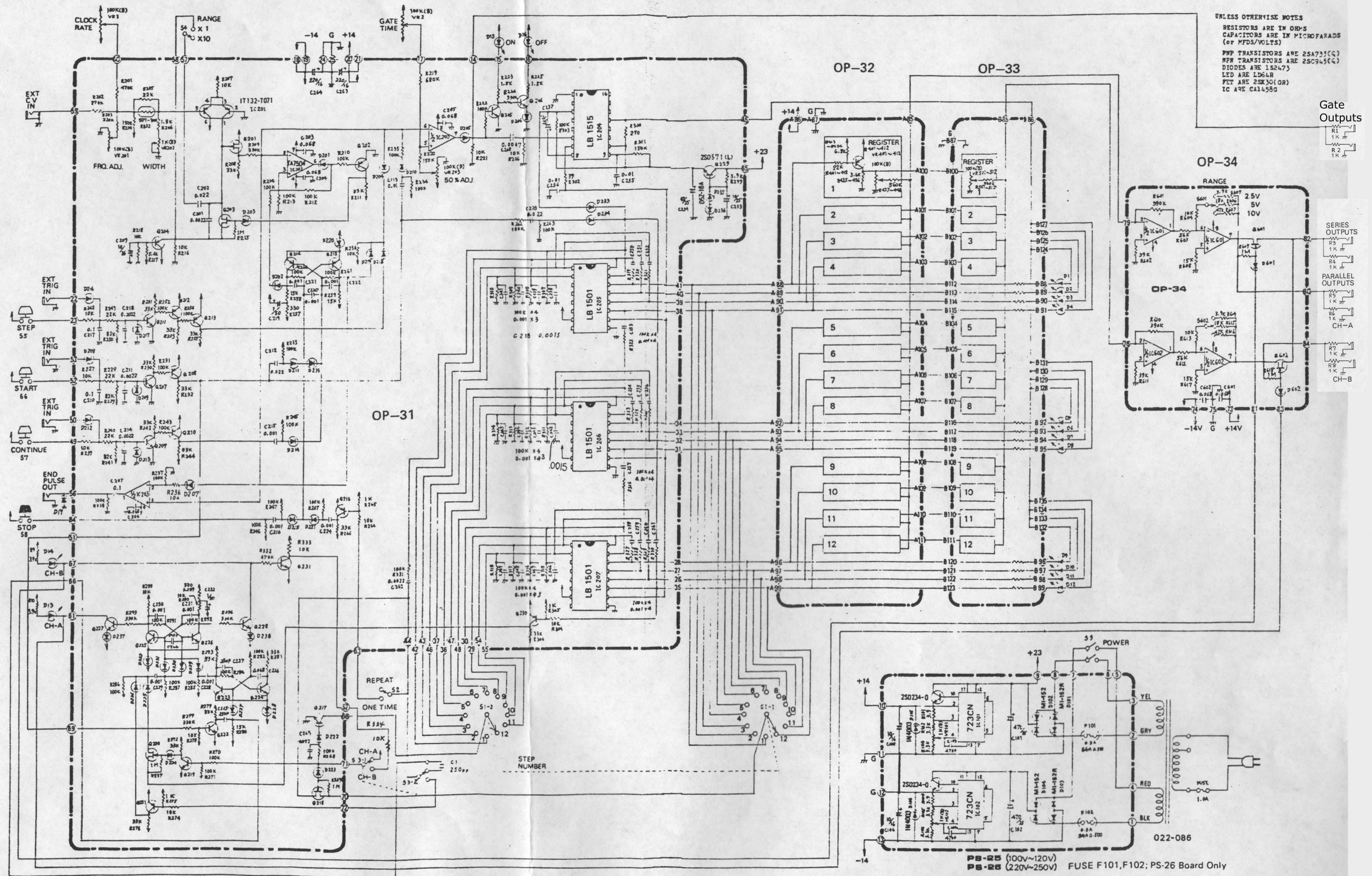
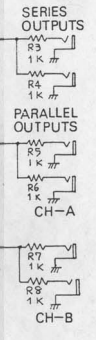
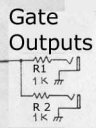


GENERAL CIRCUIT DIAGRAM

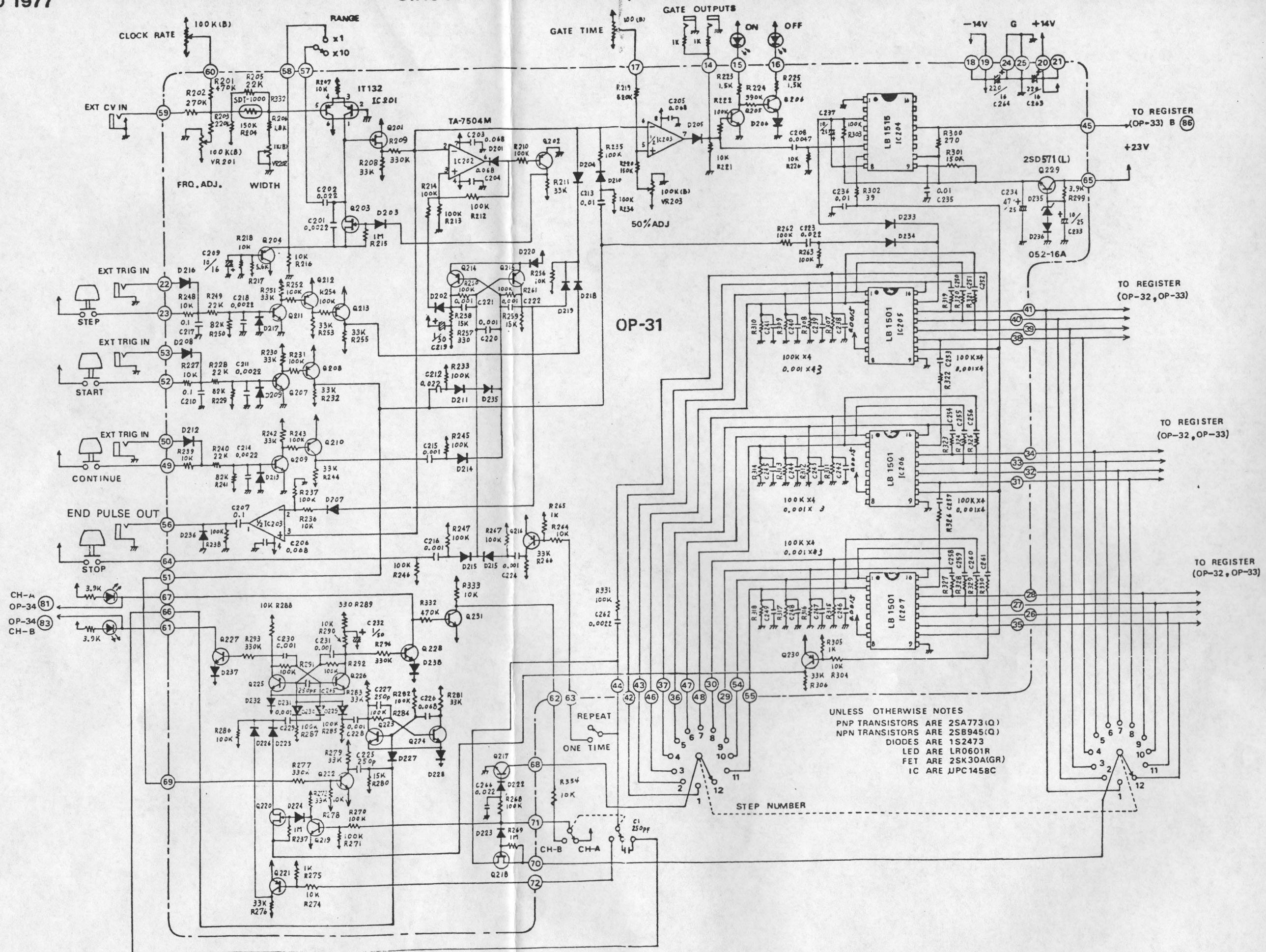


UNLESS OTHERWISE NOTES
 RESISTORS ARE IN OHMS
 CAPACITORS ARE IN MICROFARADS
 (or MFDS/VOLTS)
 PNP TRANSISTORS ARE 2SA733(C)
 NPN TRANSISTORS ARE 2SC945(C)
 DIODES ARE 1S247J
 LED ARE LD64R
 FET ARE 2SK30(GR)
 IC ARE CA1458G

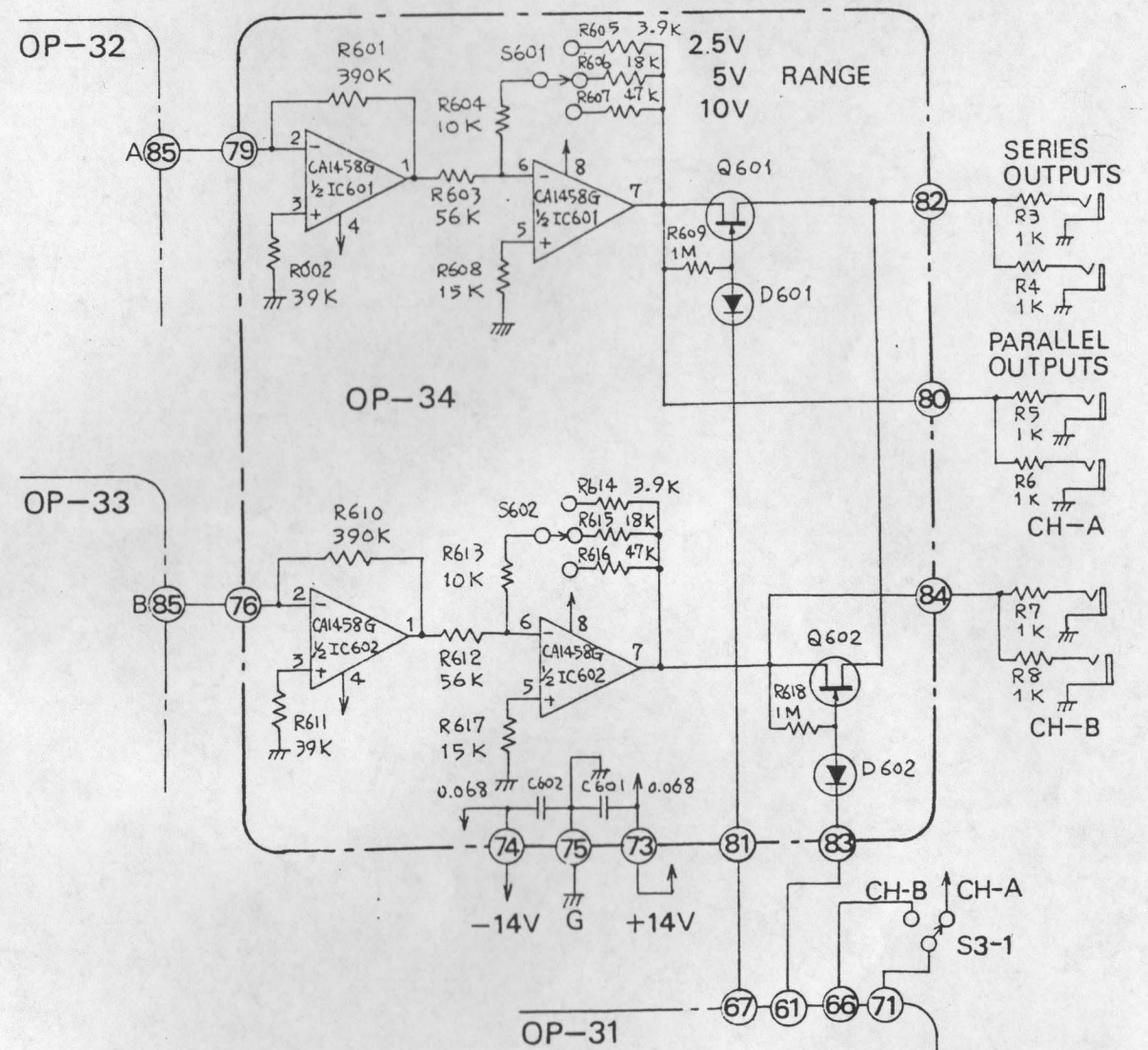
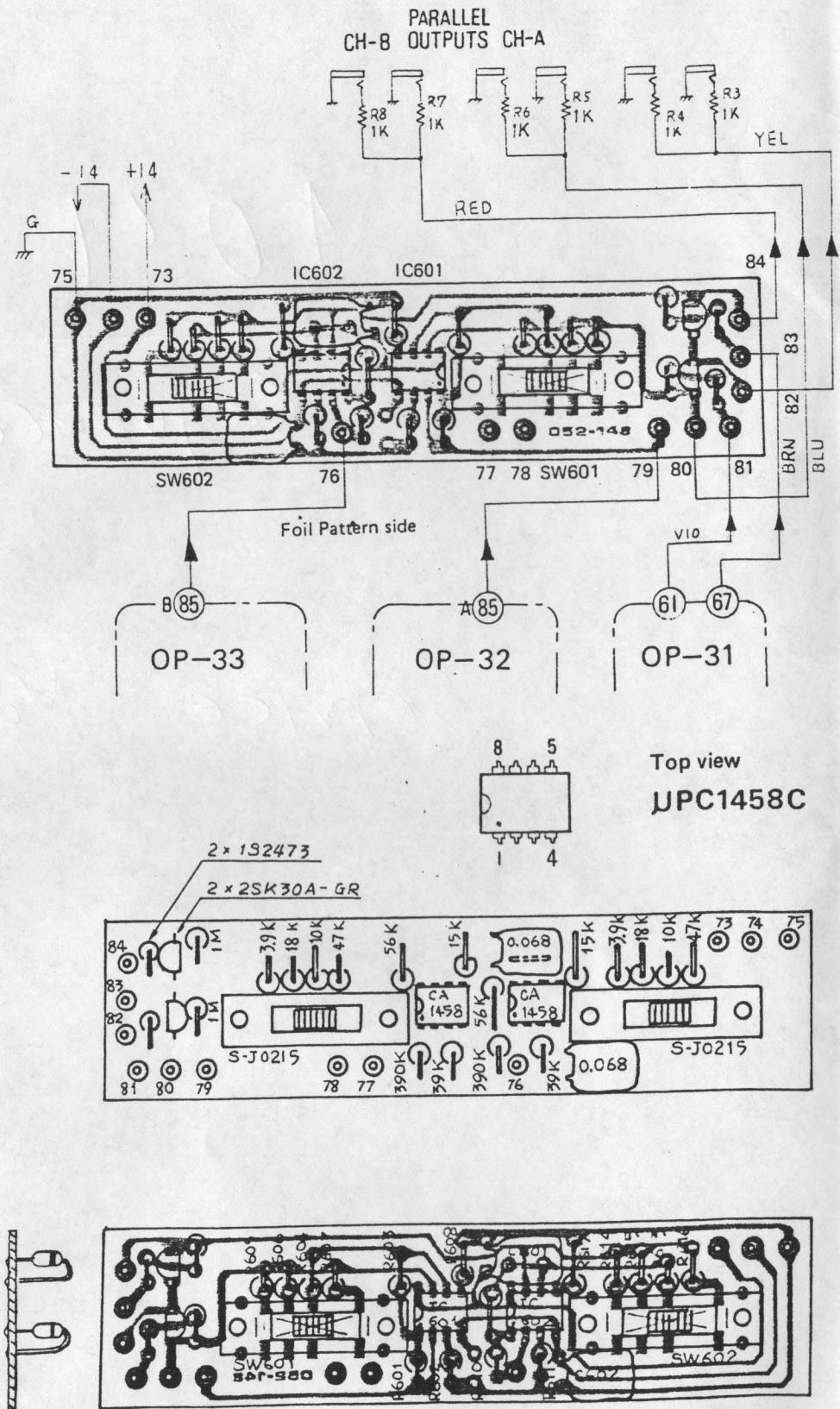


PS-25 (100V-120V)
 PS-26 (220V-250V) FUSE F101, F102; PS-26 Board Only

022-086



OUTPUT RANGE and CHANNEL SELECT BOARD OP-34 (149-034)



PARTS LIST

Sequence Board Assembly OP-31 (149-031)

052-146B	PCB	(less Parts)
020-010	IC	TA7504M (741C)
020-062	IC	μPC1458C
020-049	IC	LB-1501
020-050	IC	LB-1515
020-055	IC	IT-132 (μPA41C)
017-013	Transistor	2SC945(Q) (2SC828, 2SC372)
017-012	Transistor	2SA733(Q) (2SA495(Y))
017-072	Transistor	2SD571(L) (2SD414(Q))
017-016	FET	2SK30A (GR)
017-014	FET	2SK30A (Y)
018-014	Diode	IS2473 (IS1555)
018-026	Diode	05Z16A
018-015	Thermistor	SDT-1000

Trimmer Potentiometers

028-002	1K (B)	EVT (L) - R4XA00 13B
028-007	100K (B)	EVT (L) - R4XA00 15B

Capacitors

037-007	250pF	50V±10%	Ceramic
032-033	1μF	50V	Electrolytic
032-038	10μF	16V	Electrolytic
032-050	10μF	25V	Electrolytic
032-015	47μF	25V	Electrolytic
032-047	220μF	16V	Electrolytic

Register Board Assembly

OP-32 (149-032)

OP-33 (149-033)

052-147	PCB	(less parts)
017-012	Transistor	2SC945(Q) (2SC828, 2SC372(Y))
030-133	Potentiometer	100K (B) V16L4N 15S-B100K (EVH-BOAS15B15)

Output Range and Channel Select Board Assembly OP-34 (149-034)

052-148	PCB	(less parts)
020-062	IC	μPC1458C
017-016	FET	2SK30A (GR)
001-092	Slide switch	S-J0215
Power Supply Board Assembly		
PS-25 (100V-120V) (146-025)		
PS-26 (220V-250V) (146-026)		
052-133B	PCB	(less parts)
048-001	Heatsink	No.1
020-031	IC	723CN
017-010	Transistor	2SD234(O)

Diodes

018-028	ESA-B01-03C
(018-062)	(MI-152)
018-029	ESA-B01-03N
(018-063)	(MI-152R)
018-022	IN4003

Trimmer Potentiometer

028-002	1K (B) EVL (T) R4XA00B13
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Capacitors

037-008	470pF	50V±10%	Ceramic
032-033	10μF	16V±10%	Electrolytic
032-068	470μF	35V	Electrolytic
010-038	Wafer Terminal	A-2461-8C	

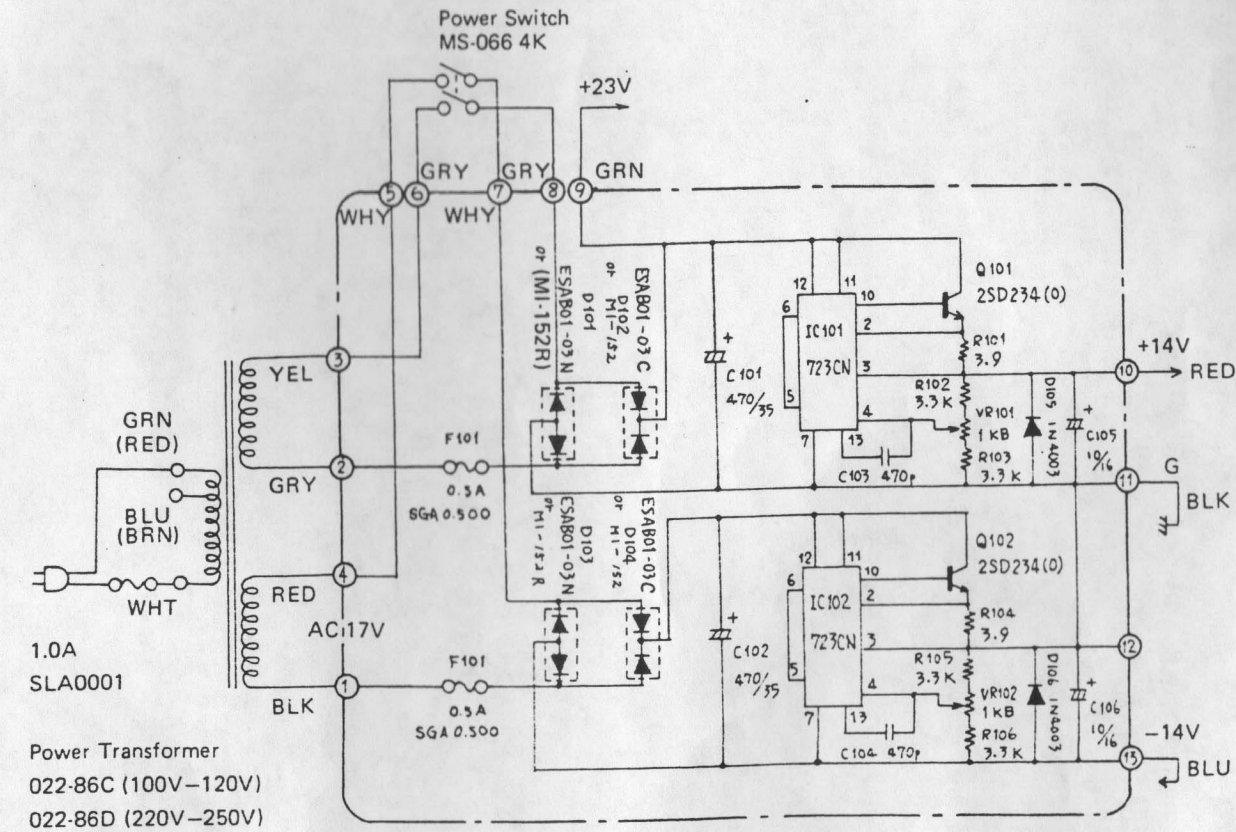
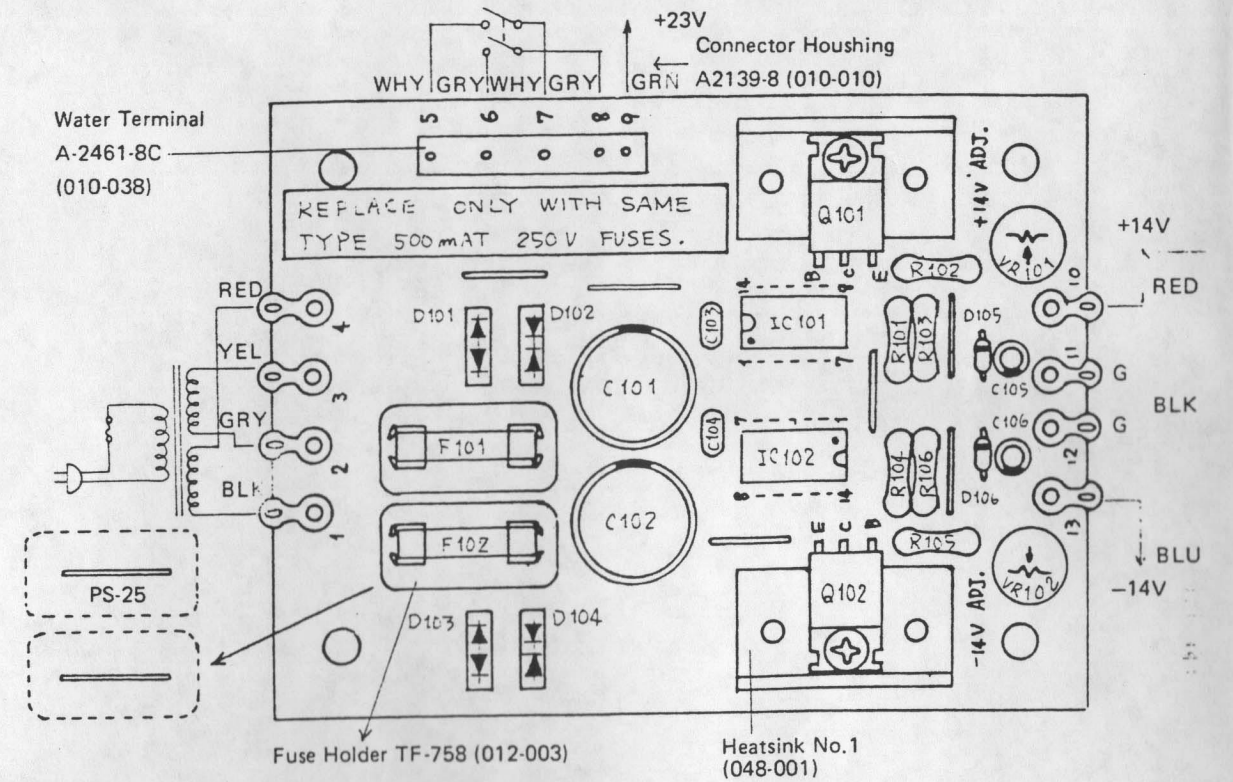
PS-26 only

012-003	Fuse Holder	TF-758
008-024	Fuse (Midget)	0.5A SGA0.500

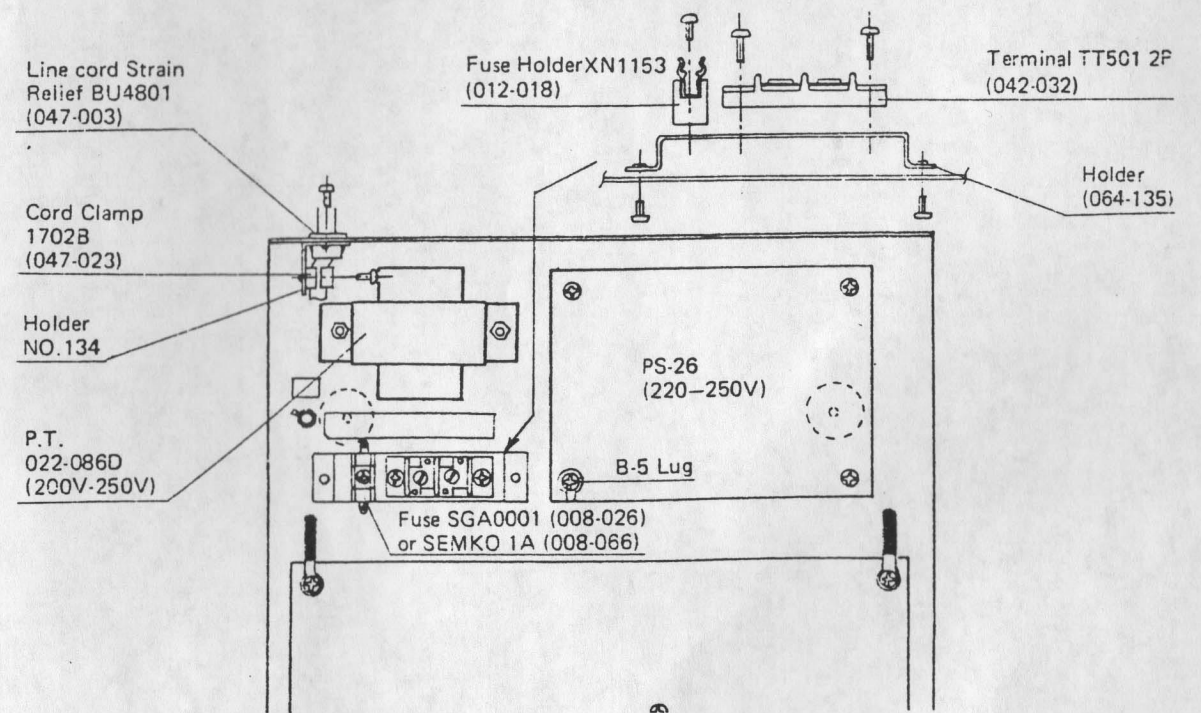
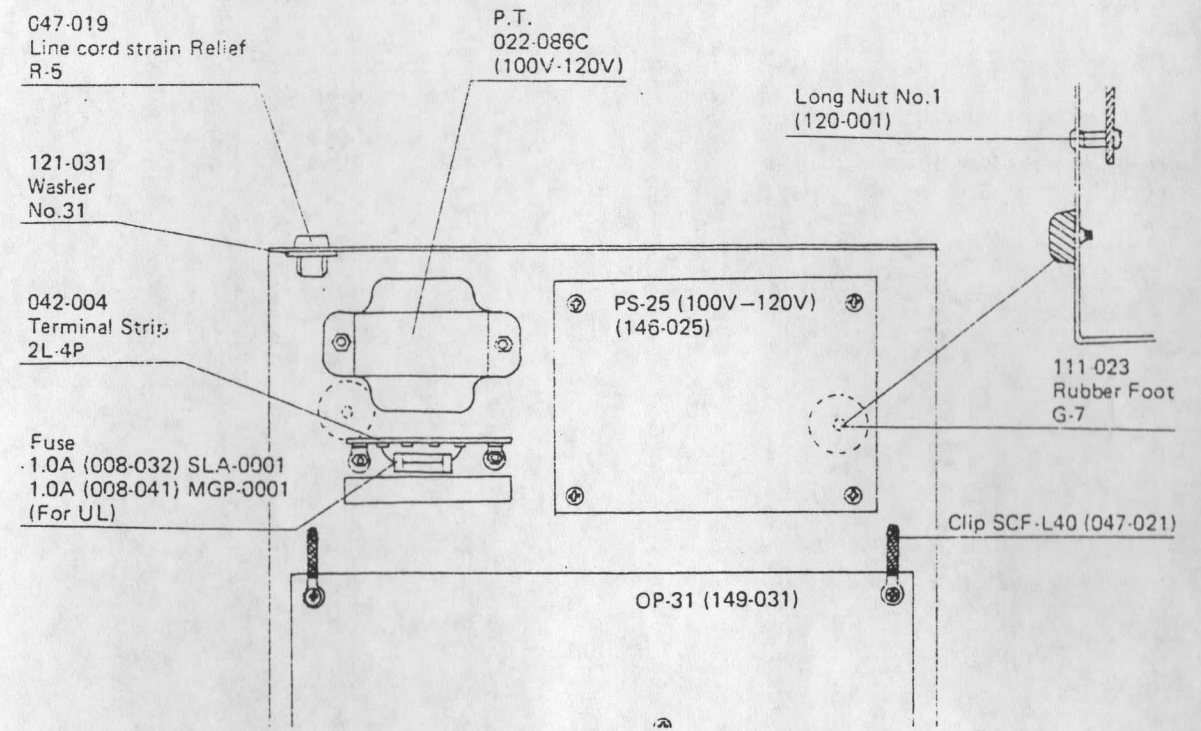
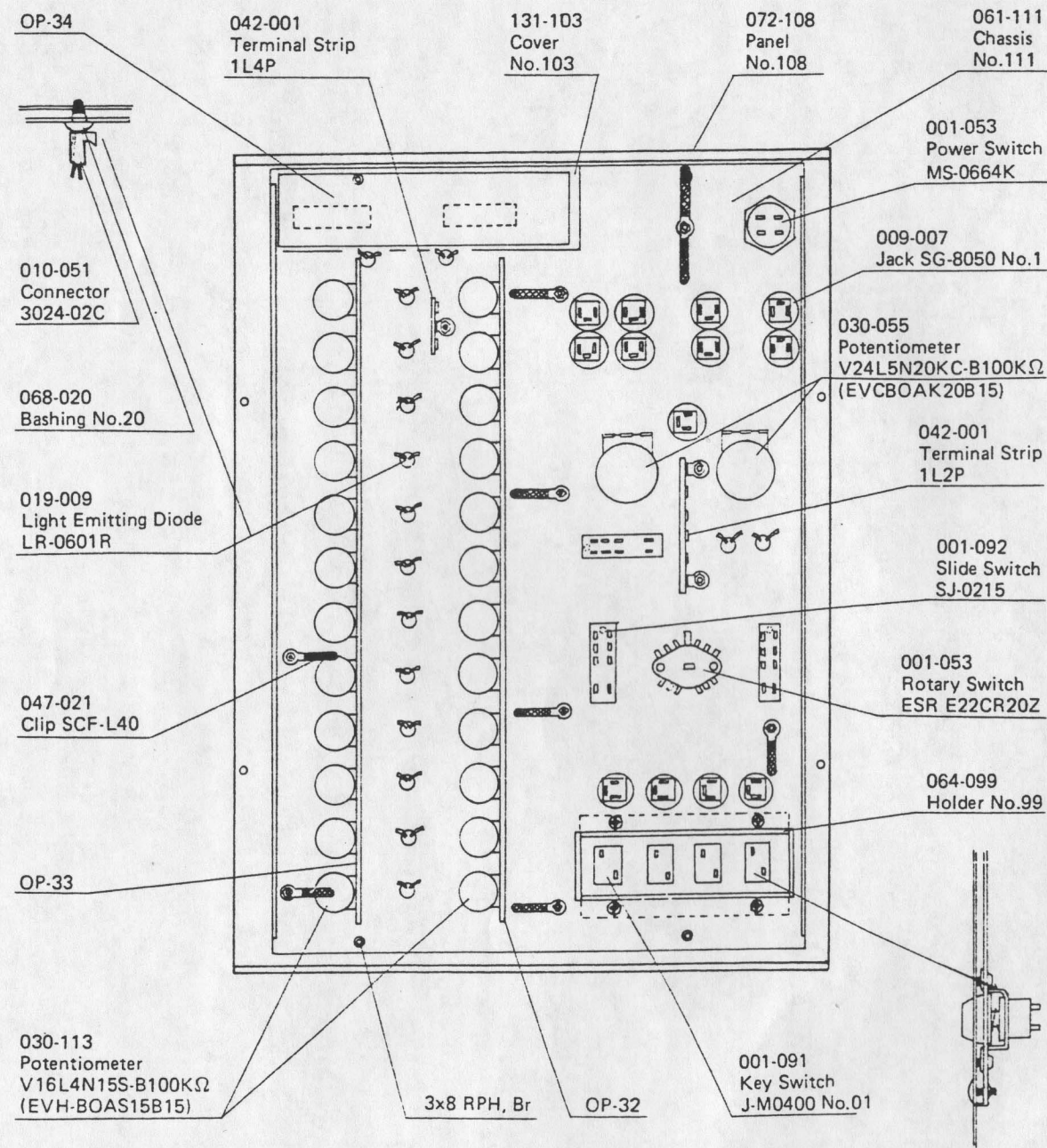
* For parts not listed above.
Refer to 2. DISASSEMBLY or 9. PARTS PICTORIAL.
* Carbon film resistors of 1/4W, and mylars are omitted.

POWER SUPPLY BOARD

PS-25 (146-025)
(100V-120V)
PS-26 (146-026)
(220V-250V)



PARTS PICTORIAL



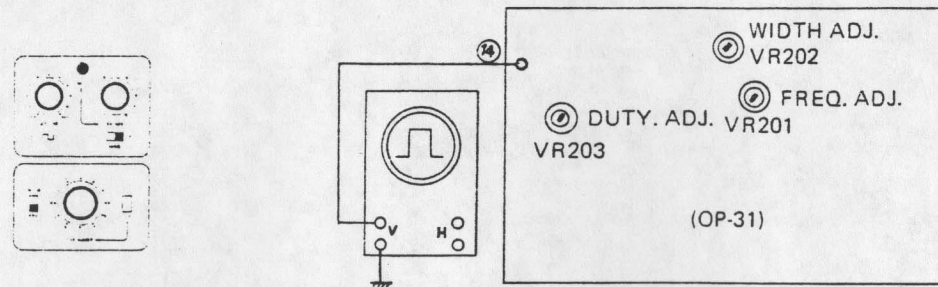
ADJUSTMENT PROCEDURE

1. Power Supply Voltage adjustment

- Connect the Digital Voltmeter to terminal "10" of the PCB (PS-25 or PS-26), and adjust VR101 for reading $+14V \pm 100mV$.
- In the same manner with connection to terminal "13", adjust VR102 for reading $-14V \pm 100mV$.

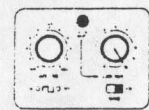
2. CLOCK RATE adjustment

Set the controls as illustrated below



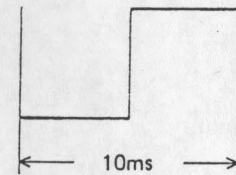
(RANGE: X10. REPEAT)

a



(CLOCK RATE: 10)

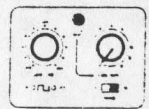
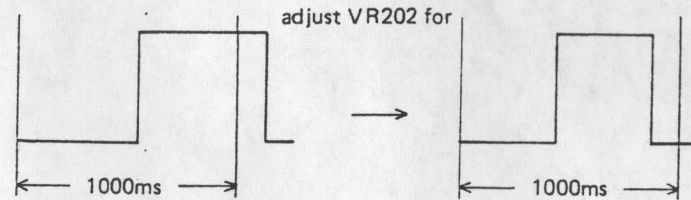
adjust VR201 for



b

a little longer than 1000ms

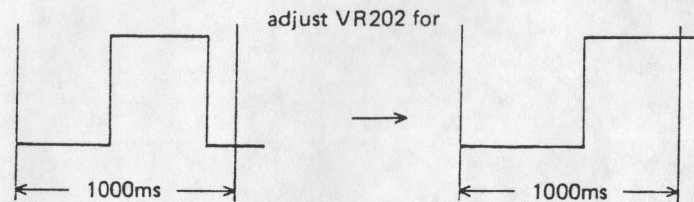
a little shorter than 1000ms



(CLOCK RATE: 0)

a little shorter than 1000ms

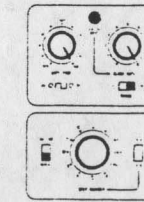
a little longer than 1000ms



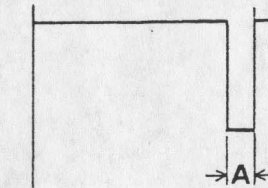
- c Step (b) may cause variation on the 10ms width on (a). Repeat, then, the steps (a) and (b) until waveforms are within $10ms \pm 10\%$ and $1000ms \pm 10\%$.

3. GATE TIME adjustment

a



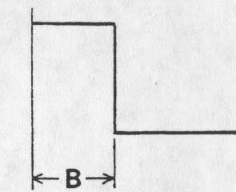
(CLOCK RATE: 10. GATE TIME: MAX)



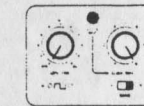
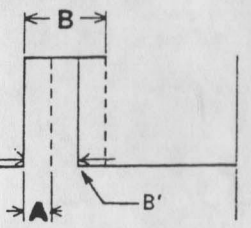
Note width of space (A)

b

wider than A

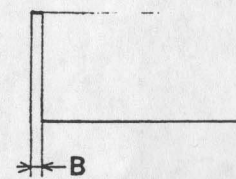


adjust VR203
for $B' = B - \frac{B-A}{2}$

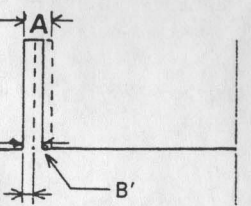


(GATE TIME: MIN)

narrower than A



adjust VR203
for $B' = B + \frac{A-B}{2}$



- c Repeat the above steps (a) and (b) until $A=B$

