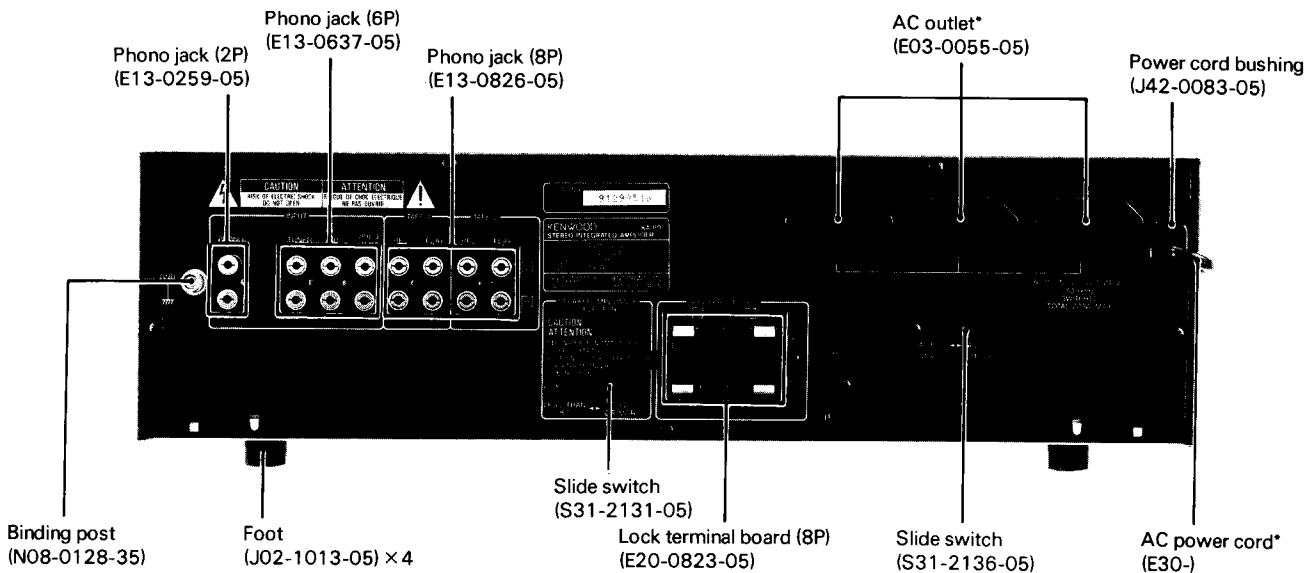
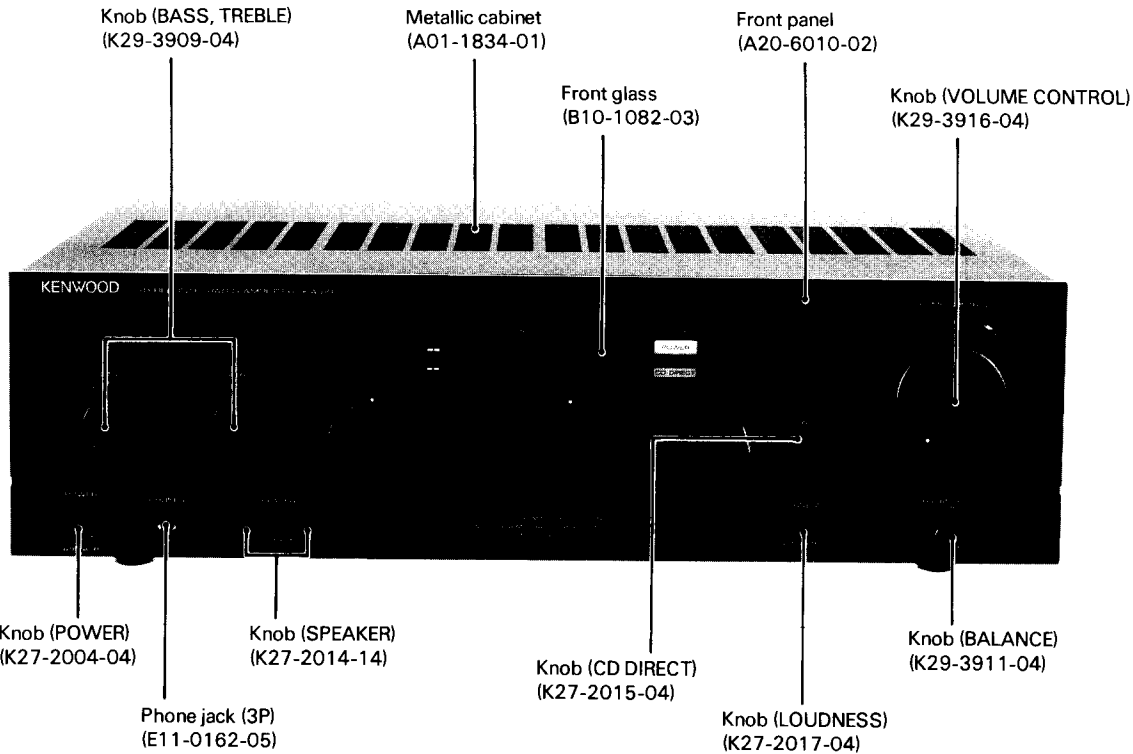


# KA-89

## SERVICE MANUAL

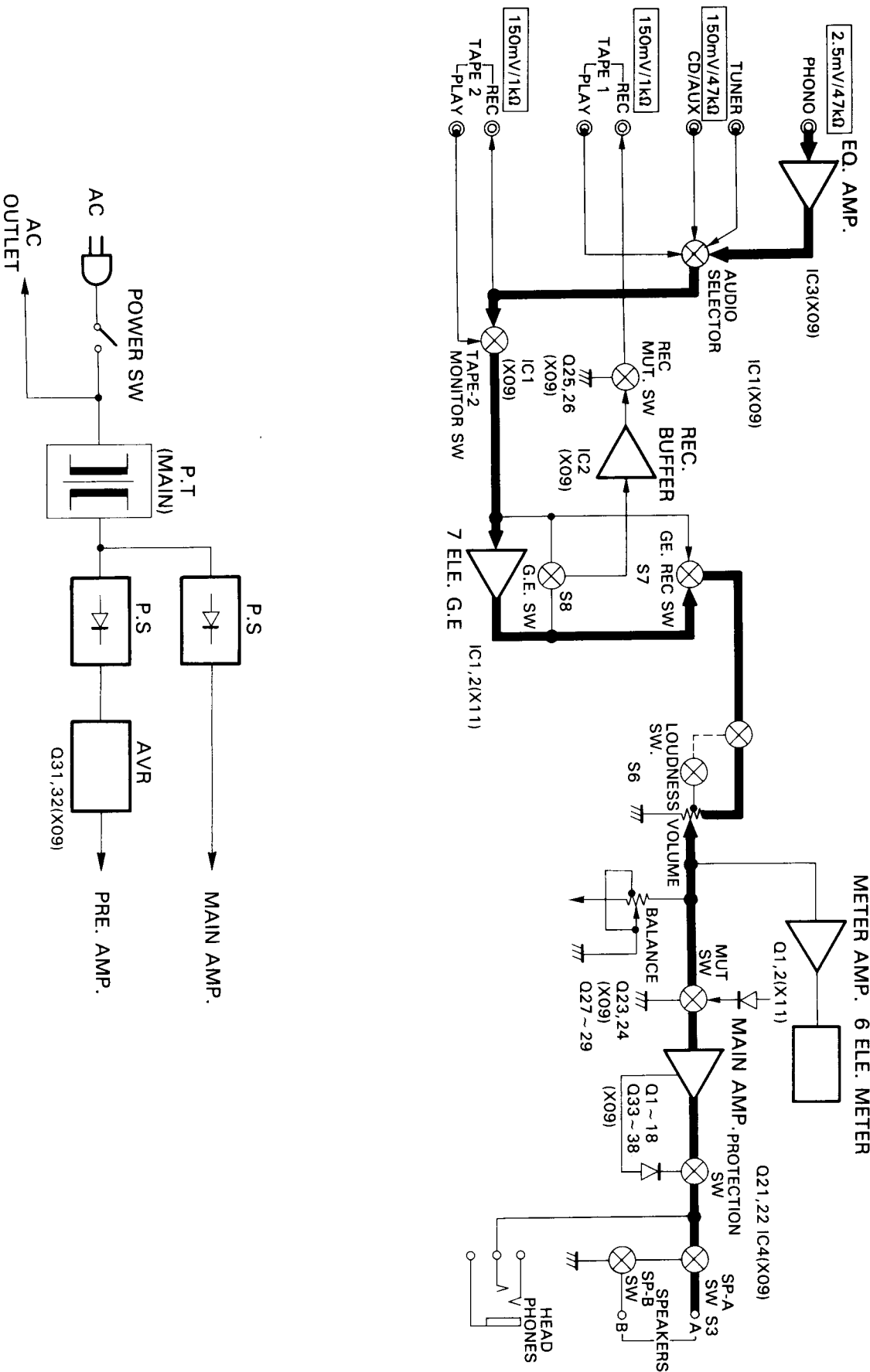
# KENWOOD

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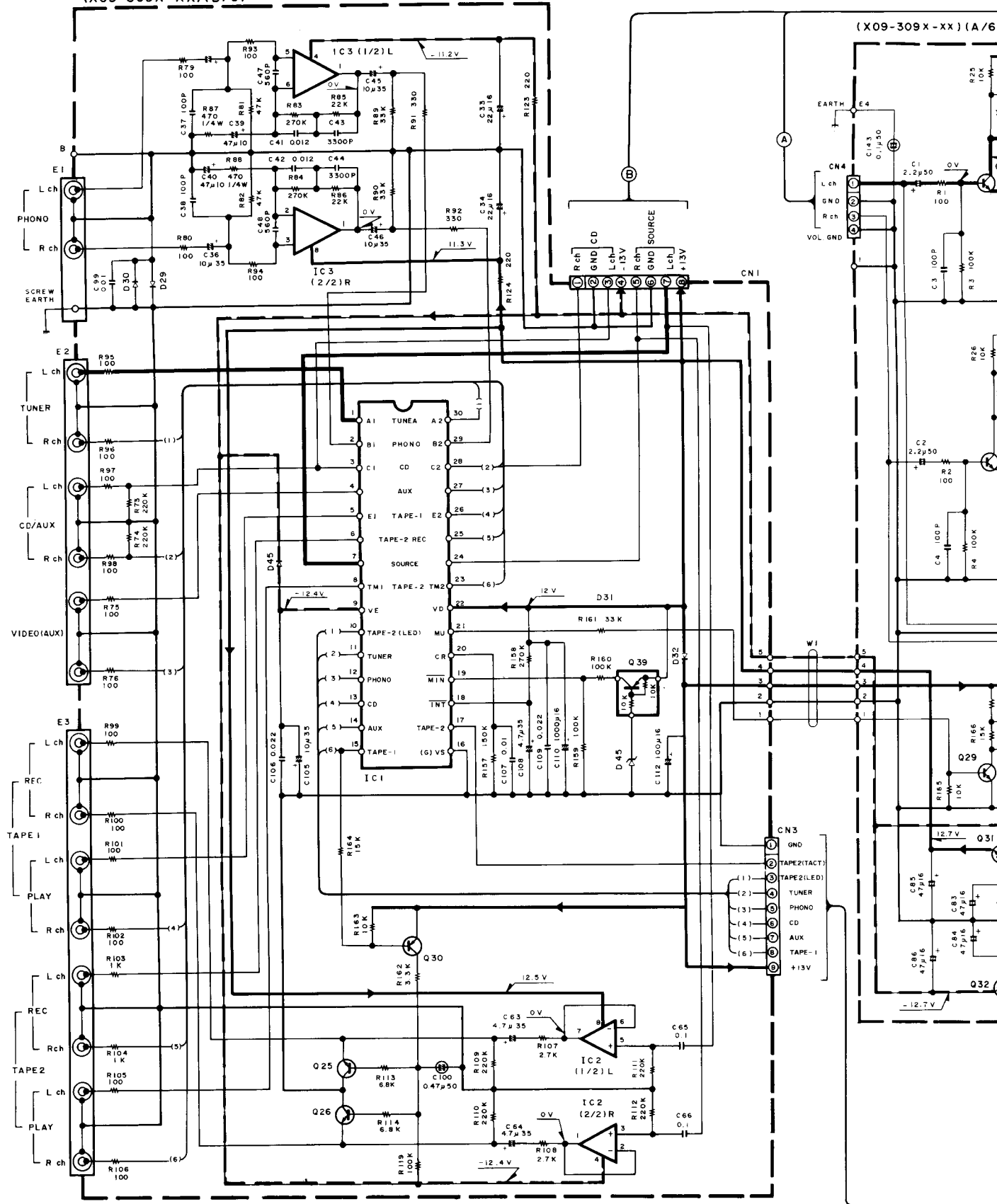
\* Refer to parts list on page 16.

# BLOCK & LEVEL DIAGRAM

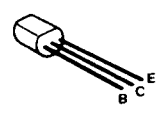


(X09-309X-XX) (B/6)

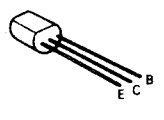
(X09-309X-XX) (A/6)



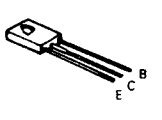
DTA124EN



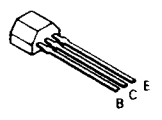
2SA1124  
2SA733(A)  
2SA954  
2SA992  
2SC1845  
2SC2632  
2SC2878  
2SC945(A)



2SD882



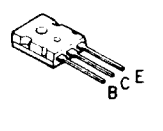
2SA933S  
2SC1740S



2SC4137



2SB1162  
2SB1163  
2SD1717  
2SD1718



2

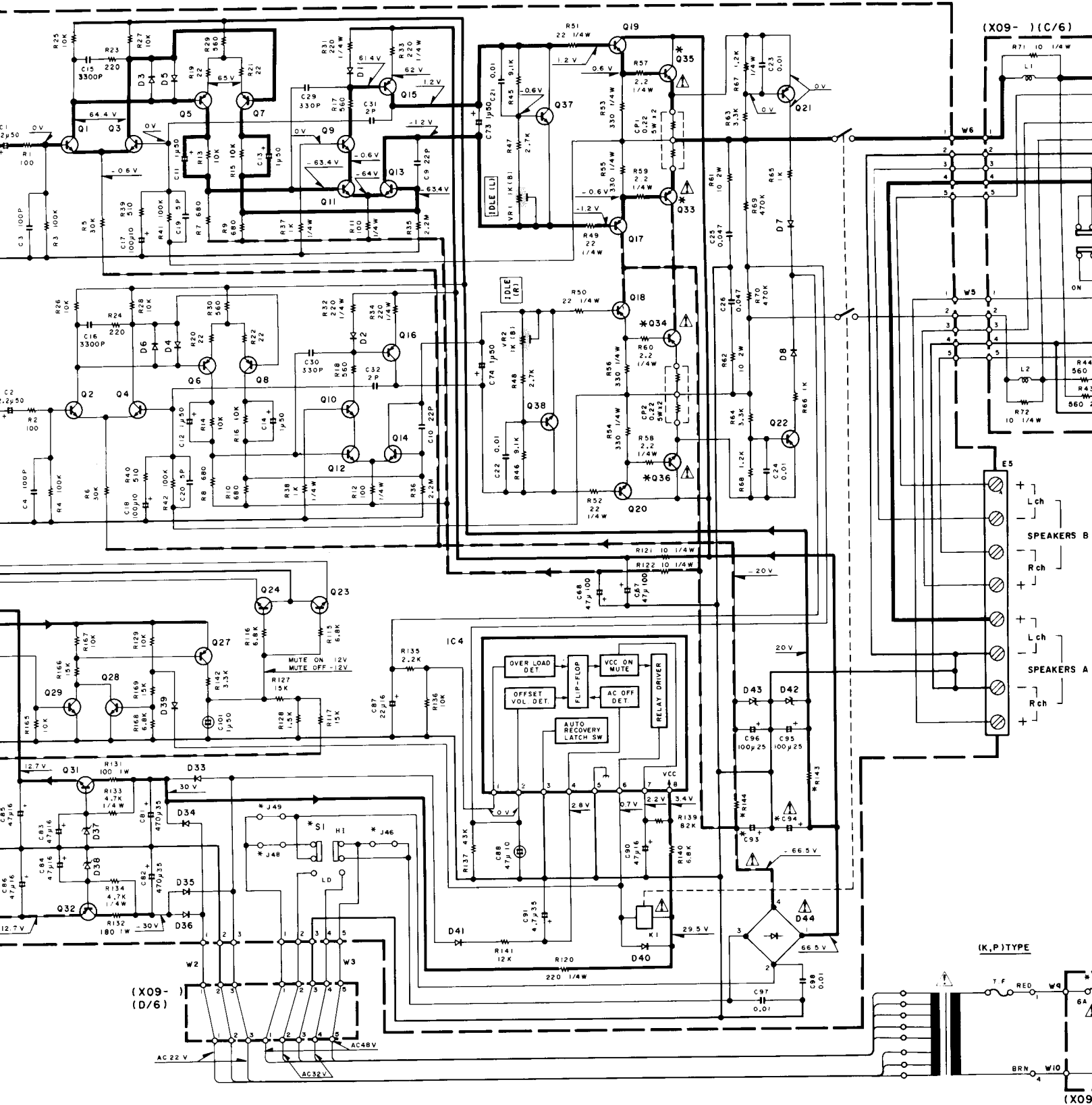
3

4

5

6

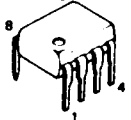
7



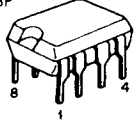
2SA1535  
2SC3944



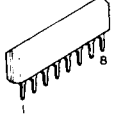
NJM4558D



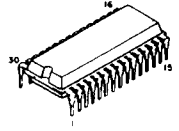
μPC4570C-A  
M5218P

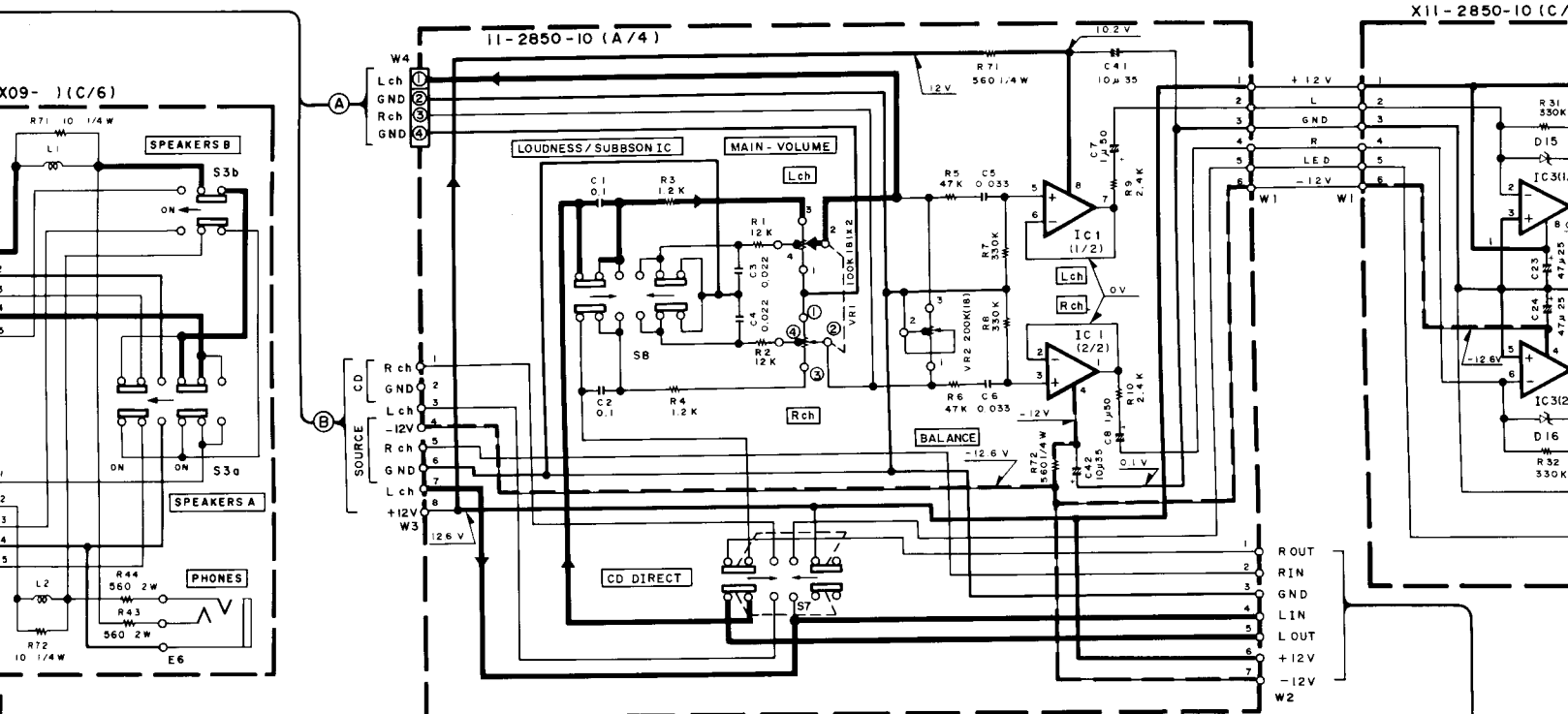


μPC1237HA



LC7818



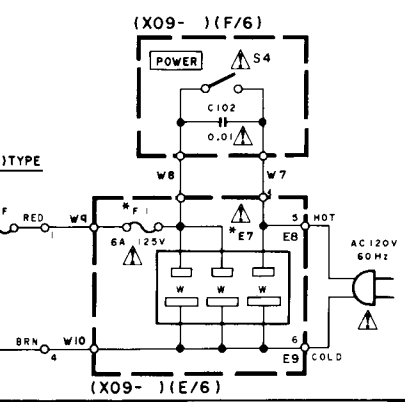
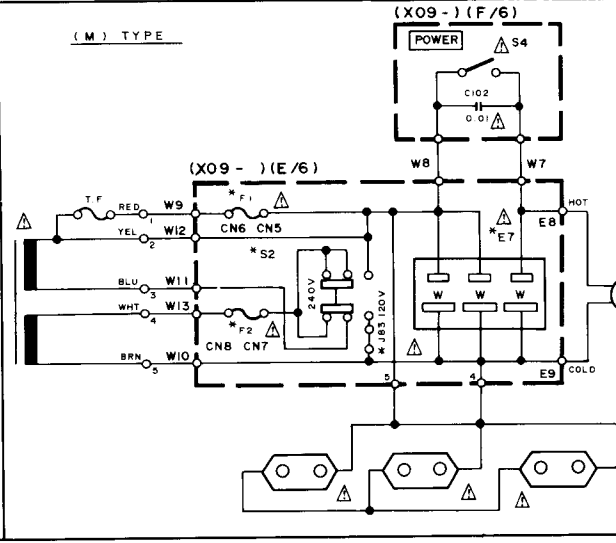
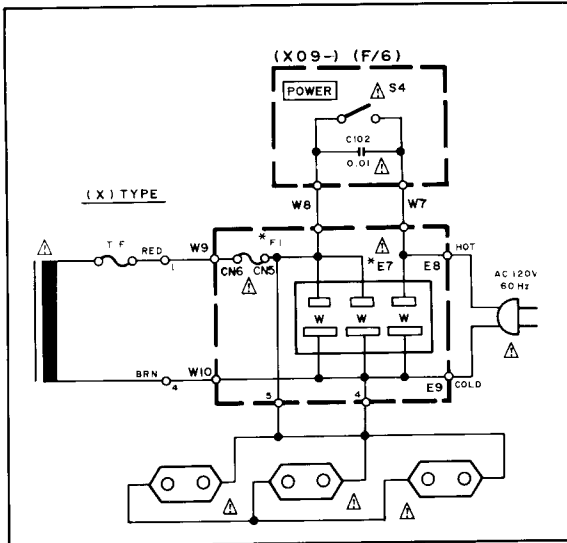
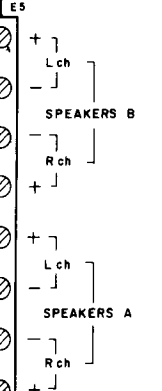


(X09-309X-XX)

- IC1 : LC7818
- IC2,3 :  $\mu$ PC4570 C-A
- IC4 :  $\mu$ PC1237 HA
- Q1~4 : 2SC1845 (F, E)
- Q5~8 : 2SA992 (F, E)
- Q9~14 : 2SC2632 (Q, R, S)
- Q15,16 : 2SA1124 (Q, R, S)
- Q17,18 : 2SA1535 (Q, R, S)
- Q19,20 : 2SC3944 (Q, R, S)
- Q21,22,27,30 : 2SA733(A)(Q,P) or 2SA933S(Q,R)
- Q23~26 : 2SC2878 (B)
- Q28,29 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)
- Q31 : 2SD882
- Q39 : DTA124EN

(X11-2850-10)

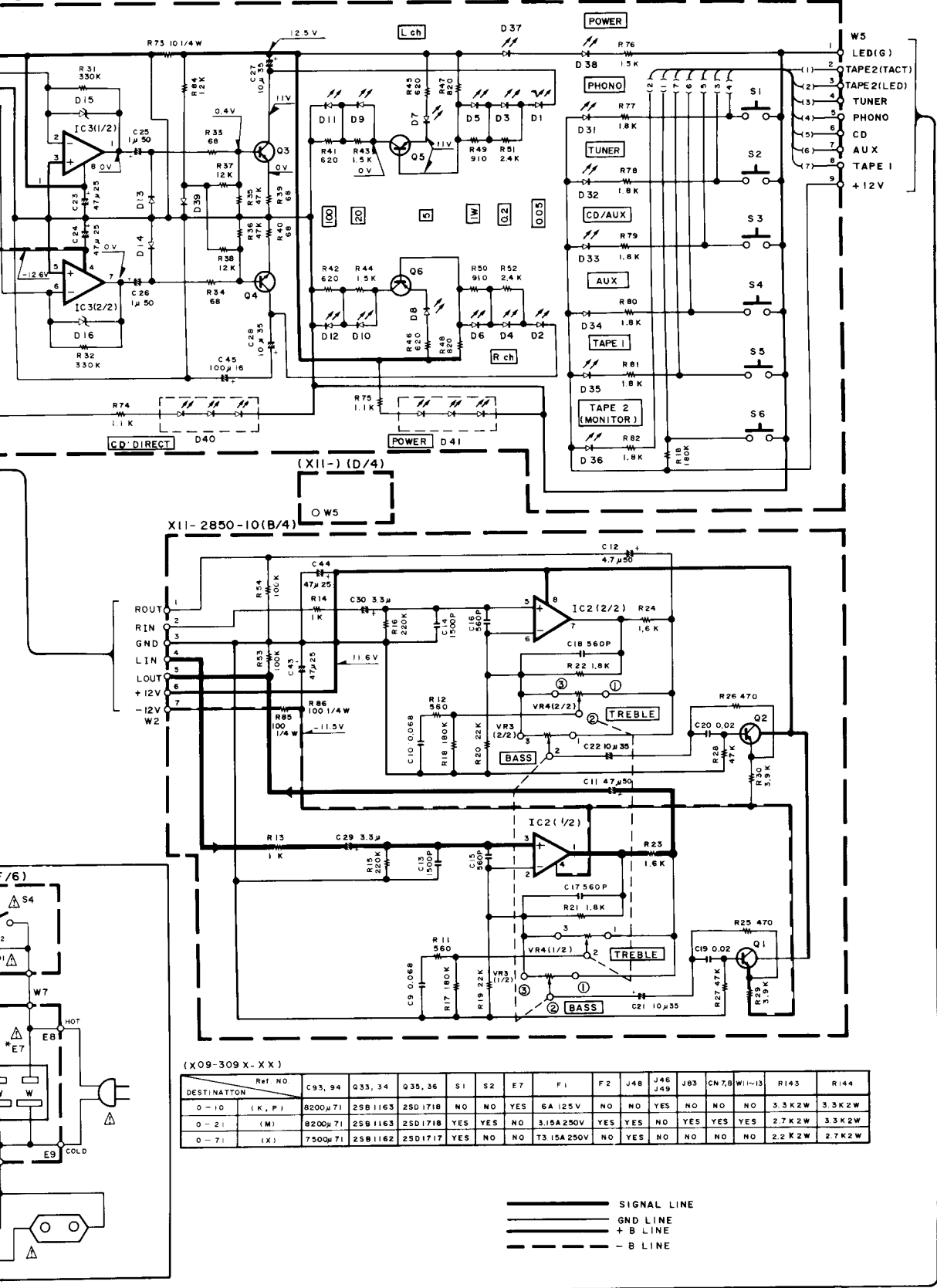
- IC1,3 : NJM45580 or M5218 P
- IC2 :  $\mu$ PC4570 C-A
- Q1,2 : 2SC1845 (F, E)
- Q3,4 : 2SC945(A)(Q,P) or 2SC1740S(Q,R) or 2SA733(A)(Q,P) or 2SA933(Q,R)
- D1~8,29~32,39,40,46 : 1SS131 or HSS104A
- D33~36,41 : S5566 B
- D37,38 : RD13ES (B2) or HZS13N (B2)
- D42,43 : RD20ES (B)
- D44 : HZS20N (B)
- D45 : RBV-602LFA or RD10ES (B) or HZS10N (B)
- D1~12,37,38 : B30-1289-05
- D31~36 : B30-1291-05
- D13,14,39 : 1SS133 or HSS104
- D15,16 : RD2-7ES (B) or HZS2-7N (B)
- D40 : B30-1287-05
- D41 : B30-0486-05



DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance

measurements shall be taken with the unit properly insulated from the ground. The unit shall be returned to the customer.



(X09-309 X-XX)

DESTINATION	Ref. NO	C93, 94	Q33, 34	Q35, 36	S1	S2	E7	F1	F2	J48	J46 J49	J83	CN7,B	W11-13	R143	R144
0-10 (K,P)	8200μ71	25B 1163	25D 1718	NO	NO	YES	6A 125V	NO	NO	YES	NO	NO	NO	NO	3.3K2W	3.3K2W
0-21 (M)	8200μ71	25B 1163	25D 1718	YES	YES	NO	3.15A 250V	YES	YES	NO	YES	YES	YES	YES	2.7K2W	3.3K2W
0-71 (X)	7500μ71	25B 1162	25D 1717	YES	NO	NO	T3 15A 250V	NO	YES	NO	NO	NO	NO	NO	2.2K2W	2.7K2W

——— SIGNAL LINE  
 - - - GND LINE  
 - · - · + B LINE  
 - · - · - B LINE

ements shall be carried out (exposed parts are accepta-  
 lated from the supply circuit) before the appliance is  
 d to the customer.

