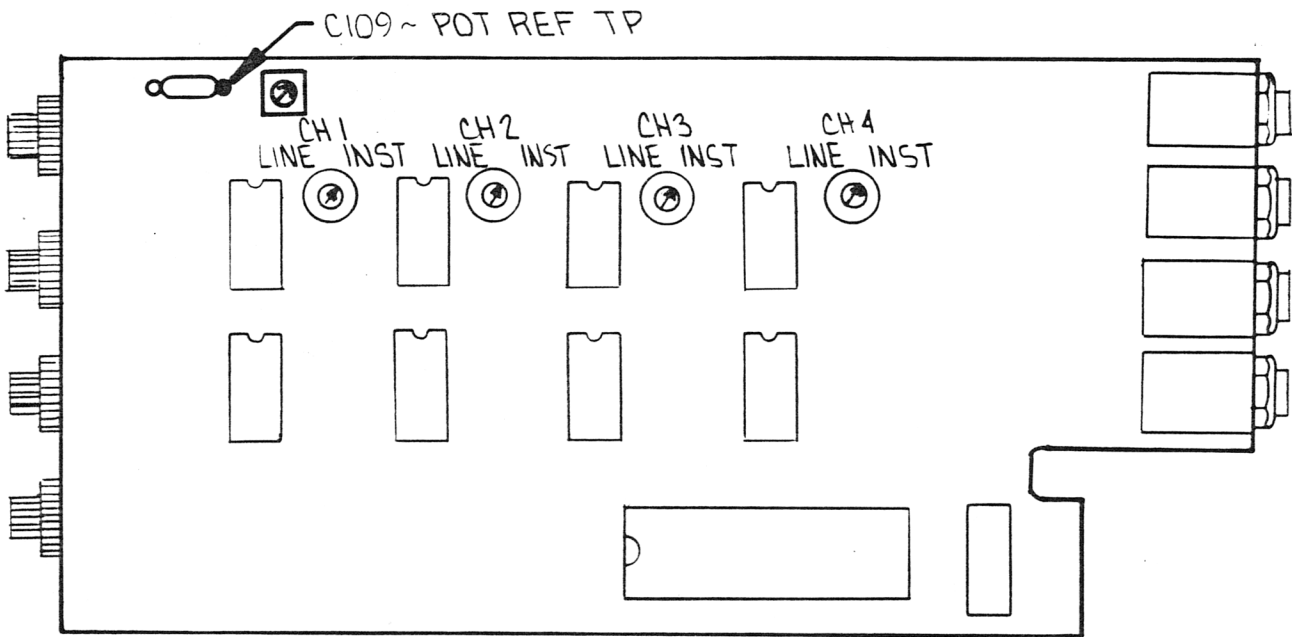
PRELIMINARY INFORMATION

All subject to change.

The Mixer uses eight DACs to control audio level and pan for four channels. Attenuation data for each DAC is latched from the PA bus group of U119 Programmable Peripheral Interface. The PB bus only accepts an input coding the number of pots. The PC bus outputs the pot and DAC addresses and strobes to U118 Vadc multiplexer and U117 DAC demultiplexer. The Mux sequentially samples the pots which are digitized by the ADC window comparator in the System Controller. U117 is actually operates as a decoder to use Vdac as the DAC select strobe. The DACs can be used in pan applications because their two outputs are complementary.

CHECK/TRIM PROCEDURE

1. Adjust POT REF for 5.10V \pm .05/-0.00V (refer to figure).



2. Put Controller in manual mode.
3. Set up signal generator for ___ mVp-p sine wave at 1 kHz.
4. Connect to Input 1.
5. Set gain trim at LINE.
6. Turn LEVEL to 0 and PAN to middle.
7. Check for 0 output at A and B.
8. Turn LEVEL to max.
9. Pan to A.
10. Check A for approx. 2.5 Vp-p output.
11. Check B for 0 output.
12. Pan to B and check outputs for opposite response.
13. Set gain trim for INSTR.

14. Check B output for approx. 25 V_{p-p} and that the PEAK LED is on.
15. Repeat steps 3-13 for inputs 2-4.
16. Connect to input A.
17. Check for unity gain output at A.
18. Repeat for input B and check output B.
19. Connect to input 1 and 2.
20. Turn level 1 to 12 o'clock.
21. Turn pans to A.
22. Turn level 2 up until all PEAK LEDs light.
23. Check that there is no clipping at output A when the PEAK LEDs light.
24. Return all level trims to Line.

PARTS

C101-13	C-045 .1 uF 50V
C114	NOT USED
C115/16	C-045 .1 uF 50V
C117	C-003 33 pF 50V Tant
C118-20	C-045 .1 uF 50V
C121	C-060 1 uF Monolithic
C122	C-036 10 uF 25V Tant
C123	C-003 33 pF 50V Tant
C124-27	C-045 .1 uF 50V
C128	C-036 10 uF 25V Tant
C129	C-003 33 pF 50V Tant
C130-32	C-045 .1 uF 50V
C133	C-060 1 uF Monolithic
C134	C-036 10 uF 25V Tant
C135	C-003 33 pF 50V Tant
C136-38	C-045 .1 uF 50V
C139	C-060 1 uF Monolithic
C140	C-036 10 uF 25V Tant
C141	C-003 33 pF 50V Tant
C142/43	C-045 .1 uF 50V
C144	C-018 .22 uF Tant
C145	C-021 2.2 uF Tant
C146	C-003 33 pF 50V Tant
C147	C-018 .22 uF Tant
C148	C-021 2.2 uF Tant
C149	NOT USED
C150	C-055 47 uF Elect
C151	C-045 .1 uF 50V
C152	C-060 1 uF Monolithic

D101-9 D-005 1N914
 D110 D-008 1N34
 D111/12 D-005 1N914
 D113 D-008 1N34
 D114 NOT USED
 D115 D-005 1N914
 D116 D-008 1N34
 D117-19 D-005 1N914
 D120 D-008 1N34
 D121-23 D-005 1N914
 D124/25 D-008 1N34

DS101-4 L-002 LED small

J101-8 J-001 1/4" Shorting Phone Jack
 J109-12 Z-222 LED connector subassembly

Q101/2 T-002 2N3904 NPN

NOTE: SCI #R-001 THROUGH R-099 ARE 5%
R-101 THROUGH R-177 ARE 1%
R-200 THROUGH R-228 ARE POTENTIOMETERS

R101-8 R-230 10K Dual Concentric
 R109 R-004 330
 R110 R-025 100K
 R111 R-094 180K
 R112 R-004 330
 R113 R-025 100K
 R114 R-094 180K
 R115 R-211 5K Trim
 R116 R-094 180K
 R117 R-025 100K
 R118 R-004 330
 R119 R-094 180K
 R120 R-025 100K
 R121 R-004 330
 R122 R-025 100K
 R123 R-026 200K
 R124 NOT USED
 R125 R-025 100K
 R126/7 R-008 1K
 R129/30 R-025 100K
 R131 R-012 10K
 R132 R-025 100K
 R133 R-224 100K Trim
 R134 R-025 100K
 R135 R-012 10K
 R136 R-025 100K
 R137 R-224 100K
 R138-41 R-025 100K
 R142 NOT USED

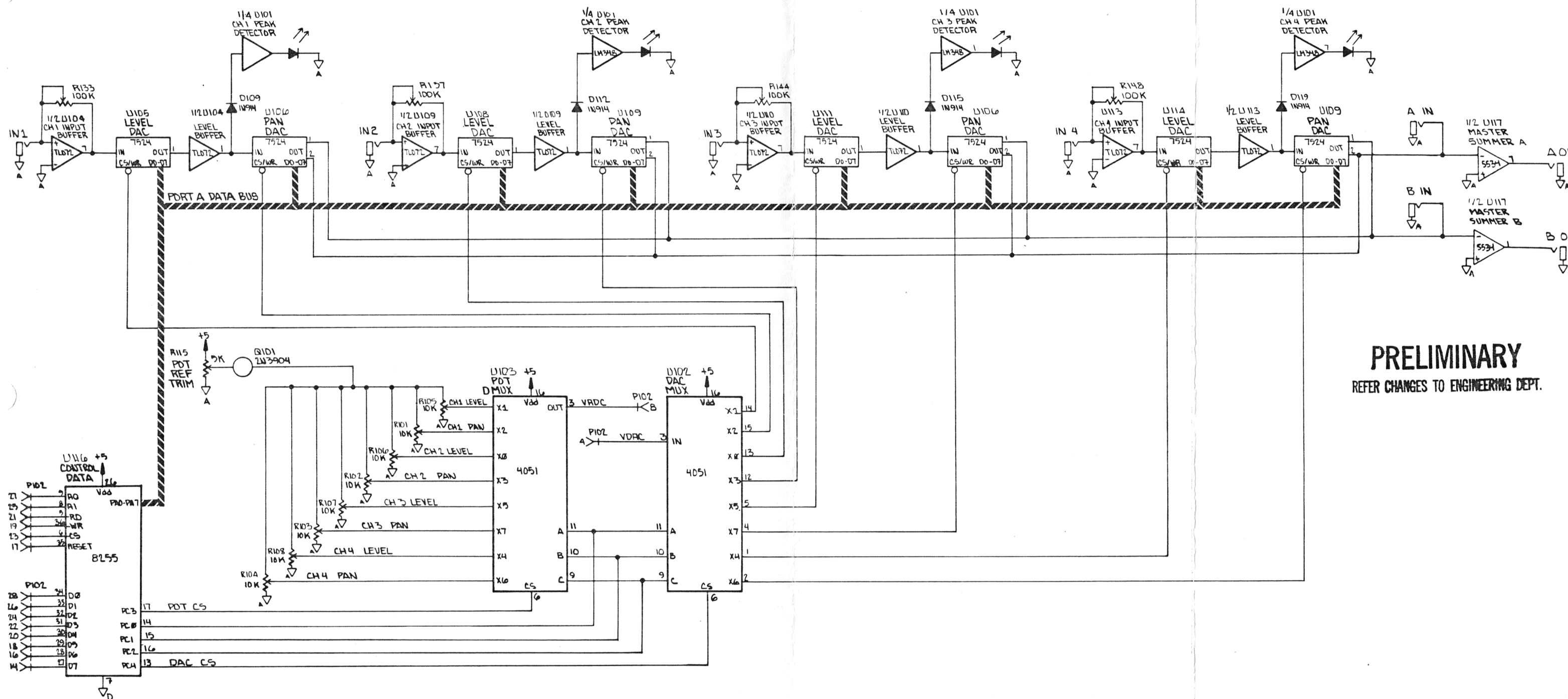
R143 R-012 10K
R144 R-224 100K Trim
R145 NOT USED
R146/47 R-012 10K
R148 R-224 100K Trim
R149 R-025 100K
R150-52 R-012 10K

RA101 R-304 10K x 9 SIP

U101 I-313 LM348 QUAD 741 OP AMP
U102/3 I-211 4051 8-IN ANA MUX
U104 I-325 TL072
U105/6 I-505 AD7524
U107 I-325 TL072
U108/9 I-505 AD7524
U110 I-325 TL072
U111/12 I-505 AD7524
U113 I-325 TL072
U114/15 I-505 AD7524
U116 I-045 8255 (PPI)
U117 I-317 NE5534 DUAL OP AMP
U118 I-408 79M15 -15V Volt. Reg.
U119 I-406 78M15 +15V Volt. Reg.

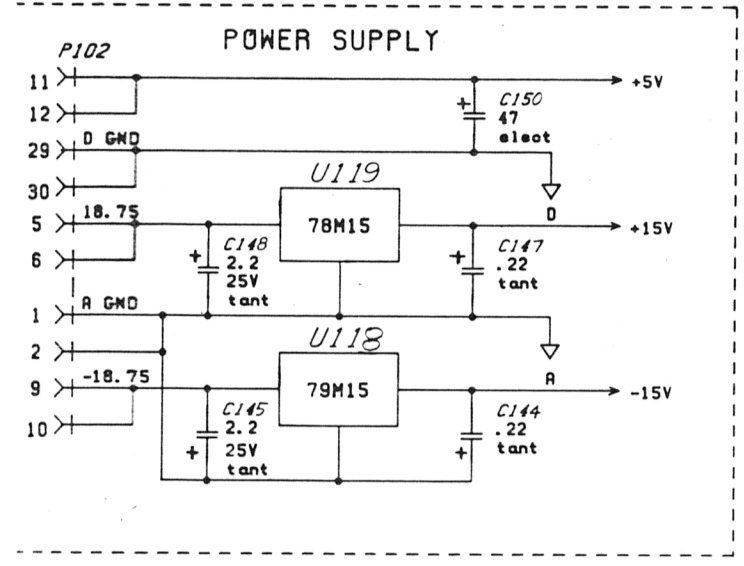
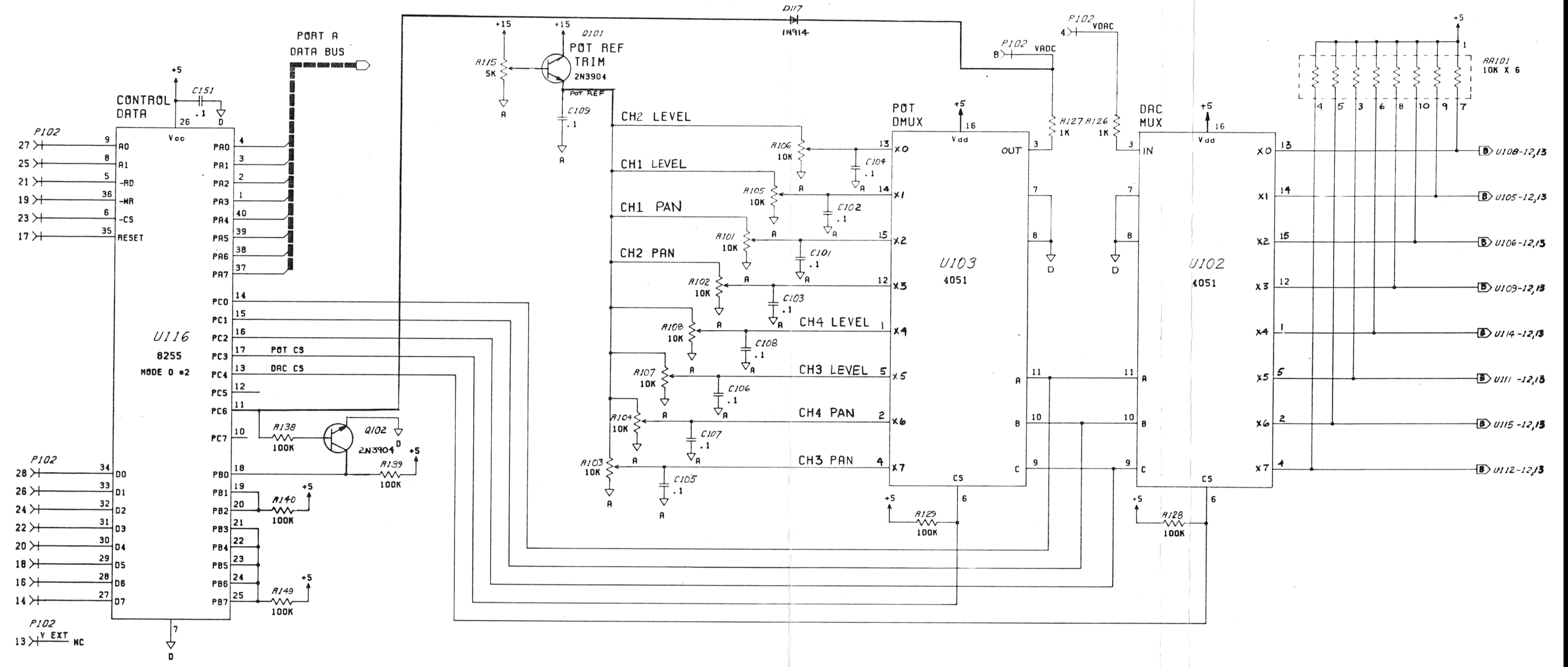
DOCUMENTS

ABSTRACT SCHEMATIC
SD514-1-0 (1/2) MIXER
SD514-1-0 (2/2) MIXER

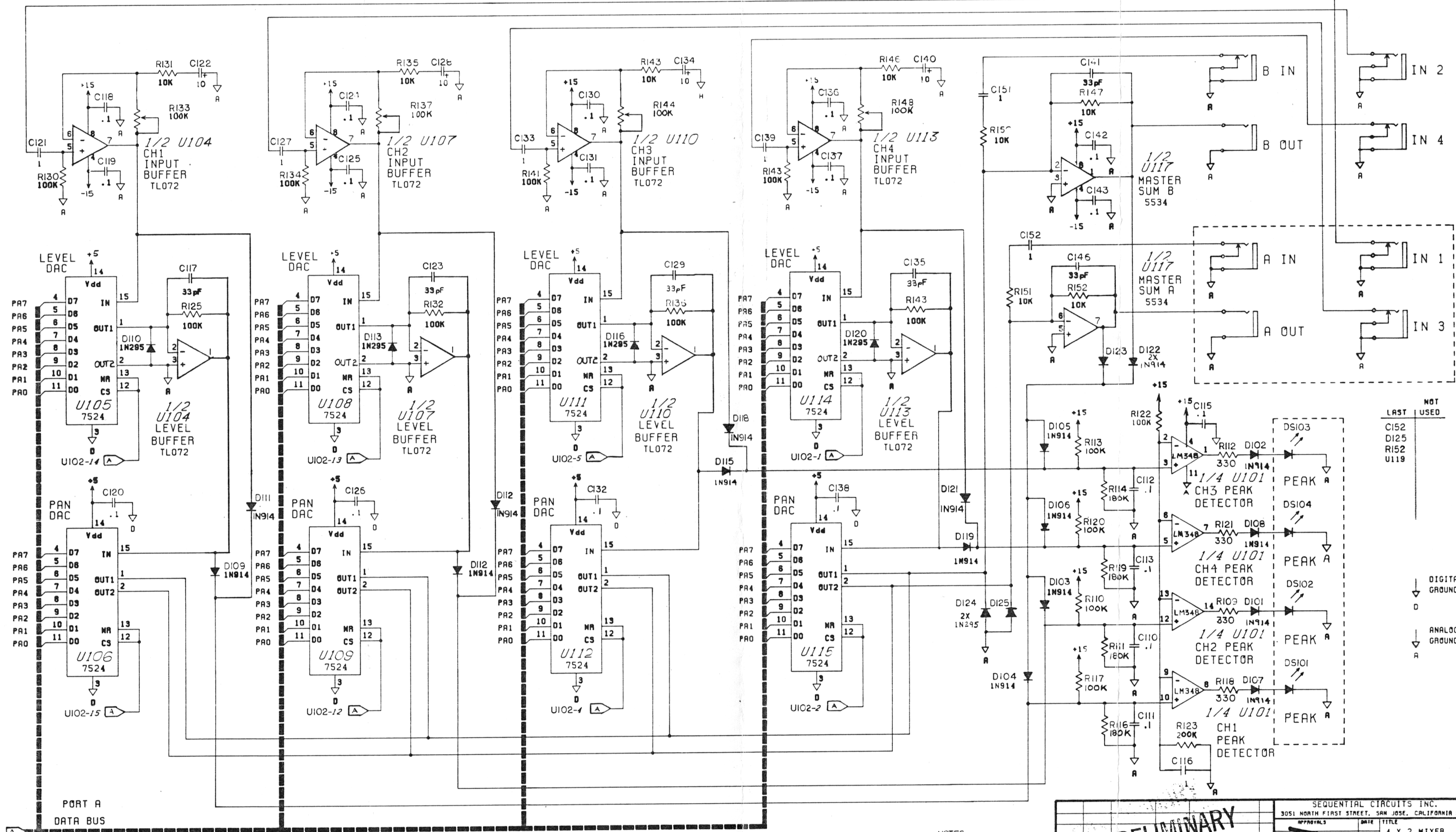


PRELIMINARY
REFER CHANGES TO ENGINEERING DEPT.

G514-0
ABSTRACT SCHEMATIC



<p>PRELIMINARY</p> <p>ENGINEERING DEPT.</p>		SEQUENTIAL CIRCUITS INC. 3051 NORTH FIRST STREET, SAN JOSE, CALIFORNIA 95134	
		APPROVALS: _____ DATE: _____	TITLE: 4 X 2 MIXER
DSN: _____	SIZE: _____	MODEL NO.: 514	DOCUMENT NO.: SD514-1-0
DWG: _____	APP: _____	ISS: _____	SHEET 1 OF 2



LAST	NOT USED
C152	
D125	
R152	
U119	

DIGITAL GROUND
↓
D
ANALOG GROUND
↓
A

NOTES:
PINS 2, 3, AT U107-U110
DIGITAL AND ANALOG GNDS
ARE CONNECTED

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		3051 NORTH FIRST STREET, SAN JOSE, CALIFORNIA 95134	
APPRAVALS	DATE	TITLE	
DSN		4 X 2 MIXER	
DWG		SIZE	MODEL NO. 514
APP		DOCUMENT NO.	SD514-1-1
FIRST	LAST	DATE	ISS
		ECR NO.	REVISIONS
			LIN
			SHEET 2 OF