

DC-30

SERVICE NOTES

First Edition

SPECIFICATIONS

Chorus Delay Time 22mS - 44mS
 Echo Delay Time / Band Width ... 40mS / 10KHz - 600mS / 1.5KHz
 Output Level / Impedance -20dB, -35dB / less than 600Ω
 S/N ratio Over 60dB
 Power Consumption 6W

Input Sensitivity / Impedance:
 Microphone -50dB / 4.7KΩ
 Microphone/Instrument -50dB / 4.7KΩ
 -35dB / 470KΩ
 -20dB / 470KΩ

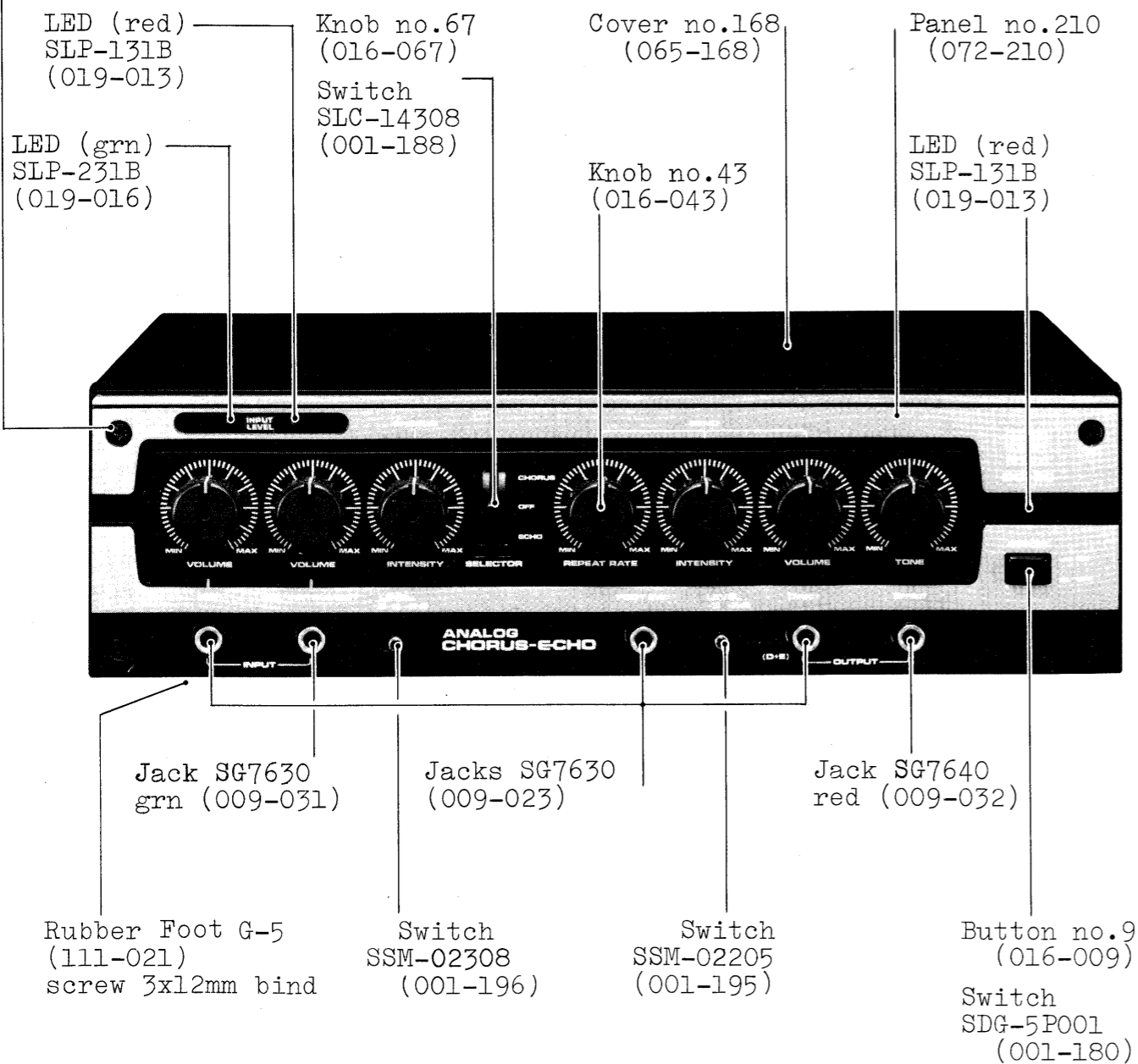
Dimensions 386(W) x 123(H) x 206(D)mm
 15.2(W) x 4.9(H) x 8.1(D)in

Weight 3.7kg, 8.2 lbs
 Accessory Connection Cord 2.5m

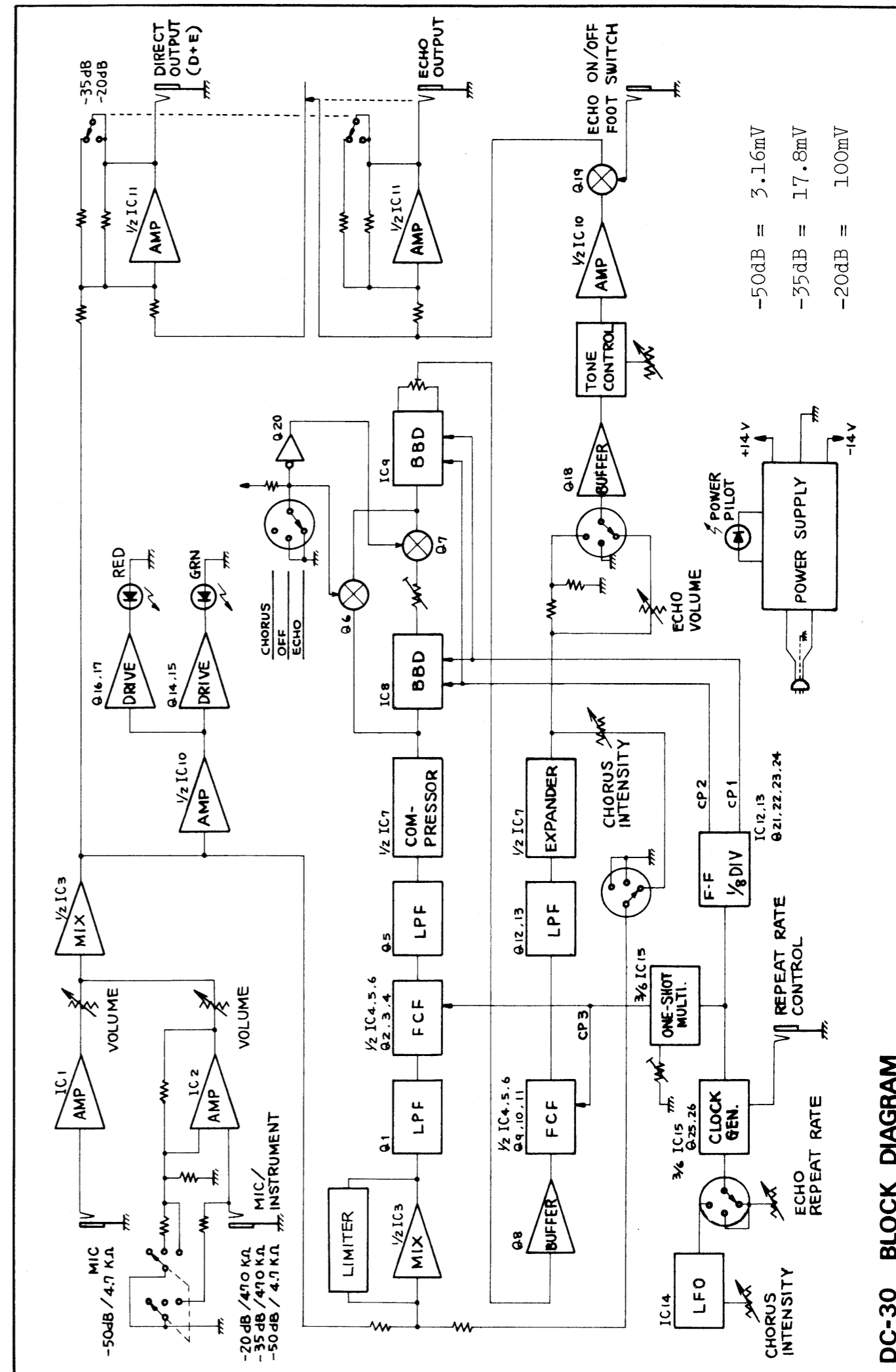
* See Block Diagram for the rest

COVER REMOVAL screws: four 4x8mm binding on the bottom

Screw 4x20mm -- Out of relation to
 oval Br chassis drawing out



* Jack on rear panel TJ-252 (009-007)



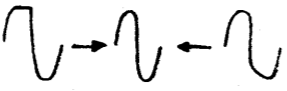
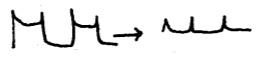
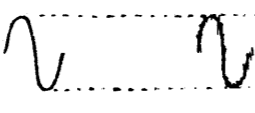
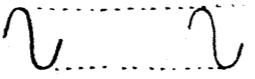


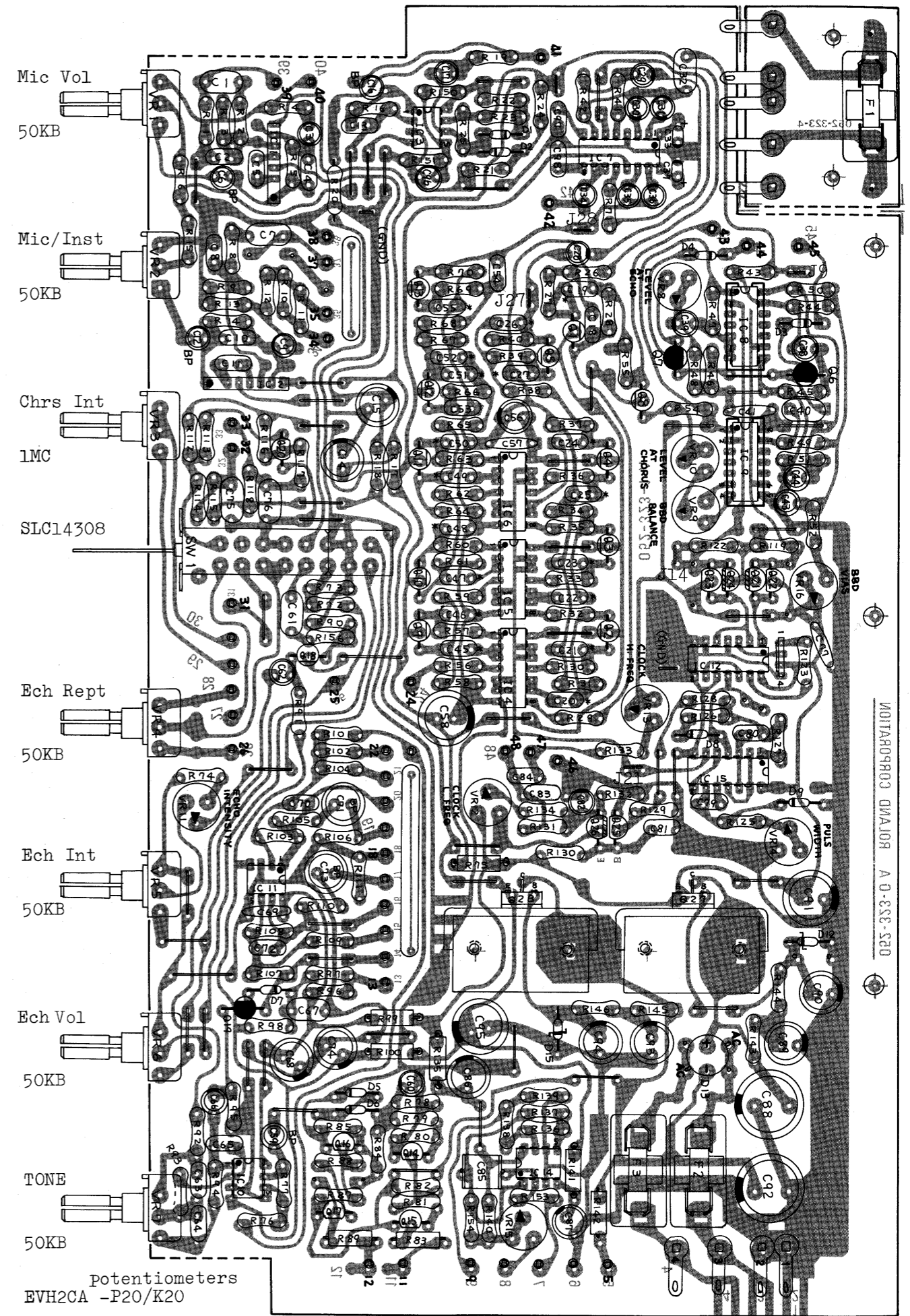
-50dB = 3.16mV
 -35dB = 17.8mV
 -20dB = 100mV

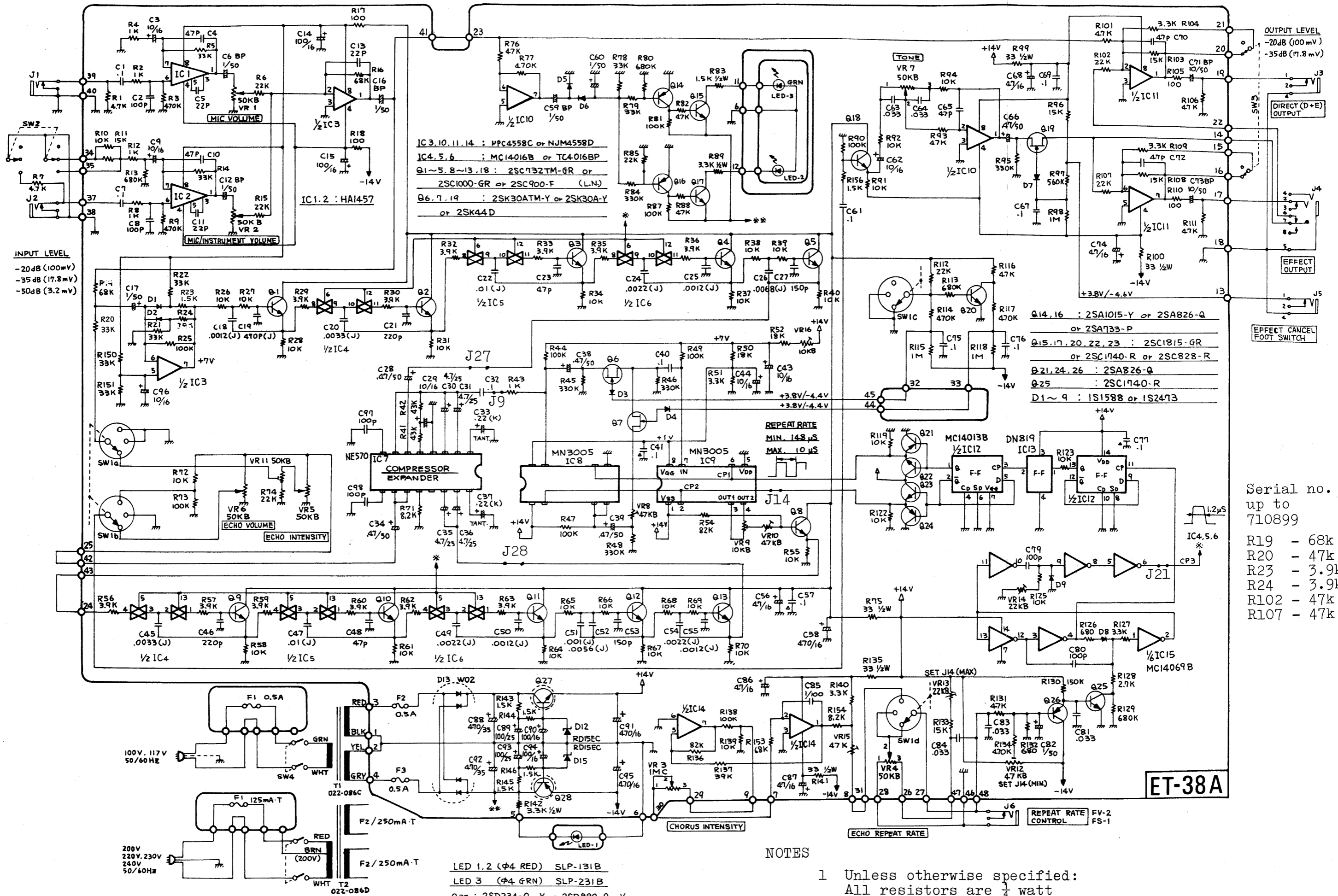
DC-30 BLOCK DIAGRAM

ADJUSTMENT

ET-38A (151-038A)

| To Adjust | Connect oscil-loscope to | Set selec-tor at | Feed  | Adjust for |
|-----------------------|--------------------------|------------------|--|--|
| BBD CLOCK | J14 | ECHO | — | VR12  |
| | | | | VR13 $a = 148\mu s$ with REPEAT RATE at min. |
| BBD CLOCK | J14 | CHORUS | — | VR15 $a = 10\mu s$ at narrowest |
| PULSE WIDTH | J21 | ECHO | — | VR14 $b = 1.2\mu s$ (adjust REPEAT RATE for easier view) |
| BBD BIAS | pin 43 or pin 24 | ECHO | 1kHz | VR16  operating point is in the center ($V_b = 7 - 7.5V$) check: 1 distortion free over the rotation of REPEAT RATE 2 both peaks being flattened symmetrically as input increases |
| BBD CLOCK BALANCE | pin 43 or pin 24 | ECHO | — | VR9  clock componet is minimized |
| COMPRES EXPNDER LEVEL | J9 J28 | CHORUS | 1kHz | VR10  J9 J28 compressor output expander input are of the same level |
| ECHO LEVEL | J28 | ECHO | 1kHz | VR8  J28(CH) J28(EC) same amplitude as at CHORUS |
| ECHO INTENS | — | ECHO | — | VR11 onset of oscillation |





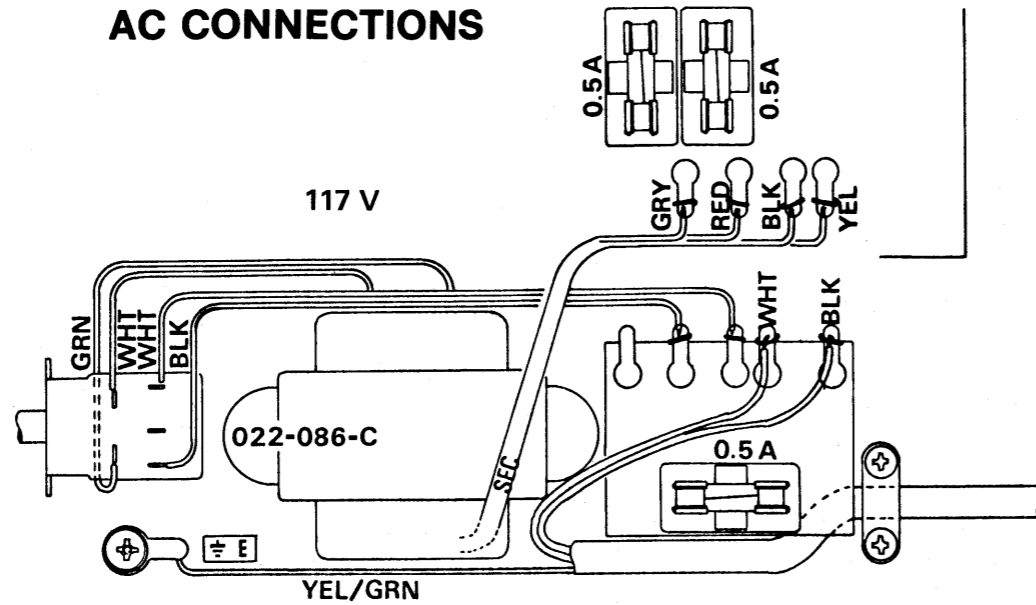
- LED 1, 2 (φ4 RED) SLP-131B**
LED 3 (φ4 GRN) SLP-231B
Q27 : 2SD234-0 or Y or 2SD080-0 or Y
Q28 : 2SB628-R or 2SB434-0

NOTES

- 1 Unless otherwise specified:
All resistors are 1/4 watt
All capacitors are 50V
- 2 Symbols (J), * indicate capacitor of 5%

AC CONNECTIONS

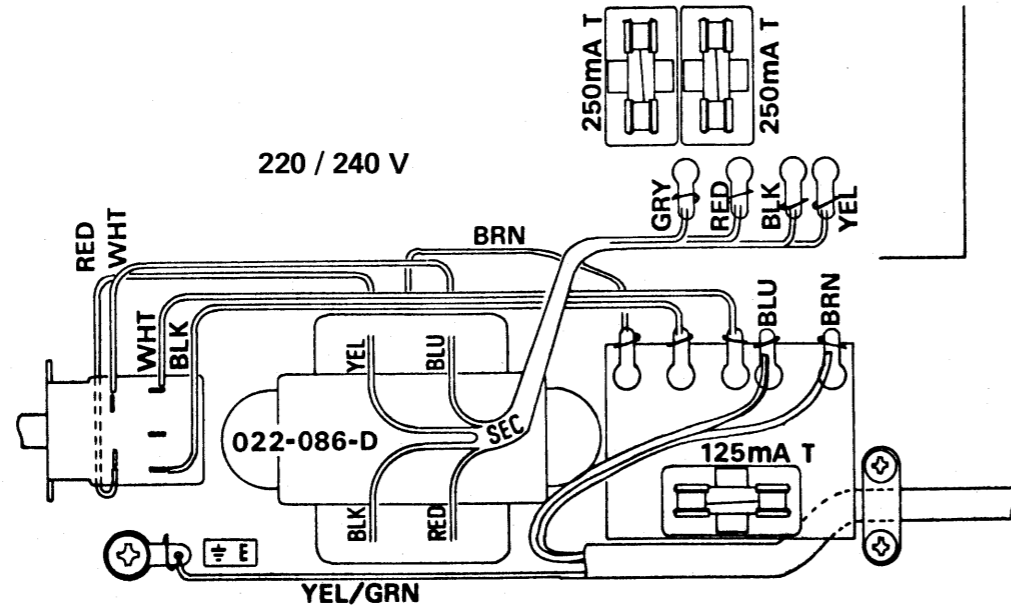
Fuses SGA 0.5A
(008-024)



Fuse Holder
TF-758
(012-003)

Switch
SDG-5P001
(001-180)

Fuses
CEE 250mAT
(008-060)
CEE 125mAT
(008-057)

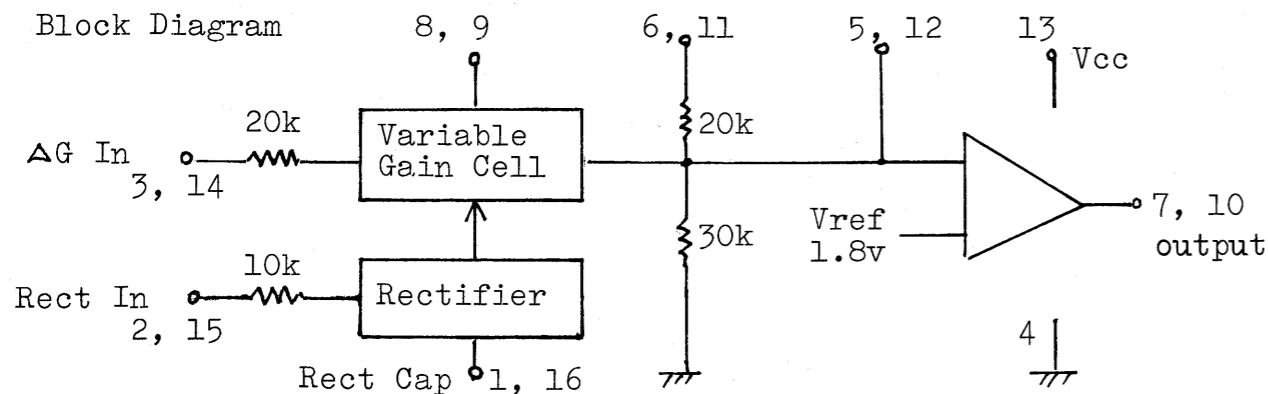


NOTE: When connection is made around AC, secure wires mechanically before soldering.

ANALOG COMPANDER IC7 NE570N

This is a dual gain control circuit in which either channel may be used as a dynamic range compressor or expander. Each channel has a full-wave rectifier to detect the average value of the signal --- a linearized, temperature compensated variable cell, and an OP amp.

Block Diagram



PARTS LIST

- 065-168 Cover no.168 case
- 111-021 Rubber Foot G-5
- 072-210 Panel no.210
- 061-207 Cover no.207 rear panel
- 061-194 Chassis no.194
- 016-043 Knob no.43 rotary
- 016-067 Knob no.67 lever
- 016-009 Button no.9 blk power switch

- ICs
- 020-085 MN3005 BBD
- 020-039 DN819 FF
- 020-176 MC14069BCP or TC4069BP
- 020-179 MC14013BCP or TC4013BP
- 020-171 MC14016BCP or TC4016BP
- 020-080 HA1457
- 020-097 μ PC4558C or NJM4558D
- 020-098 NE570N

SWITCHES

- 001-188 SLC-14308 lever
- 001-180 SDG-5P001 push power
- 001-196 SSM-02308 slide input
- 001-195 SSM-02205 slide output

POTENTIOMETERS

- 028-576 EVH2CAP20(K20)B54 50KB
- 028-592 EVH2CAP20(K20)C16 1MC
- 030-465 SR19R or EVL/EVT 10KB trim.
- 030-467 SR19R or EVL/EVT 22KB trim.
- 030-469 SR19R or EVL/EVT 47KB trim.

JACKS

- 009-023 SG7630
- 009-007 TJ-252 rear
- 009-031 SG7630 green
- 009-032 SG7640 red

RESISTORS $\frac{1}{2}$ W

- 044-108 ERC12GK 33-ohm
- 044-128 ERC12GK 1.5K-ohm
- 044-132 ERC12GK 3.3K-ohm

- 022-086C Power Transformer 100/117V
- 022-086D Power Transformer 220/240V
- 123-001 Sleeve Nut (stand off) no.1
- 012-030 IC Socket C03-014-350T
- 048-069 Heat Sink no.69 or no.32

CAPACITORS

Electrolytic

- 032-190 ECEA50N1 1μ F 50V Bipolar
- 032-191 ECEA50N10 10μ F 50V Bipolar
- 032-232 0.22 μ F 35V tantalum

FUSES FUSE HOLDER

- 008-024 SGA 0.500A 100/117V
- 008-060 CEE 250mAT sec. 220/240V
- 008-057 CEE 125mAT prim.220/240V

- 035-092 MHK 1μ F 100V J polystyren
- Mylar 50V J(5%)

TRANSISTORS

- 017-103 2SC732TM-GR or 2SC2240-GR, 2SC1681-GR
- 2SC1000-GR, 2SC1222-E
- 017-137 2SC1740-R
- 017-097 2SA826-Q
- 017-077 2SB628-R or 2SB434-0
- 017-010 2SD234-0 or 2SD880-0/Y
- 017-105 2SA1015-Y
- 017-106 2SC1815-GR
- 017-014 2SK30ATM-Y FET

- 035-201 470pF
- 035-205 0.001 μ F
- 035-206 0.0012 μ F
- 035-209 0.0022 μ F
- 035-211 0.0033 μ F
- 035-213 0.0056 μ F
- 035-214 0.0068 μ F
- 035-216 0.01 μ F

PCBs

- 151-038A ET-38A assy
- 052-323A ET-38A less parts
- 052-397 Peak LED less parts
- 052-398 Pilot LED less parts
- 052-323-4 Fuse less parts

DIODES

- 018-059 1S1588 or 1S2473, 1S1555
- 018-096 RD15EC or 05Z15U zener
- 018-082 W-02 or IM152/152R rectifier
- 019-013 SLP-131B red LED
- 019-016 SLP-231B green LED