GROUP CENTRE INC.
P.O. Box No. 1444, Reseda, California 91335

(1)

U.S.A. SERVICE NOTES:

SERVICE NOTES --- SDS V MODULE REPLACEMENT 20/02/82

When removing or replacing modules make sure that the black locating key is still in position in the centre of the connecting block. The keys can sometimes fall out when a module is removed. Failure to locate the module properly will mean the module will not work and may prevent the rest of the unit from functioning.

Factory sounds can be changed by adjusting the following pre-set controls:-

Noise pitch = R18
Tone pitch = R17
Bend = R1
Decay = R5
Click bal = R13
Noise-tone bal = R9
Left/Right bal = R28

It is advisable to remove the screws from the adjacent modules to facilitate easy removal of modules.

It is unnecessary to remove the two slotted screws in the front panel only the four corner posi-drive screws. The Mix module on the right hand side cannot be removed until the 26 fingers are de-soldered from the Buss board running along the back of the rack.

Do not fit cymbal or hi hat in Channel 1 position as the 5v regulater on the piggyback board could short on the left hand cheek of the chassis.

It is not recommended that more than five cymbals or hi hats are fitted in any one rack. Contact the factory for a higher powered rack if seven cymbals are required in a rack.

OTHER SERVICE ADJUSTABLE PRE-SETS

R27 Filter Q (resonance)

R25 Filter (Dynamic Sweep)

PLEASE NOTE
Our New Telephone No.
213-884-2653

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OTHER SERVICE ADJUSTABLE PRE-SETS:/CONT....

R71	Noise generator gain
R26	Oscillator modulation depth (Snare only)
R28	Stereo Left/Right balance

PRE-SET ADJUSTMENTS FOR DIFFERENT MODULES:

The noise, tone, bend, decay, noise tone, click drum, (factory pre-sets numbers R18, 17, 1, 5, 9 and 13) are set for a pleasing factory sound. Other pre-sets are set according to the module type as follows:-

All pre-set positions viewed from top

BASS

R25	3/4 clockwise
R28	1/2 way
R27	(if fitted) Fully anti-clockwise
R26	(if fitted) Fully anti-clockwise
R71	Set for equal noise and tone volume

SNARE

R25	Fully anti-clockwise
R28	1/2 way
R27	2/3 clockwise
R71	Set for slightly more noise than tone
R26	1/2 way

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PRE-SET ADJUSTMENTS FOR DIFFERENT MODULES:/CONT...

HIGH TOM TOM

R25 3/4 clockwise

R28 7/8 clockwise

R27 (if fitted) Fully anti-clockwise

R71 Slightly less noise than tone

R26 (if fitted) Fully anti-clockwise

MED.TOM TOM

Same as high tom tom except

R28 1/2 way

LOW TOM TOM

Same as high tom except

R28 7/8 anti-clockwise

Note: Extra tom toms can be incorporated into the rack. The stereo image of each tom should be adjusted by R28 accordingly.

HI HAT (DIGITAL)

R28 7/8 clockwise

R71 Set for equal noise and tone

CYMBAL

R28 1/2 way or where desired if two or more cymbals in a rack.

R71 Equal noise and tone

If two or more cymbals are fitted to a rack it may be desirable to have different bell pitches. This can be achieved by raising or lowering the value of the 820 ohms resister soldered on the rear of the module i.e. 470 ohms, 1K.

REPLACEMENT OF KNOBS:

Knobs are of the collett type fixing and can be removed with a special screwdriver which has a slot cut out of the centre of the plate. First remove the plastic cover of the knob and then turn the collett anti-clockwise to release the knob.

OUTPUT MIS-MATCH:

The outputs of the SDS 5 are wired as follows:-

Pins 1 and 2	Ground
Pin 3	Hot

This can cause problems on some desks and can usually be re-wired as necessary. See ACCESS TO BUSS AND BACK PANEL:

If the unit appears to be dead but the trigger lights are flashing when the pads are struck, but none of the outputs work, output wiring mis-match is the most likely cause of the problem.

The separate outputs Channel 1 to 7 are low impedance, low level microphone outputs, whereas the mix right and left outputs are at line level.

The individual outputs can be converted to line level if required by removing the 68 ohm resistor on the back of the channel output sockets. See ACCESS TO BUSS AND BACK PANEL:

The volume controls on the right hand mix channel affect only the mix output. They have no effect on the individual channel outputs or the right and left outputs. Thus a drummer can mix his own monitor level on stage leaving the main channel outputs to the P.A. unnaffected by level changes he may make on stage.

ACCESS TO BUSS AND BACK PANEL:

To remove the top cover, remove the two black screws on either side of the case. Lever off the chrome handle covers and remove the handle retaining screws. Remove the rear three rubber feet and the six posidrive screws on the back panel.

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FAULTS LIST:

SELF TRIGGERING:

If a module is triggering continuously, the most likely cause is bad connection between the buss board and the module or the fixing bolts holding the module front panel to the front panel p.c.b. are loose.

Cure - clean and re-tin module connector fingers and tighten 6BA front panel retaining nuts.

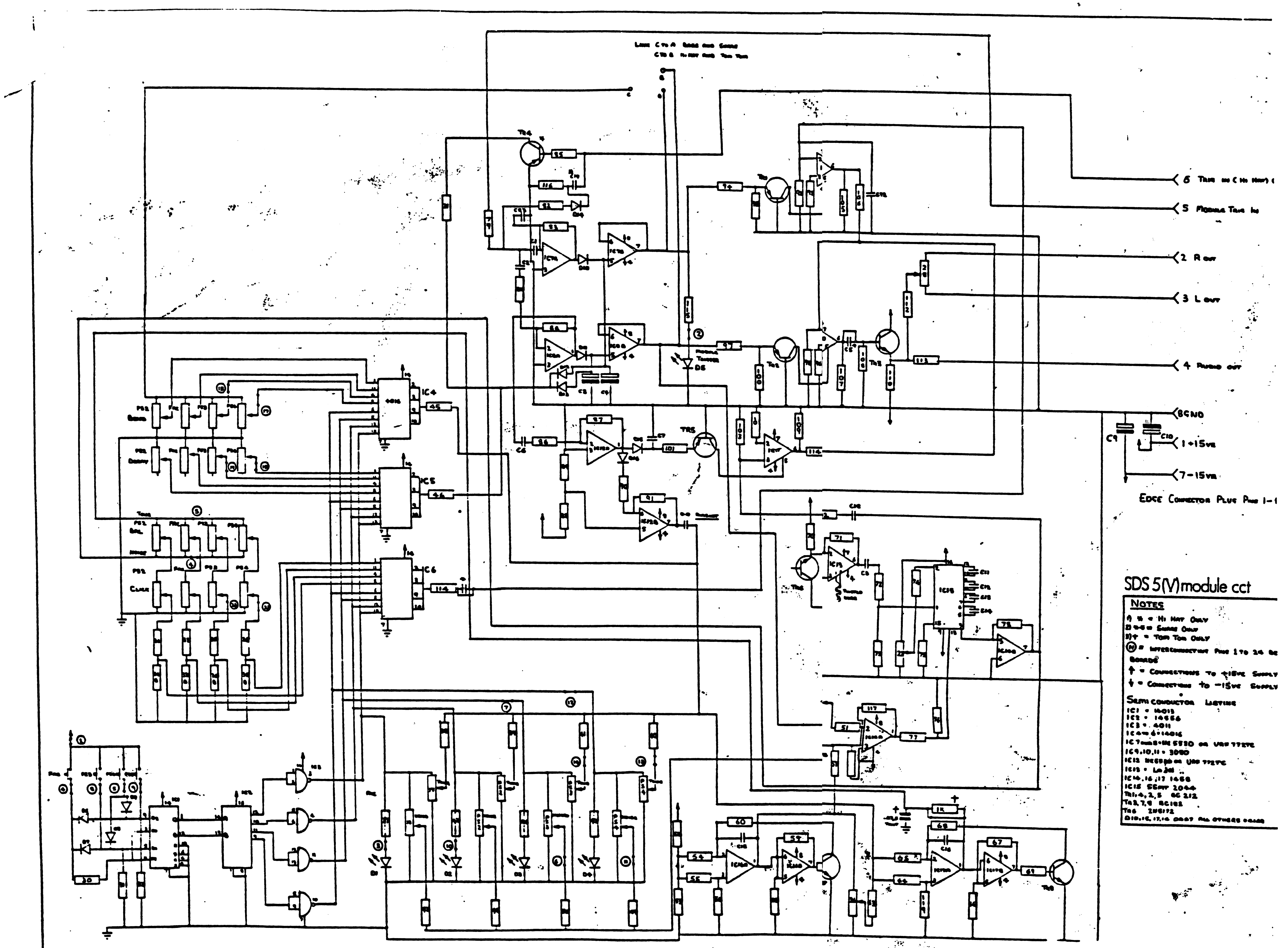
MODULE FAILURE:

Module appears to trigger when pad is struck but no sound comes from mix output.

Check to see if there is output from the module via its individual output and the stereo outputs. If there is no output here either, the module is at fault. If there is output then the relevant mix volume control is faulty. Cure: Repair module or replace mix volume pot.

TRIGGERING FROM INDUCTIVE LOAD SWITCHING:

Occasionally, relays, electric motors and other heavy current switching can cause the SDS 5 to trigger. This normally can be overcome by suppressing the interference at source.



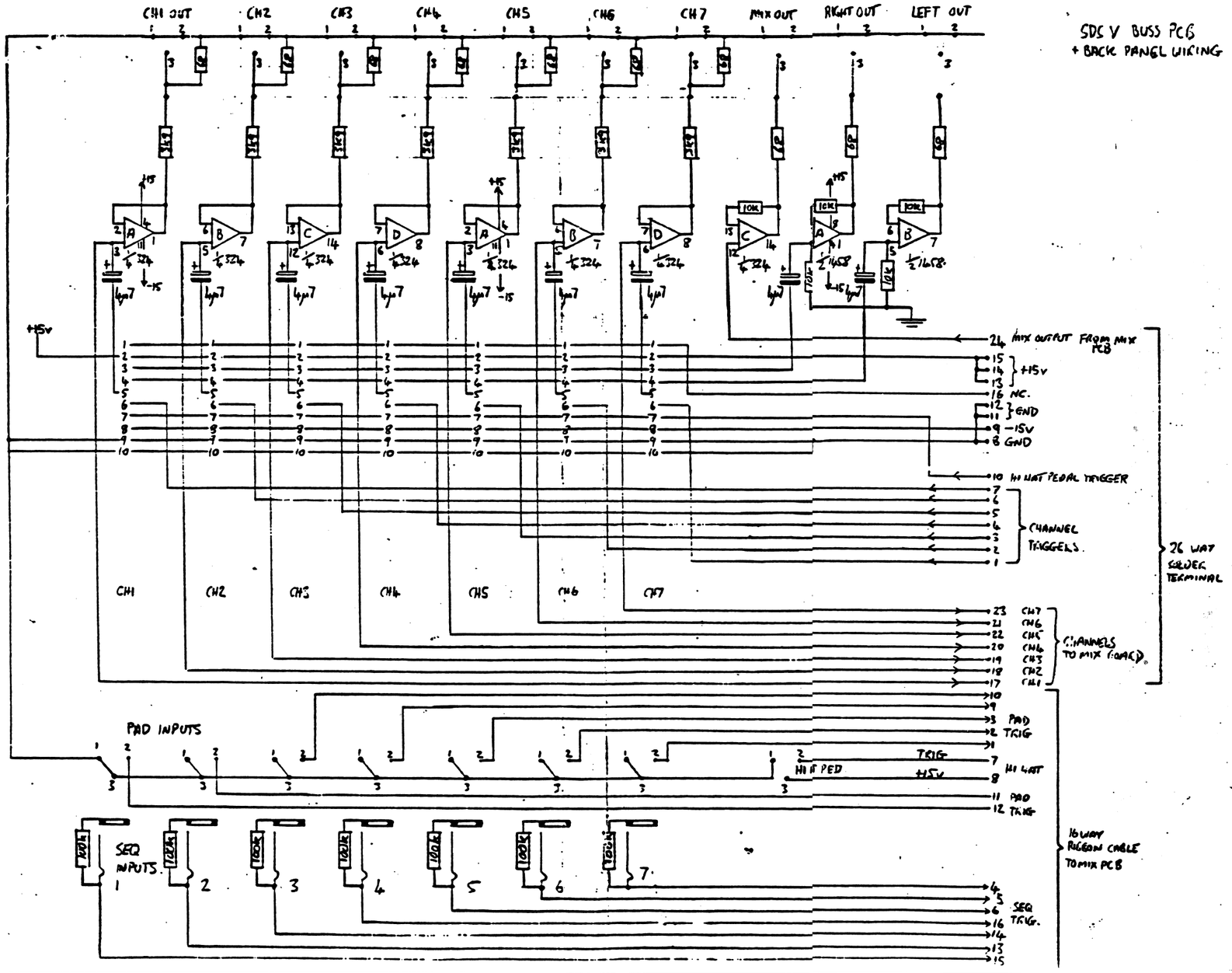
SDS 5(V) module cct

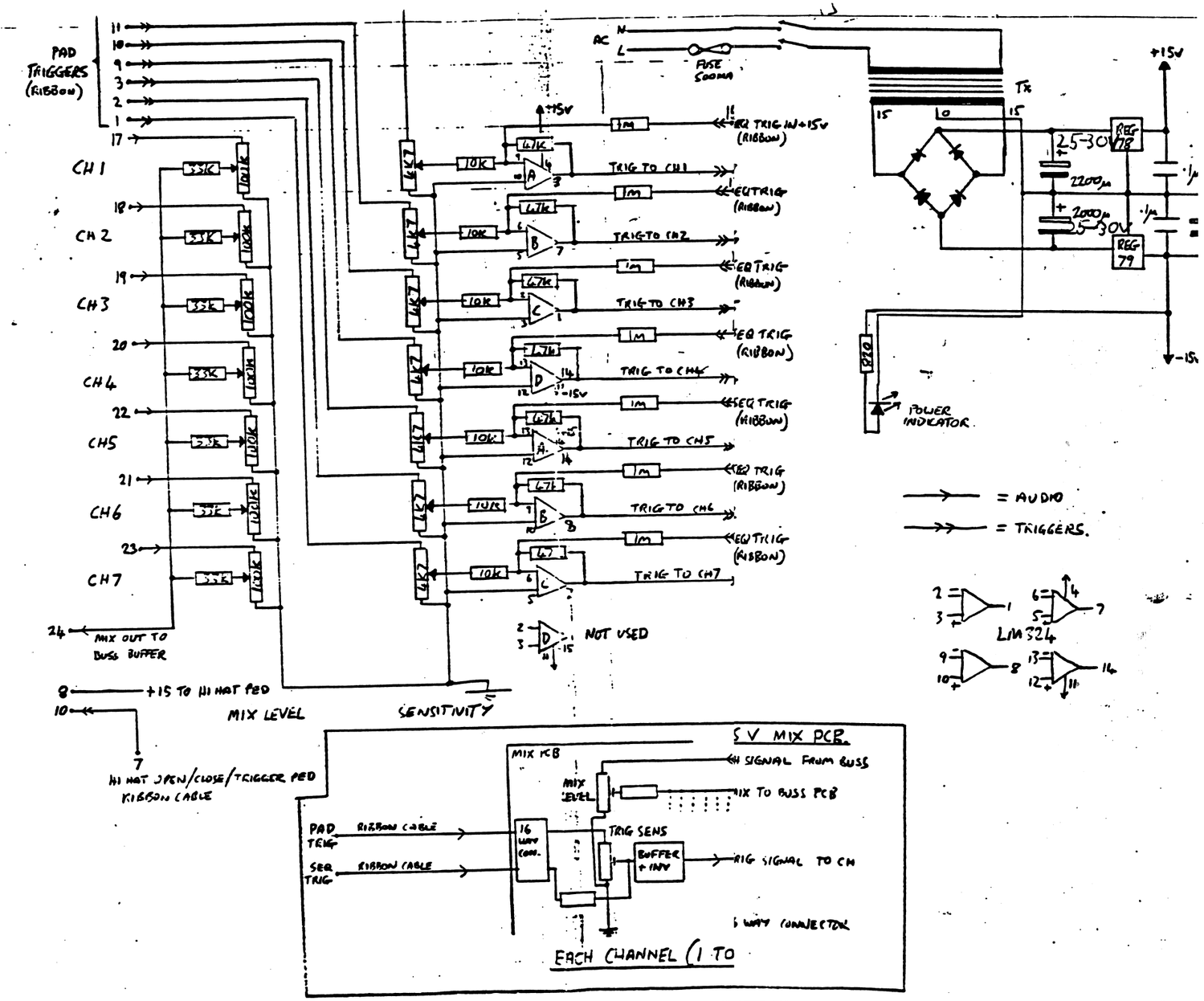
Notes

1) ✻ = Hi Hat Only
2) ✻✻ = Snare Only
3) † = Tom Tom Only
(N) = Interconnecting Pins 1 to 24 between Boards
↑ = Connections to +15vc Supply
↓ = Connections to −15vc Supply

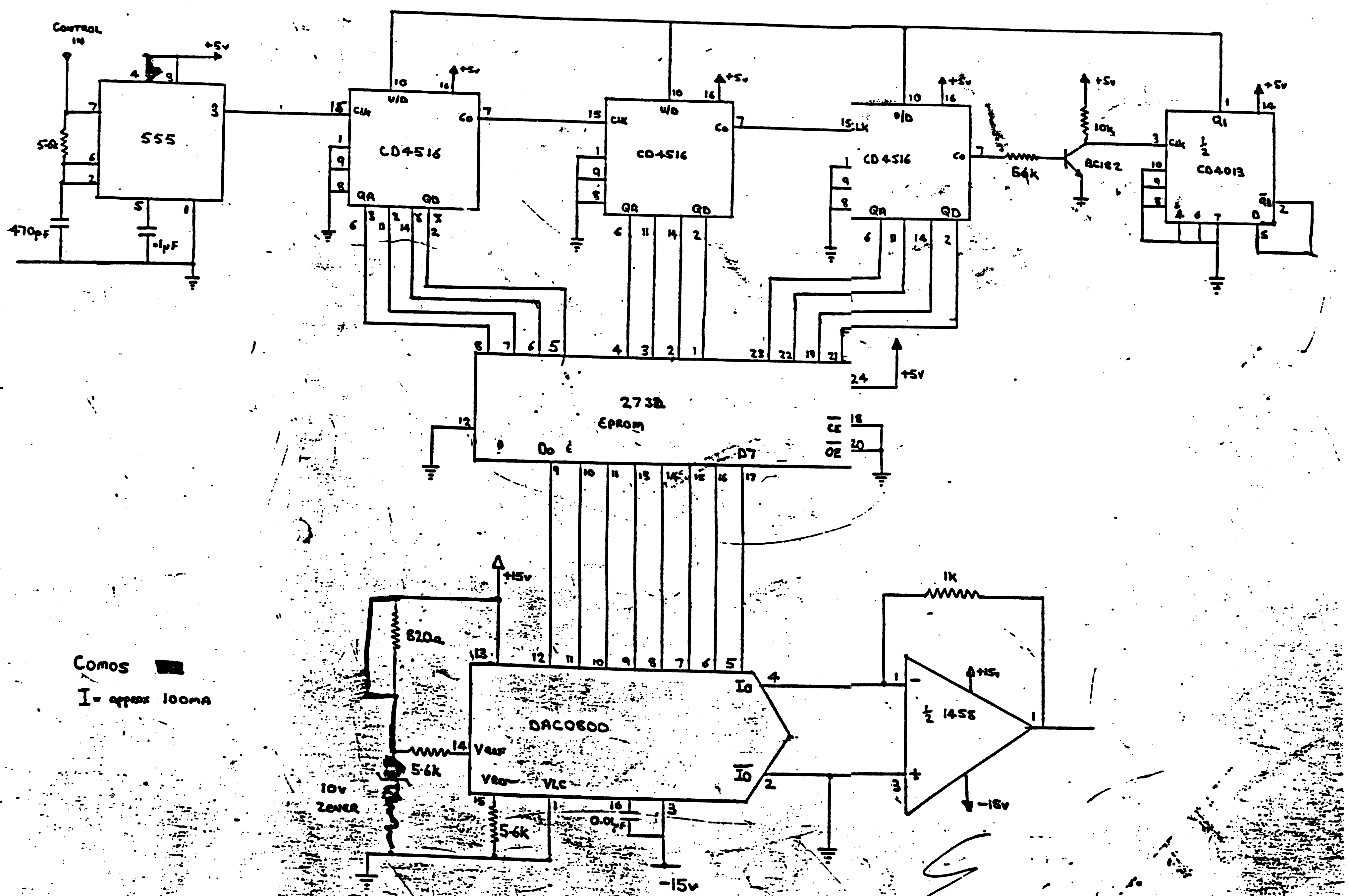
Semiconductor Listing
IC1 = 14013
IC2 = 14556
IC3 = 4011
IC4 and 6 = 14016
IC7 and 8 = NE 5530 or UAF 772TC
IC9,10,11 = 3080
IC12 NE5530 or UAF 772TC
IC13 = LM311
IC14,16,17 1458
IC15 SEMT 2044
TR1,4,2,5 BC 212
TR3,7,9 BC182
TR6 2N5172
D10,15,17,18 OA47 All others 1N4148

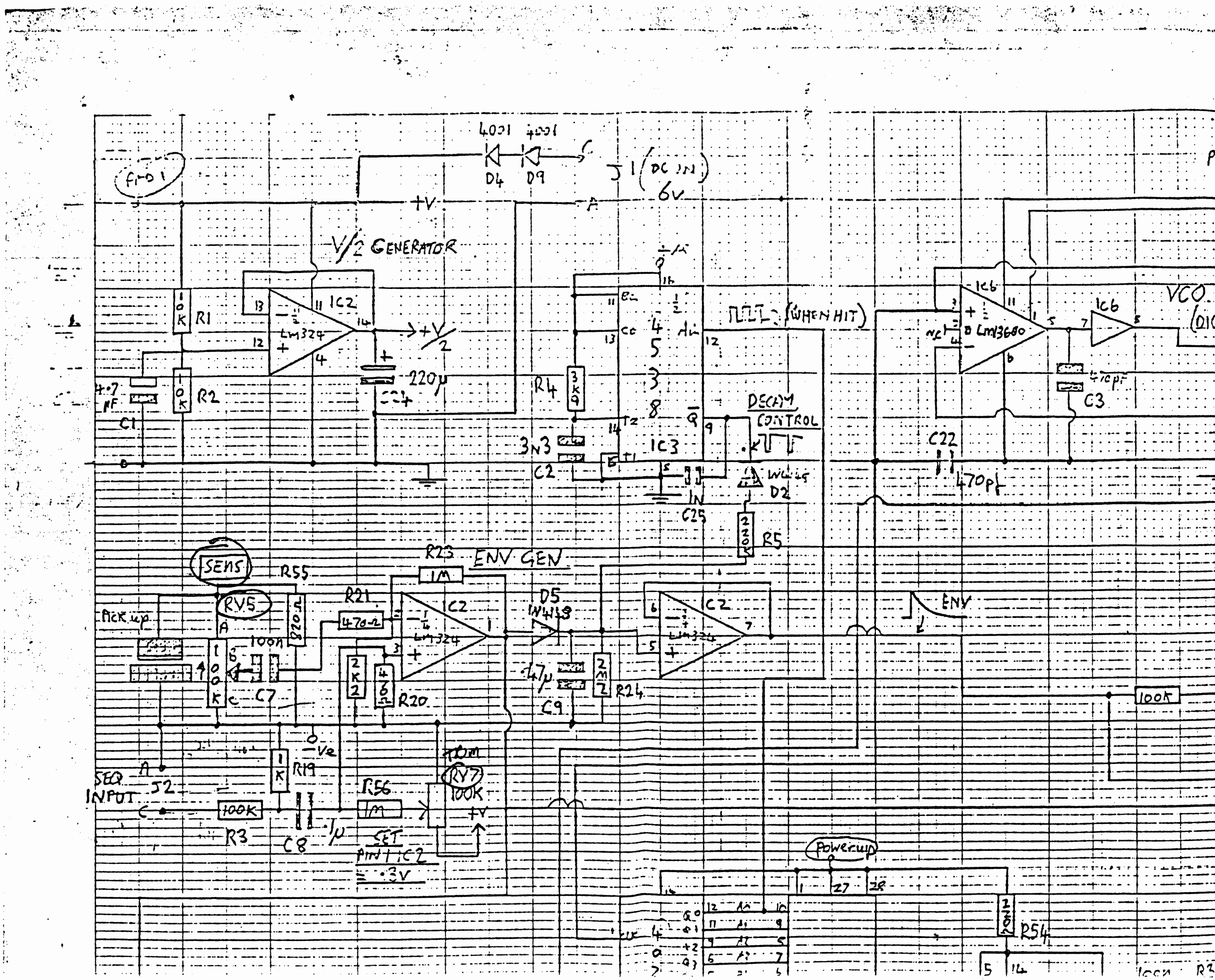
SDS V BUSS PCB
+ BACK PANEL WIRING



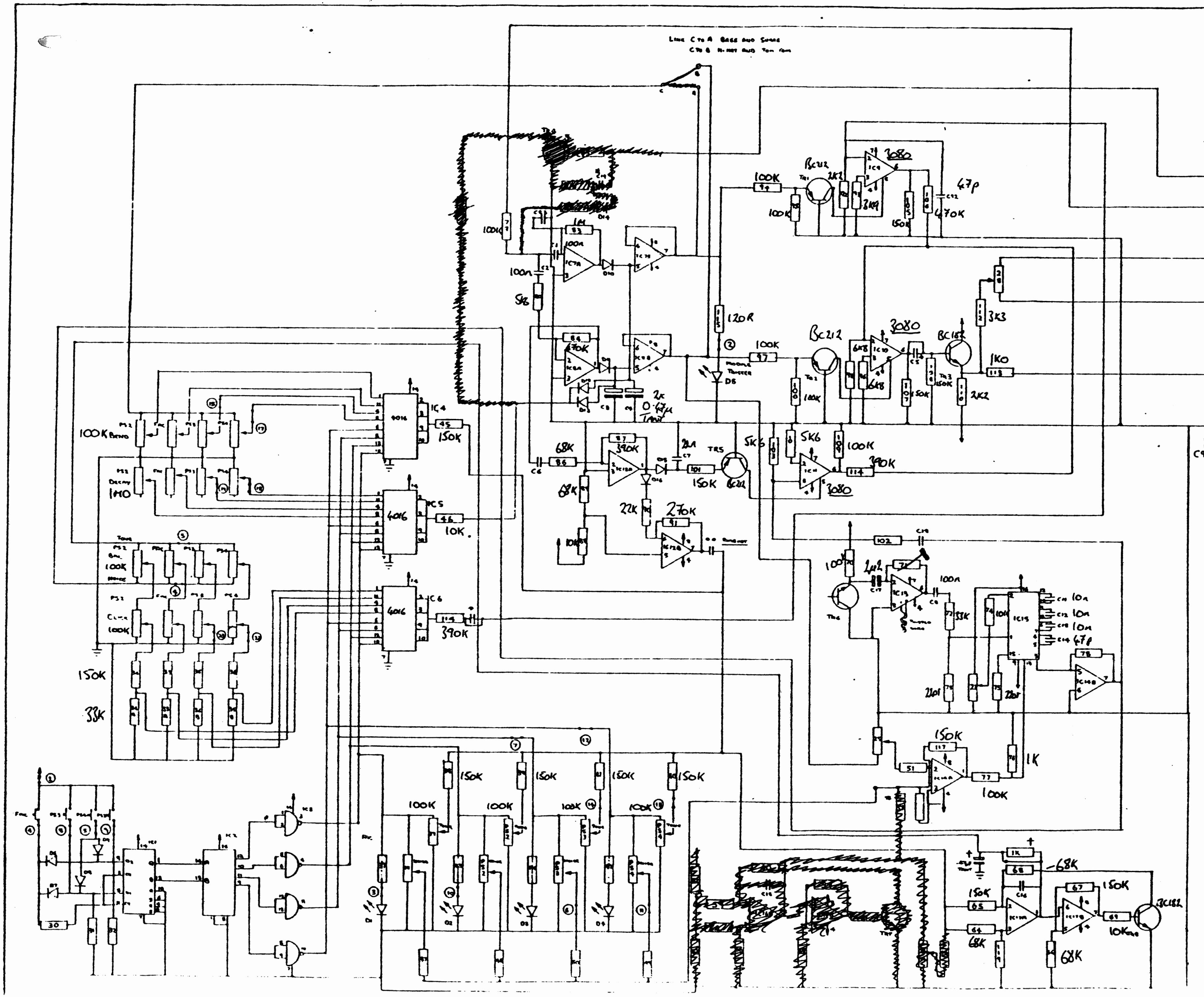

PAD TRIGGERS (RIBBON)
11
10
9
3
2
1
17
CH 1
18
CH 2
19
CH 3
20
CH 4
22
CH 5
21
CH 6
23
CH 7
24
MIX OUT TO BUSS BUFFER
8
+15 TO HI HAT PED
10
7
HI HAT OPEN/CLOSE/TRIGGER PED RIBBON CABLE
MIX LEVEL
SENSITIVITY
AC
N
L
FUSE 500MA
Tx
15
10
15
+15V
-15V
2.5-30V
2200µ
2000µ
2.5-30V
REG 78
REG 79
220
POWER INDICATOR
TRIG TO CH1
TRIG TO CH2
TRIG TO CH3
TRIG TO CH4
TRIG TO CH5
TRIG TO CH6
TRIG TO CH7
EQ TRIG (RIBBON)
NOT USED
= AUDIO
= TRIGGERS.
LM324

5V MIX PCB
MIX PCB
HI SIGNAL FROM BUSS
MIX LEVEL
MIX TO BUSS PCB
PAD TRIG
RIBBON CABLE
SEQ TRIG
RIBBON CABLE
16 WAY CONN.
TRIG SENS
BUFFER + INV
HIGH SIGNAL TO CH
5 WAY CONNECTOR
EACH CHANNEL (1 TO


CONTROL IN
+5v
555
470pF
.1µF
CD4516
CD4516
CD4516
U/D
CLK
Co
QA
QD
10k
56k
BC182
Q1
CLK
½
CD4013
D
2732
EPROM
Do
D7
CE
OE
+5V
+15v
820Ω
5.6k
5.6k
10v
ZENER
Vref
VLC
DAC0800
Io
0.01µF
-15v
1k
+15v
½ 1458
-15v
Comos [redacted]
I= approx 100mA



4001
D4
D9
J1 (DC IN) 6V
+V
V/2 GENERATOR
IC2
LM324
+V/2
220μ
R1
R2
C1
R4
3n3
C2
IC3
4538
C25
D2
R5
DECAY CONTROL
(WHEN HIT)
IC6
LM3600
VCO
C3
C22
470pF
SENS
RV5
R55
Pick up
C7
100n
R21
R23
1M
ENV GEN
D5
1N4148
C9
R24
R20
R19
ENV
100K
SEQ INPUT
J2
R3
100K
C8
R56
1M
RV7
SET PIN 1 IC2 = ·3V
Powerup
R54



SDS 5(V) module cct (Tom-Tom)

NOTES

1) ~~... Hi Hat Only~~
2) ~~... Snare Only~~
3) † = Tom Tom Only

(N) = Interconnecting Pins 1 to 24 between A.. Boards

↑ = Connections to +15ve Supply

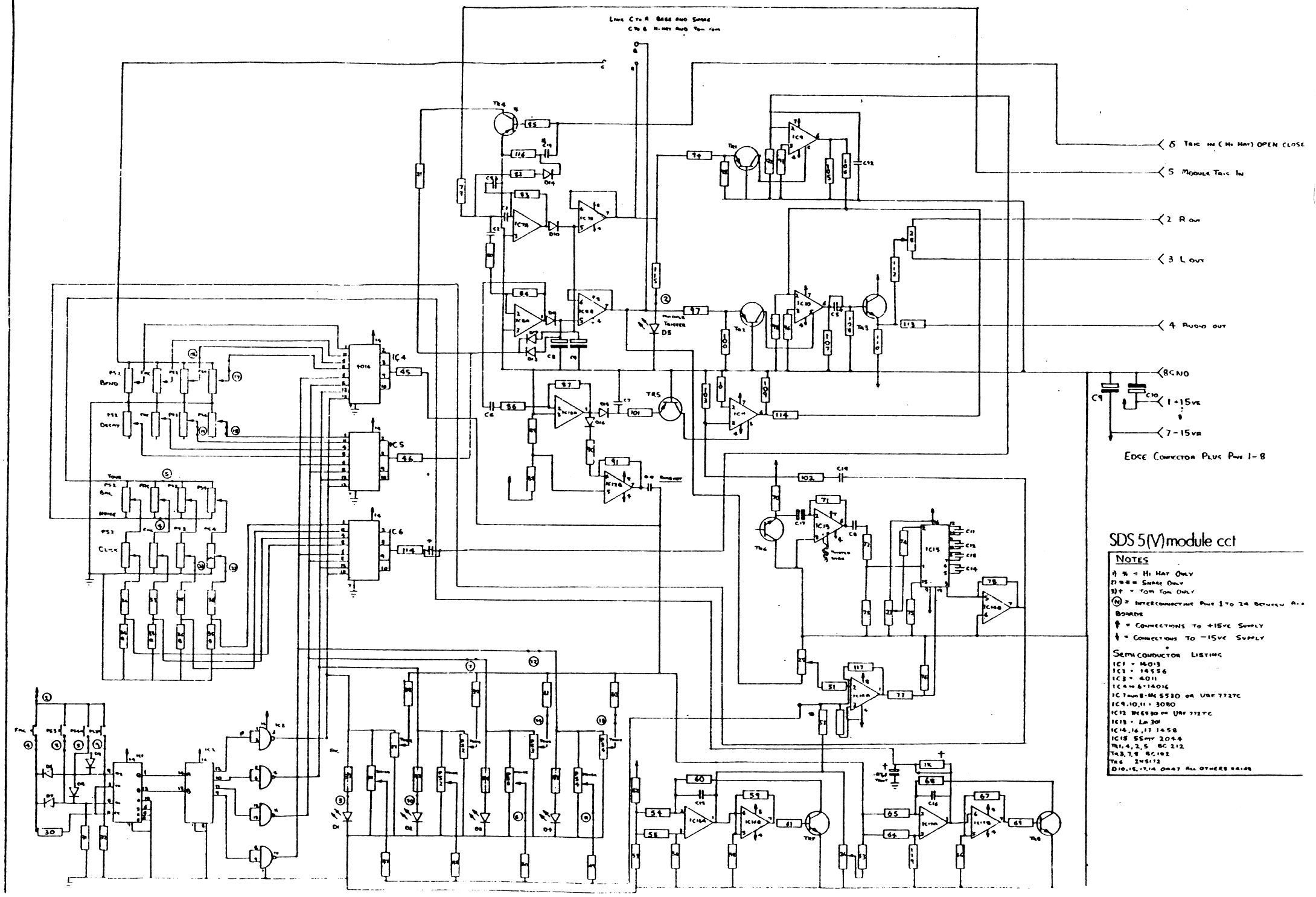
↓ = Connections to −15ve Supply

Semiconductor Listing

IC1 = 14013
IC2 = 14556
IC3 = 4011
IC4 to 6 = 14016
IC7 and 8 = ~~...~~ LF353
IC9, 10, 11 = 3080
IC12 ~~...~~ LF353
IC13 = LM 301
IC14, 16, 17 1458
IC15 SSM 2044
TR1, 4, 2, 5 BC 212
TR3, 7, 8 BC182
TR6 2N5172
D10, 15, 17, 14 OA47 All others 1N4148

Schematic + Component Values

SDS 5 Tom. Module



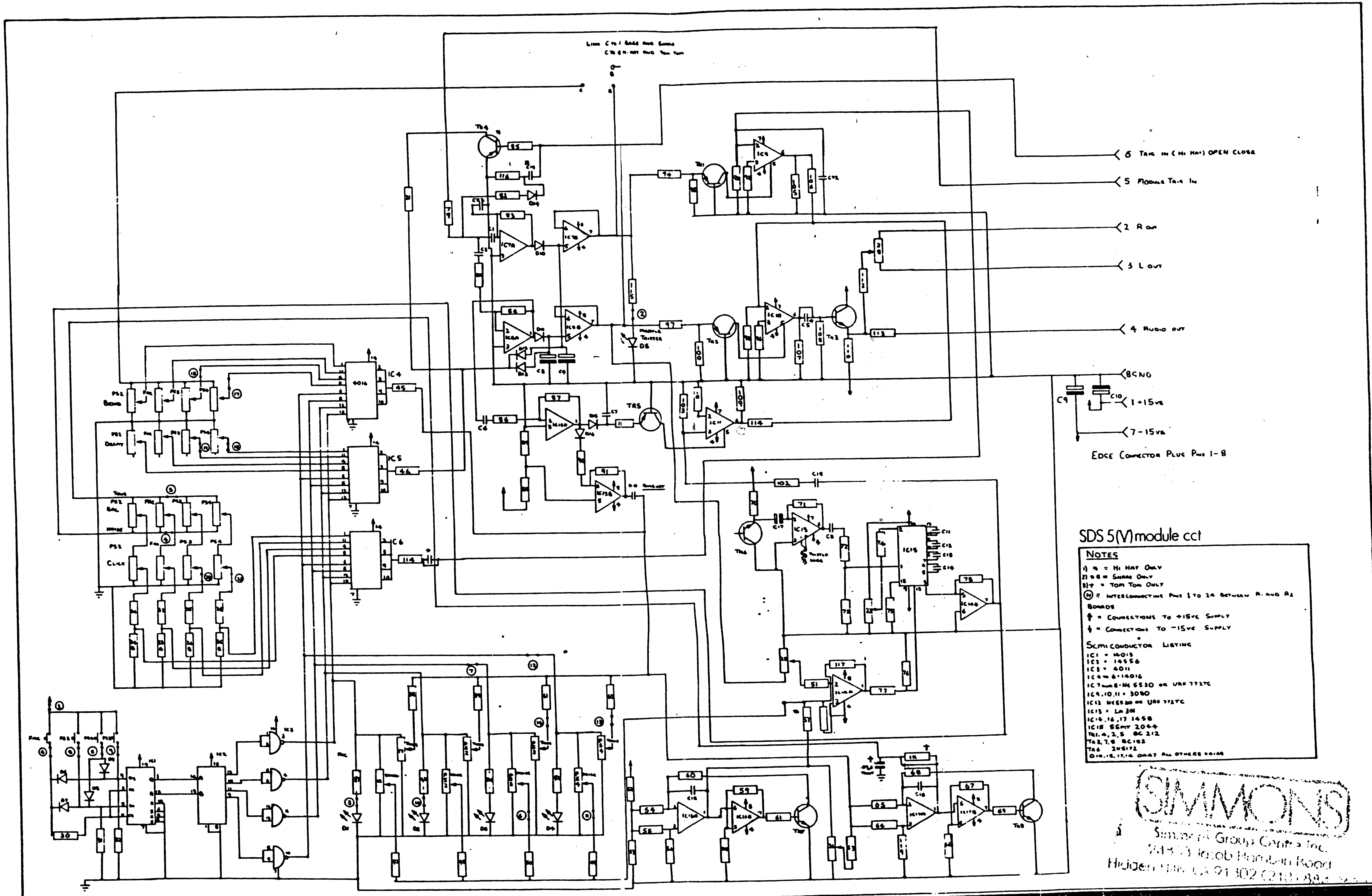
SDS 5(V) module cct

NOTES

1) % = HI HAT ONLY
2) ** = SNARE ONLY
3) † = TOM TOM ONLY
(N) = INTERCONNECTING PINS 1 TO 24 BETWEEN P.C.B BOARDS
↑ = CONNECTIONS TO +15VR SUPPLY
↓ = CONNECTIONS TO −15VR SUPPLY

SEMICONDUCTOR LISTING

IC1 = 4013
IC2 = 14556
IC3 = 4011
IC4 to 6 = 14016
IC7 and 8 = MK 5520 OR UAF 772TC
IC9, 10, 11 = 3080
IC12 = CA3130 OR UAF 772TC
IC13 = LM 301
IC14, 16, 17 = 1458
IC15 = SSMT 2044
TR1, 4, 2, 5 = BC 212
TR3, 7, 8 = BC 182
TR6 = 2N5172
D10, 15, 17, 18 ONLY ALL OTHERS = OA 90



SDS 5(V) module cct
NOTES
1) ∗ = HI HAT ONLY
2) ∗∗ = SNARE ONLY
3) † = TOM TOM ONLY
(N) = INTERCONNECTING PINS 1 TO 24 BETWEEN A1 AND A2 BOARDS
↑ = CONNECTIONS TO +15VE SUPPLY
↓ = CONNECTIONS TO −15VE SUPPLY
SEMICONDUCTOR LISTING
IC1 = 14013
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IC3 = 4011
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IC13 = LM301
IC14,16,17 1458
IC15 SSM 2044
TR1,4,2,5 BC212
TR3,7,8 BC182
TR6 2N5172
6 TRIG IN (HI HAT) OPEN CLOSE
5 MODULE TRIG IN
2 R OUT
3 L OUT
4 AUDIO OUT
8 GND
1 +15VE
7 −15VE
EDGE CONNECTOR PLUG PINS 1–8
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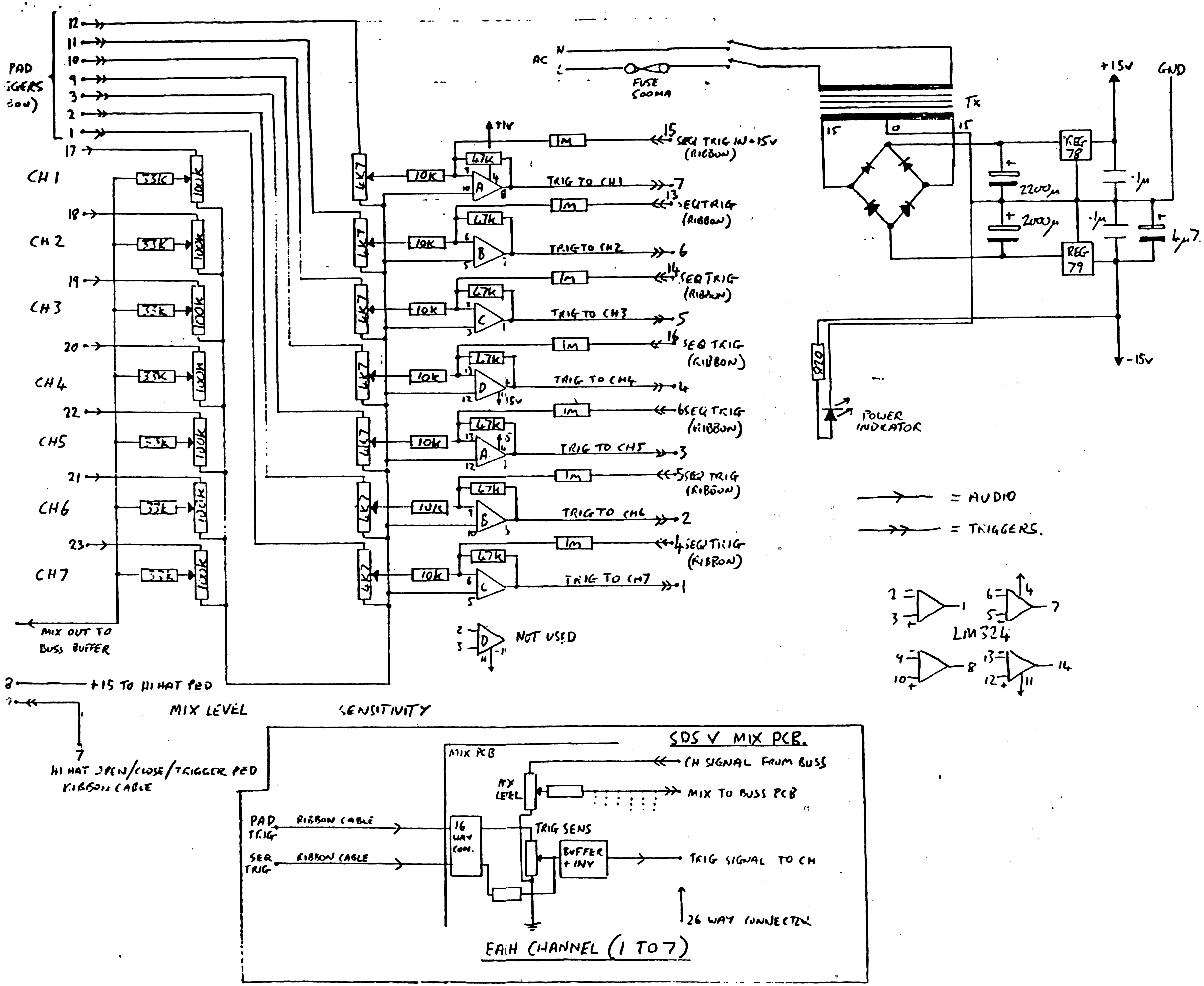
PAD TRIGGERS (RIBBON)
12 11 10 9 3 2 1
17 18 19 20 22 21 23
CH 1
CH 2
CH 3
CH 4
CH 5
CH 6
CH 7
33k
100k
4K7
10k
47k
1M
+15V
SEQ TRIG IN +15V (RIBBON)
TRIG TO CH1
SEQ TRIG (RIBBON)
TRIG TO CH2
TRIG TO CH3
TRIG TO CH4
TRIG TO CH5
TRIG TO CH6
TRIG TO CH7
NOT USED
MIX OUT TO BUSS BUFFER
+15 TO HI HAT PED
HI HAT OPEN/CLOSE/TRIGGER PED RIBBON CABLE
MIX LEVEL
SENSITIVITY
AC
N
L
FUSE 500MA
Tx
15
0
15
2200μ
2200μ
REG 78
REG 79
·1μ
·1μ
4μ7
+15V
GND
-15V
820
POWER INDICATOR
= AUDIO
= TRIGGERS.
LM324
SDS V MIX PCB.
MIX PCB
CH SIGNAL FROM BUSS
MIX LEVEL
MIX TO BUSS PCB
PAD TRIG
SEQ TRIG
RIBBON CABLE
RIBBON CABLE
16 WAY CON.
TRIG SENS
BUFFER + INV
TRIG SIGNAL TO CH
26 WAY CONNECTOR
EACH CHANNEL (1 TO 7)

SDS V BUSS PCB
+ BACK PANEL WIRING

SIMMONS
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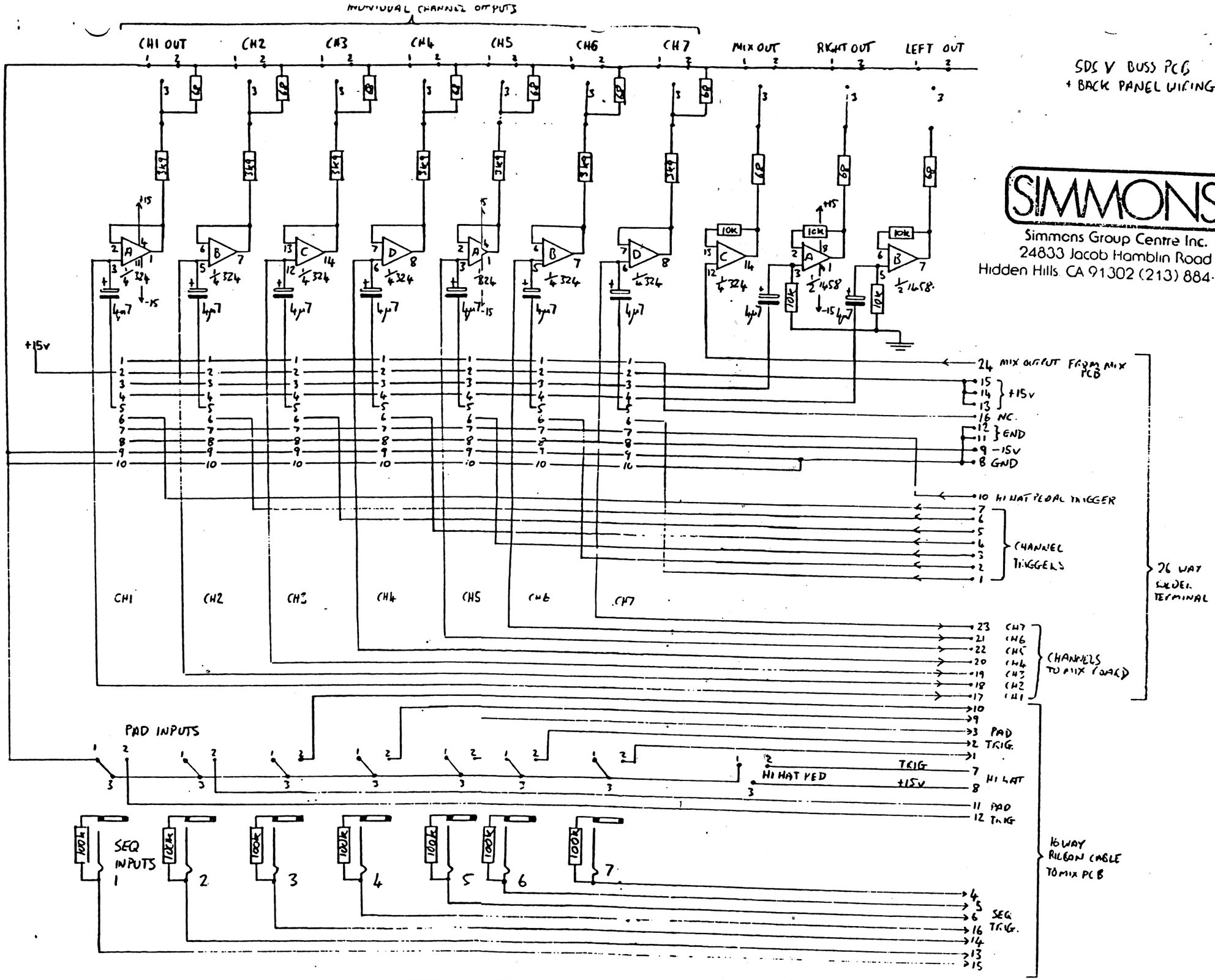

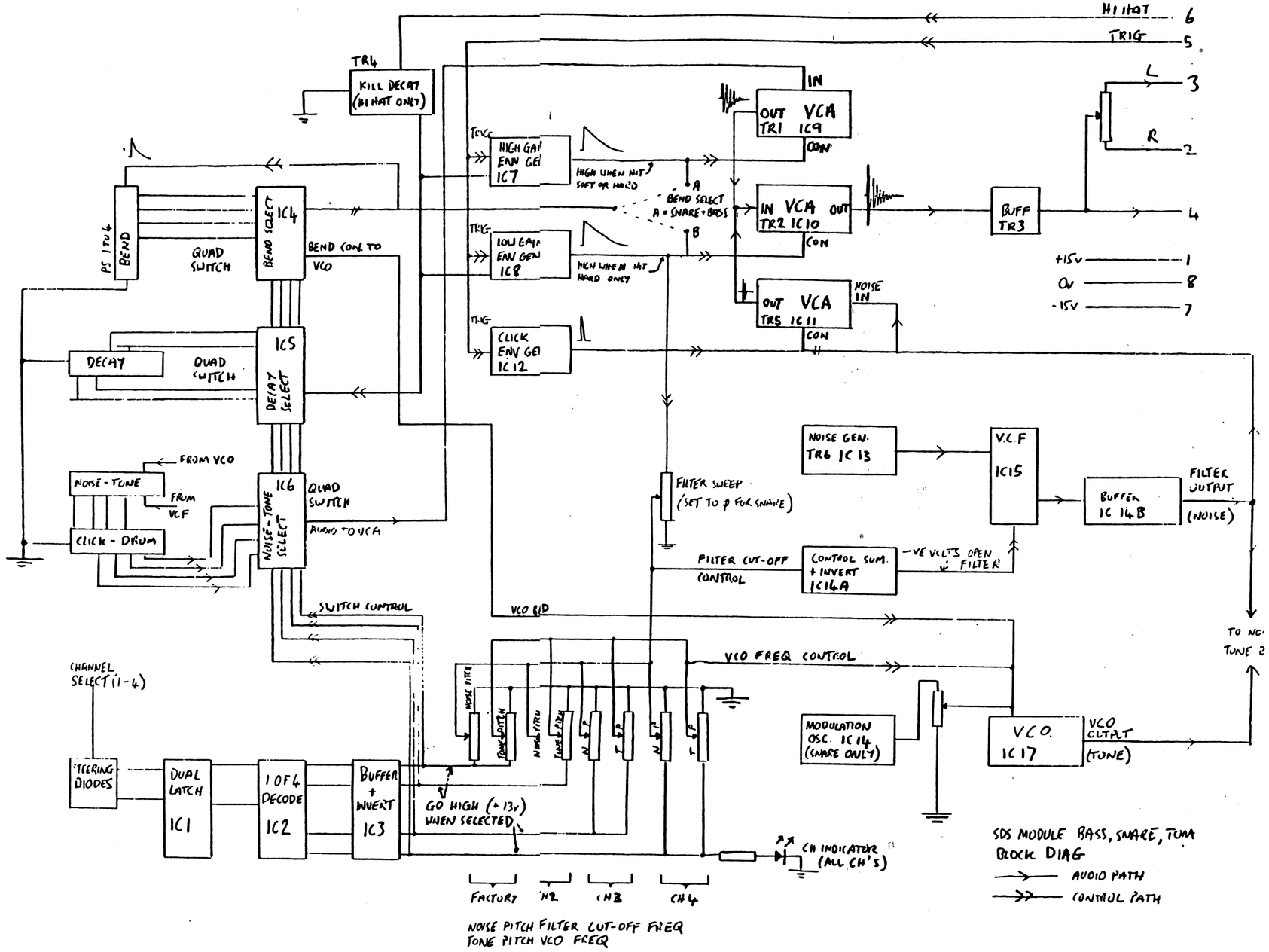

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