

Sequential Circuits, Inc.
3051 North First Street
San Jose, CA 95134-2093
(408) 946-5240
TELEX: 364412 INTR

PRO-FX MODULE 520 TRANSPOSE/SYNC
PRELIMINARY SERVICE DATA
Manual No. TN520-0
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.

U113 8255 Programmable Peripheral Interface has three bus groups, denoted PA, PB and PC. The PA bus provides switch bits to U111 switch latch. The PB bus accepts the five switch inputs, plus a low signal from Q109 which codes the number of pots. The PC bus outputs the switch latch strobe, pot and S/H addresses and strobes to the Vadc multiplexer and Vdac demultiplexer. The Vadc multiplexer sequentially samples the pots to be digitized by the ADC window comparator in the System Controller. Likewise, control voltages for the module originate in the System Controller DAC and are output via the Vdac demultiplexer.

TRIM PROCEDURE

1. Connect 1-Vp-p, 1-kHz signal to input.
2. Connect output to monitor system.
3. Switch power on and switch IN on.
4. Switch LOWER /4 on.
5. Turn MIX LO/UP to LO.
6. Turn MIX DR/EF to EF.
7. Trim DRY/EFF NULL for minimum dry signal, by listening for the least level of the 1-kHz Upper voice.
8. Turn MIX LO/UP to UP.
9. Trim LO/UP NULL for least level of the 225-Hz Lower voice.

PARTS

PCB 1

C101-4	C-045 .1uF
C105-7	C-007 600pF 50V Disc
C108-10	C-045 .1uF 50V
C111	C-007 600pF 50V Disc ***Dual Desig***
C112	C-018 .22uF 35V Tant
C113/14	NOT USED
C115	C-007 600pF 50V Disc
C116-18	C-045 .1 uF 50V
C119	NOT USED
C120	C-007 600 pF ***Dual Desig***
C121	C-045 .1uF 50V
C122/23	C-007 600pF 50V Disc
C124-26	C-045 .1 uF 50V
C127	NOT USED
C128/29	C-012 .01uF 50V Mylar
C130	C-045 .1 uF 50V
C131/32	C-012 .01uF 50V Mylar
C133/34	NOT USED
C135-37	C-012 .01uF 50V Mylar
C138	C-045 .1 uF 50V
C139	C-012 .01 uF 50V
C140/41	C-045 .1 uF 50V
C142	C-043 .039 uF
C143	C-053 220 uF
C144/45	C-045 .1 uF 50V
C146	C-014 .02 uF
C147	C-045 .1 uF 50V
C148	NOT USED
C149	C-043 .039 uF
C150	C-008 .001 uF
C151/52	NOT USED
C153	C-045 .1 uF 50V
C154	NOT USED
C155	C-045 .1 uF 50V
C156	C-012 .01 uF 50V
C157	NOT USED
C158	C-021 2.2 uF 25V Tant
C159	C-018 .22 uF 35V Tant
C160	C-021 2.2 uF 25V Tant
C161	C-018 .22 uF 35V Tant
C162	C-055 47 uF
C163	C-002 10 pF
C164	C-004 100 pF
C165	C-060 1. uF 50V
C166-68	NOT USED
C169	C-018 22 uF
C170/71	C-045 .1 uF 50V
C172	C-007 150 pF

D101-3 D-005 1N914
D104/5 D-006 1N4735
D106-15 D-005 1N914
D116 D-008 1N34
D117-20 D-005 1N914

J101-5 J-061 RT ANGLE Switch Socket
J106/7 J-048 1/4" Mono Phone
J108 Z-222 LED Connector Harness (E-009 Teflon; E-108 Wire; J-066 Housing;
J-067 Pins)

P101 P-043 20-PIN Header

**NOTE: SCI #R-001 THROUGH R-092 ARE 5%
R101 THROUGH R-177 ARE 1%
R200 THROUGH R-228 ARE POTENTIOMETERS**

R101/2 R-230 10K DUAL POT
R103/4 R-230 10K DUAL POT
R105-9 R-217 100K Pot
R110 R-004 330
R111 R-022 75K
R112 R-004 330
R113 R-022 75K
R114 R-004 330
R115 R-022 75K
R116 R-004 330
R117/8 R-022 75K
R119 R-004 330
R120 R-009 1.5K
R121/2 R-058 240K
R123 R-135 102K
R124 R-024 91K
R125/6 R-135 102K
R127 R-024 91K
R128 R-135 102K
R129 R-024 91K
R130 R-075 1.8K
R131 R-054 33K
R132 R-018 47K
R133 R-029 1M
R134 R-073 24K
R135 R-008 1K
R136 R-056 51K
R137 R-018 47K
R138 R-028 470K
R139 R-211 5K Pot
R140 R-025 100K
R141 R-004 330
R142 R-066 300K
R143 R-065 160K
R144 R-092 110K

R145	R-135 102K
R146	R-008 1K
R147-49	R-135 102K
R150	R-025 100K
R151	R-017 39K
R152	R-075 1.8K
R153	R-092 119K
R154/55	R-056 51K
R156	R-072 12K
R157	R-028 470K
R158	R-016 30K
R159	R-012 10K
R160	NOT USED
R161	R-025 100K
R162	R-008 1K
R163	R-018 47K
R164	R-008 1K
R165/66	R-150 150K
R167	R-217 100K Pot
R168	R-012 10K
R170/71	R-061 4.7M
R172	R-025 100K
R173	R-026 200K
R174	R-025 100K
R175	R-065 160K
R176	R-012 10K
R177	R-040 22K
R178	NOT USED
R179/80	R-008 1K
R181	R-012 10K
R182	R-020 62K
R183	R-009 5.1K
R184	NOT USED
R185	R-012 10K
R186	R-018 47K
R187	R-025 100K
R188	NOT USED
R189	R-012 10K
R190	R-025 100K
R191	R-038 8.2K
R192	R-016 30K
R193	R-025 100K
R194	R-015 20K
R195	R-217 100K Pot
R196	R-031 3K
R197	R-038 8.2K
R198	R-016 30K
R199	R-025 100K *** Dual Desig ***
R1100	R-026 200K
R1101	NOT USED
R1102	R-025 100K
R1103	R-016 30K
R1104	R-022 75K

R1105 NOT USED
 R1106 R-010 2K
 R1107 R-038 18K
 R1108 R-025 100K
 R1109 R-076 27K
 R1110 R-015 20K
 R1111 R-023 82K
 R1112 NOT USED
 R1113 R-225 25K Pot
 R1114 R-055 7.5K
 R1115 R-009 1.5K
 R1116 R-225 25K Pot

S101-5 S-057 Switch with LED

U101 I-320 3320 VCF
 U102 I-211 4051 8-IN ANA MUX
 U103 I-313 LM348 QUAD-741 OP AMP
 U104 I-320 3320 VCF
 U105 I-211 4051 8-IN ANA MUX
 U106 I-313 LM348 QUAD-741 OP AMP
 U107 I-205 4013 DUAL FLIP FLOP
 U108/9 I-312 TL082 DUAL BI FET OP AMP
 U110 I-313 LM348 QUAD-741 OP AMP
 U111 I-228 4174 HEX LATCH
 U112 I-206 4016 QUAD ANA LATCH
 U113 I-045 8255 PPI
 U114 I-327 3360
 U115 I-325 TL072
 U116 I-408 79M15 -15V V-REG
 U117 I-406 78M15 +15V V-REG
 U118 I-317 NE5534

PCB 2

C201 C-045 .1 uF 50V
 C202 C-012 .01 uF 50V
 C203 NOT USED
 C204 C-045 .1 uF 50V
 C205 C-018 .22 uF Tant
 C206 C-009 .002 uF 35V Tant
 C207 NOT USED
 C208-10 C-045 .1 uF 50V
 C211 NOT USED
 C212-14 C-045 .1 uF 50V
 C216 C-048 .047 pF 50V
 C217 C-021 2.2 uF 25V
 C218 C-045 .1 uF 50V
 C219 C-021 2.2 uF 25V
 C220 NOT USED
 C221/22 C-045 .1 uF 50V

C223 C-012 .01 uF 50V
C224 C-003 .33 pF
C225 C-009 .002 uF 50V
C226 C-012 .01 uF 50V
C227/28 C-045 .1 uF 50V
C229 NOT USED
C230 C-045 .1 uF 50V
C231 C-012 .01 uF 50V
C232 C-006 470 uF
C233 C-053 220 uF

D201-3 D-005 1N914
D204 D-006 1N4735
D204-6 D-005 1N914
D207/8 NOT USED
D209-13 D-005 1N914
D214-16 NOT USED
D217-26 D-005 1N914

J201 J-065 10 x 2 PC SOCKET

Q201-4 T-002 2N3904

**NOTE: SCI #R-001 THROUGH R-092 ARE 5%
R101 THROUGH R-177 ARE 1%
R200 THROUGH R-228 ARE POTENTIOMETERS**

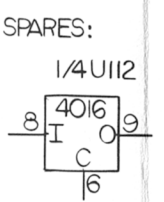
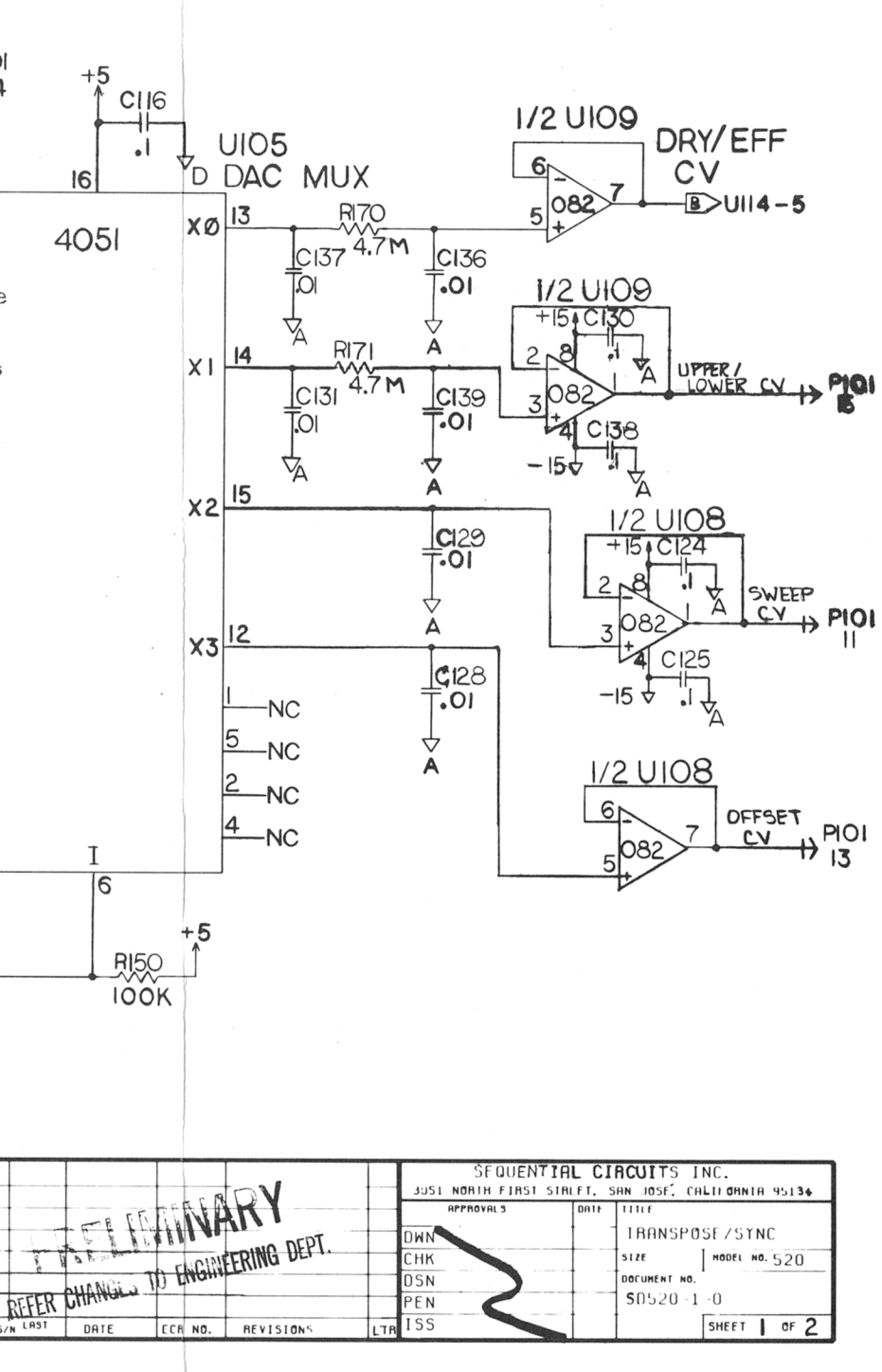
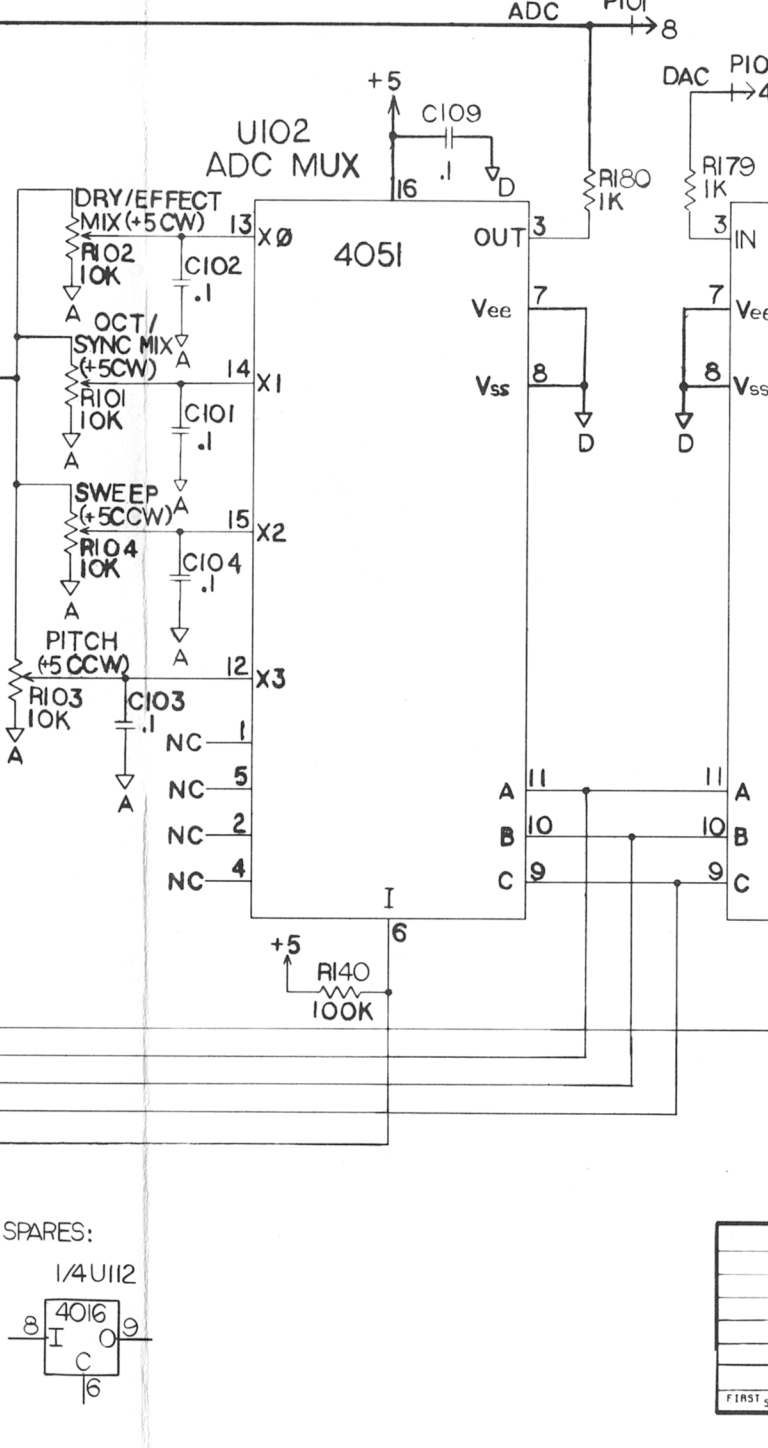
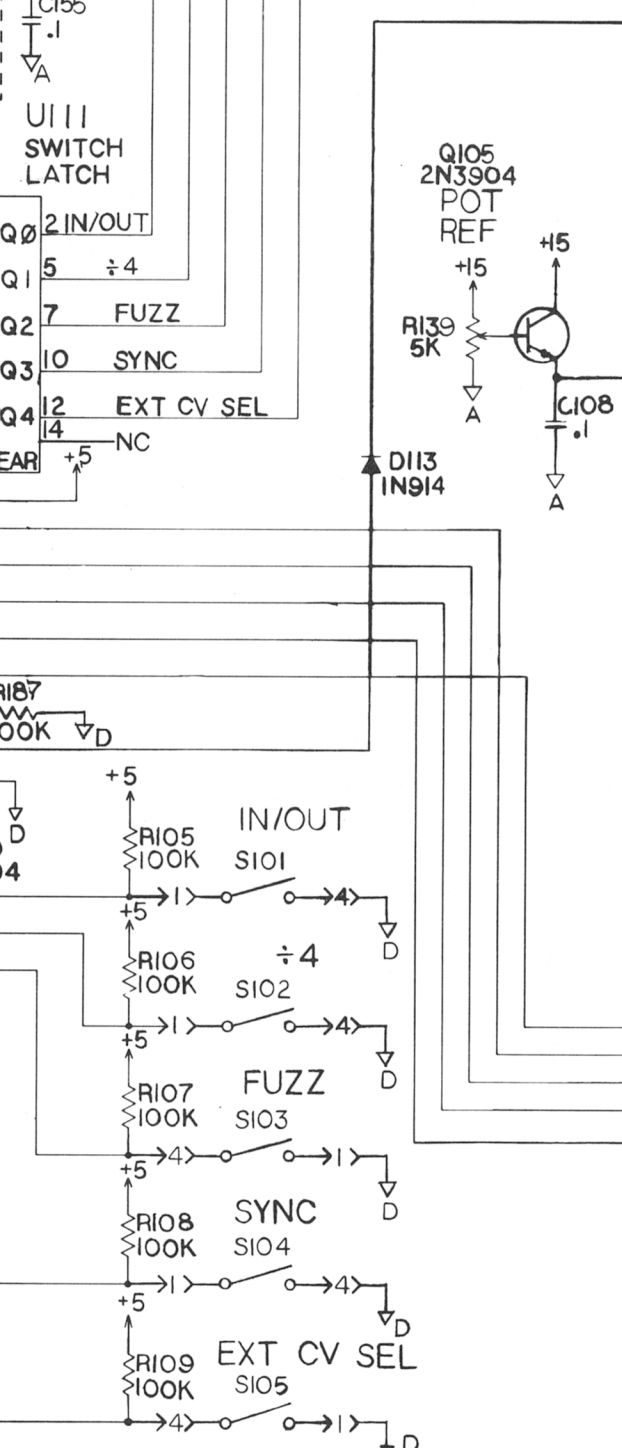
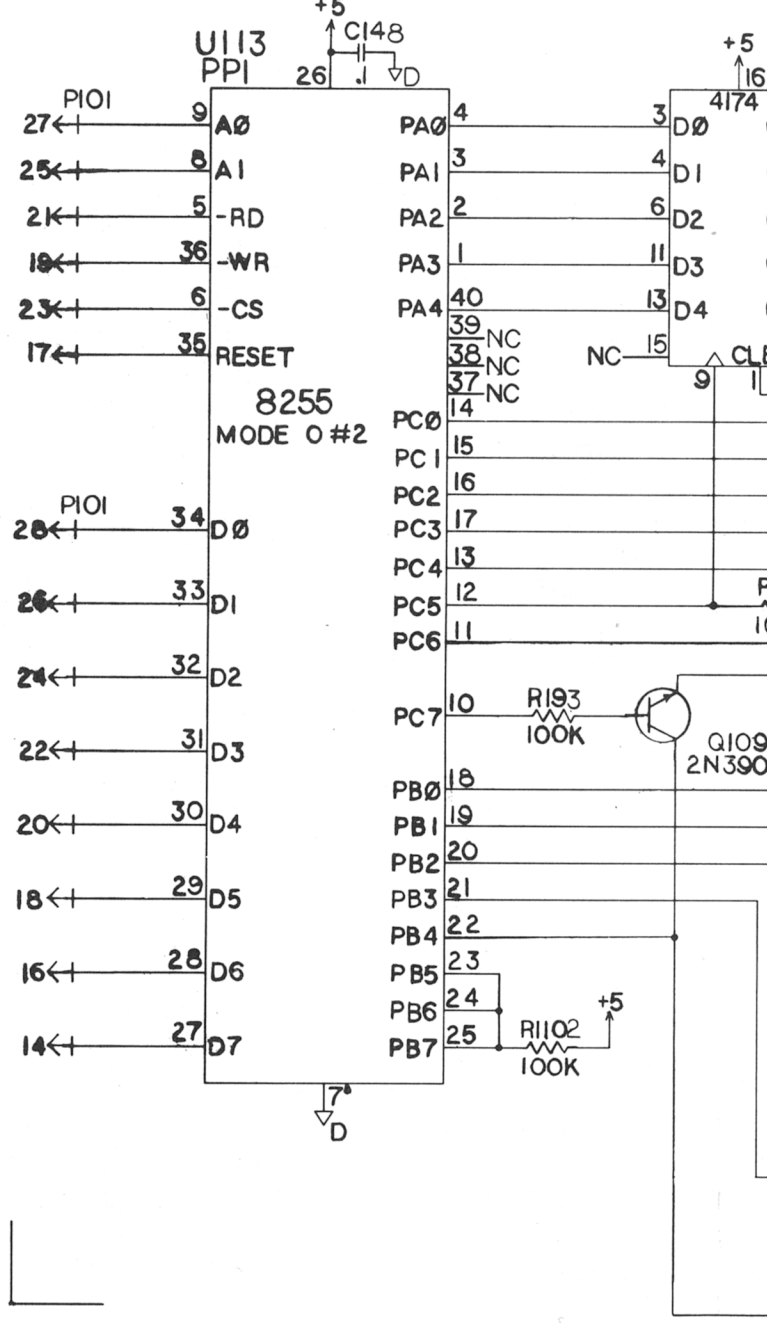
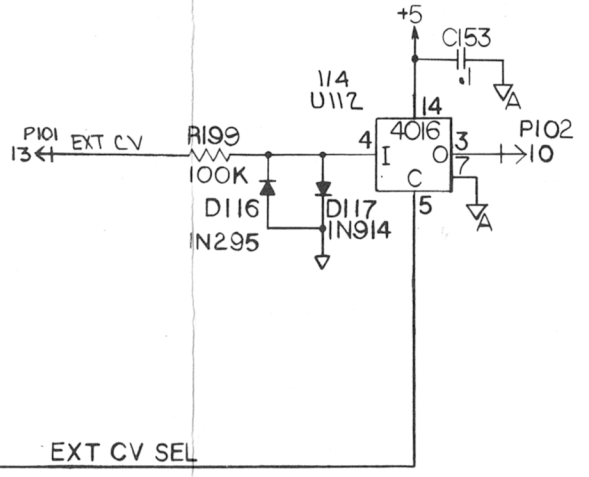
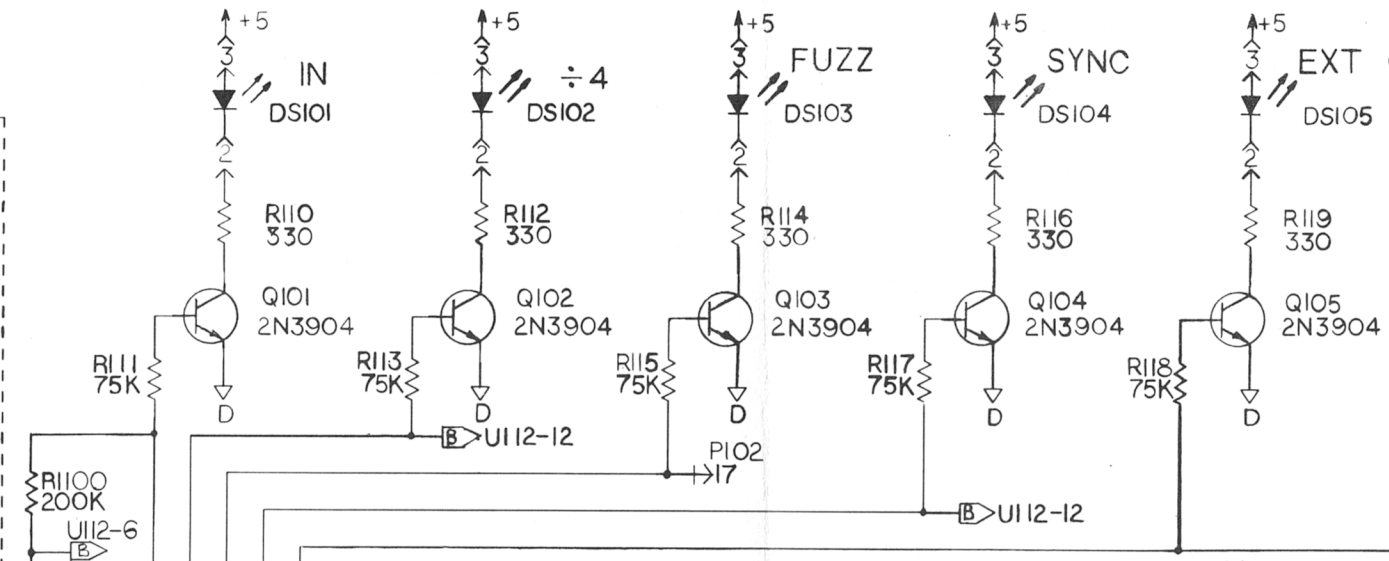
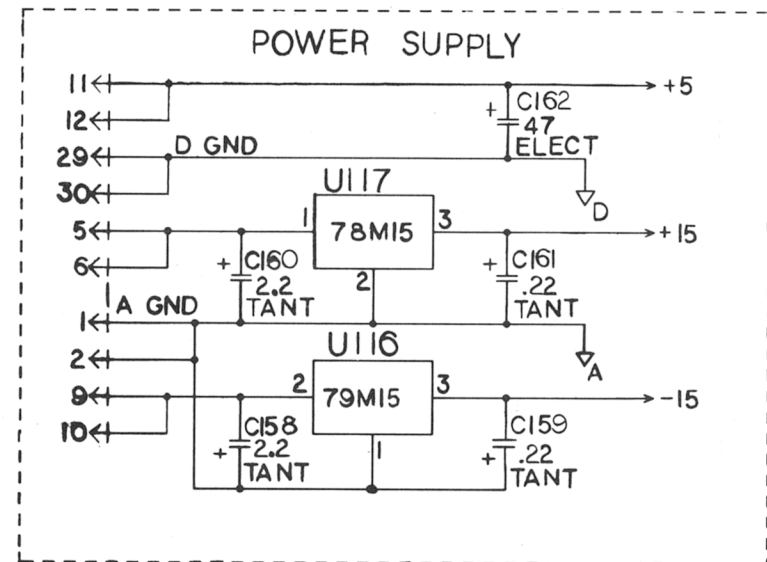
R201 R-031 3K
R202 R-041 150K
R203 R-092 110K
R204 R-071 11K
R205 R-083 820
R206 R-022 75K
R207 R-010 2K
R208 R-013 13K
R209 R-067 3.9K
R210 R-010 2K
R211 R-056 51K
R212 R-083 820
R214 R-056 51K
R215/16 R-040 22K
R217 R-045 10M
R218 R-082 820K
R219 R-025 100K
R220 R-026 200K
R221 NOT USED
R222 R-025 200K
R223 R-022 75K
R224 R-083 820
R225 R-012 10K
R226 R-081 620K
R227/28 R-040 22K
R229 R-025 100K

R230 R-012 10K
R231 R-058 240K
R232 R-087 220K
R233 R-061 4.7K
R234 R-083 820
R235 R-054 33K
R236 R-087 220K
R237 NOT USED
R238 R-092 110K
R239 R-087 220
R240 R-014 15K
R241 R-018 47K
R242 R-044 270K
R243 R-026 200K
R244 R-012 10K
R245 R-040 22K
R246 R-024 91K
R247 R-034 2.2K
R248 R-009 1.5K
R249 R-052 1.2K
R250 R-012 10K
R151 R-072 12K
R152 R-012 10K

U201 I-327 3360
U202 I-313 LM348 QUAD 741 OP AMP
U203 NOT USED
U204 I-313 LM348 QUAD 741 OP AMP
U205/6 I-312 TL082 DUAL BI FET OP AMP
U207 I-206 4016 QUAD ANA SWITCH
U208 I-312 TL082 DUAL BI FET OP AMP
U209 I-205 4013 DUAL FLIP FLOP

DOCUMENTS

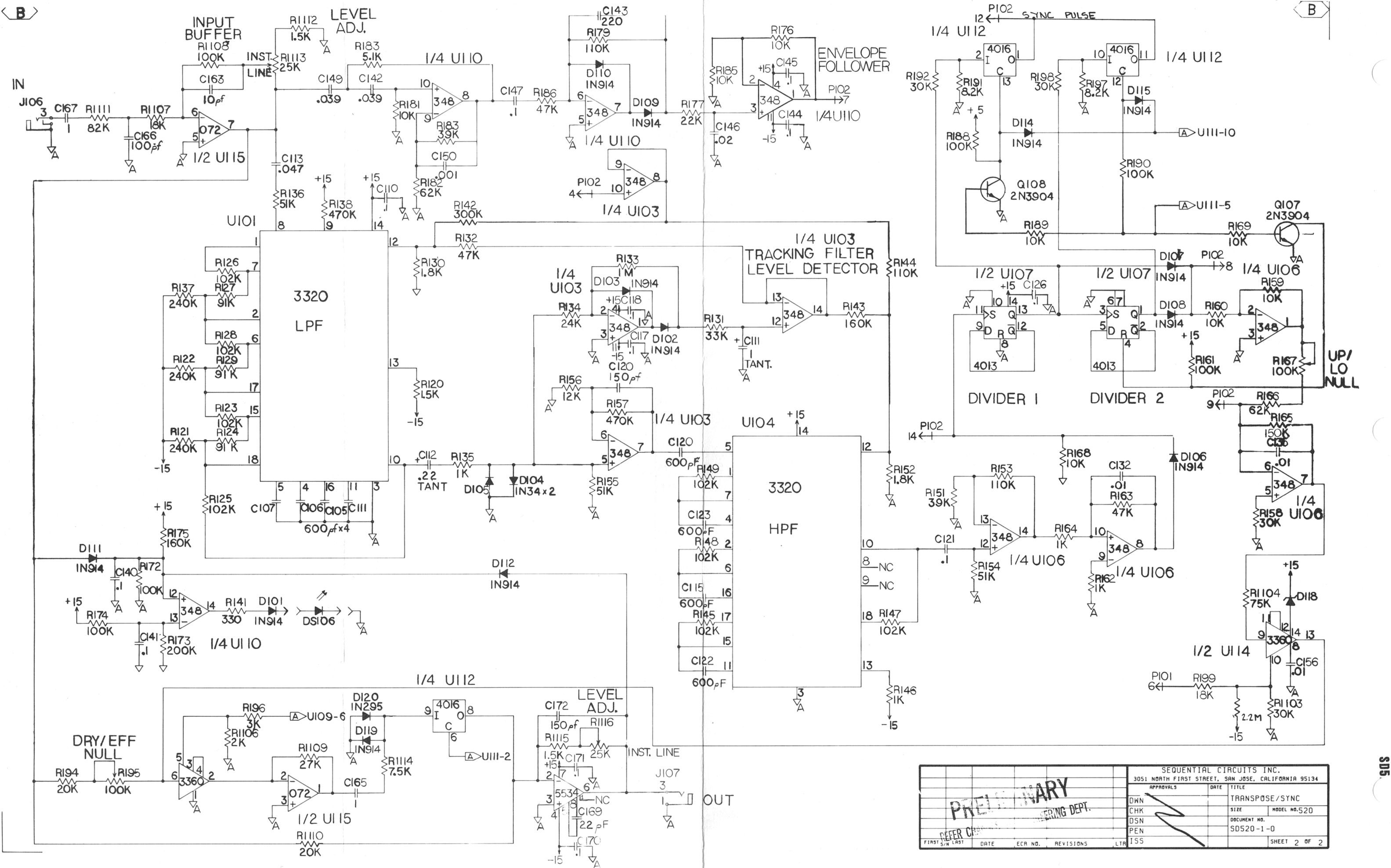
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SD520-1-0 (2/2) PCB 1
SD520-2-0 PCB 2



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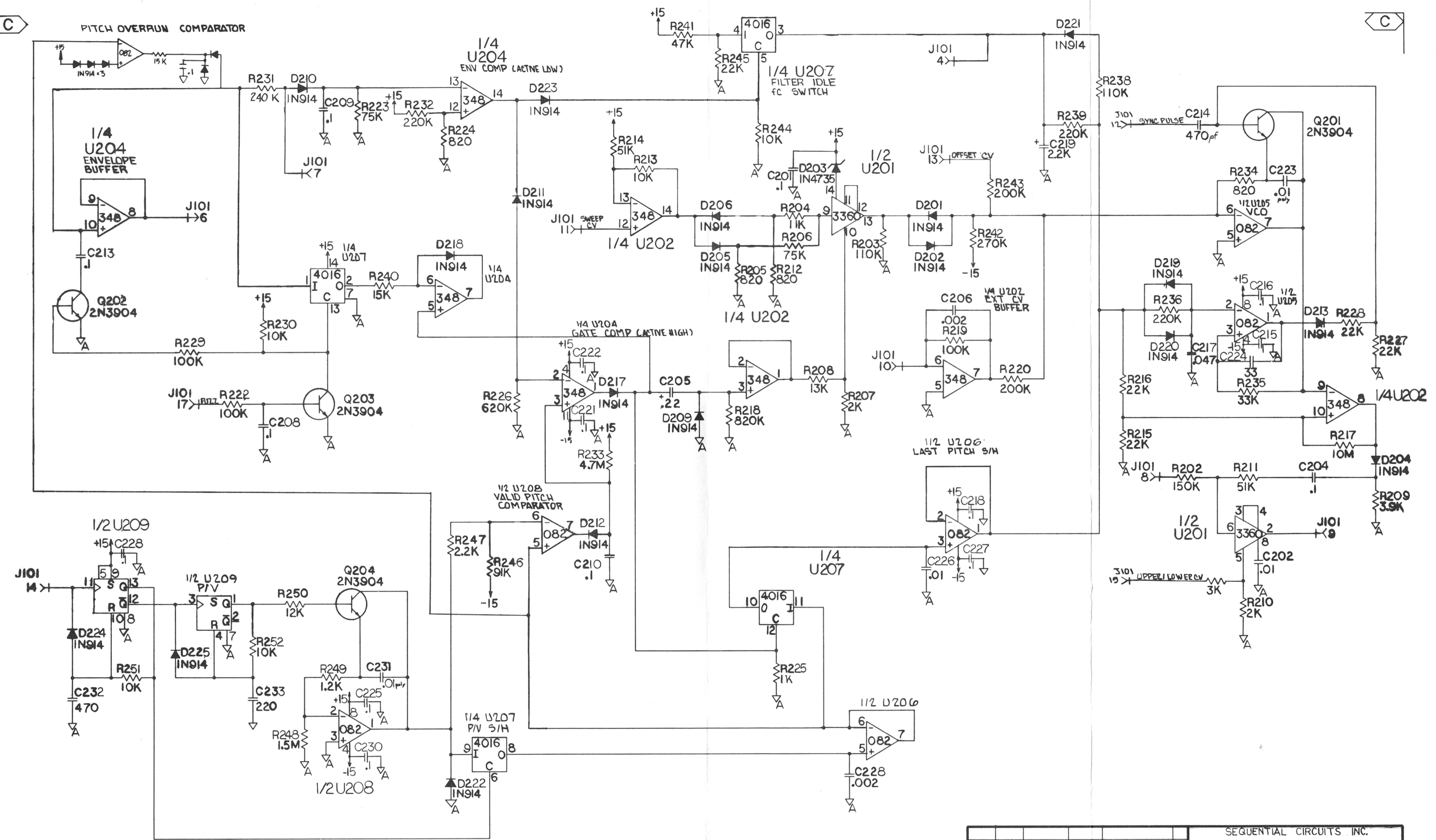


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