

Service Manual

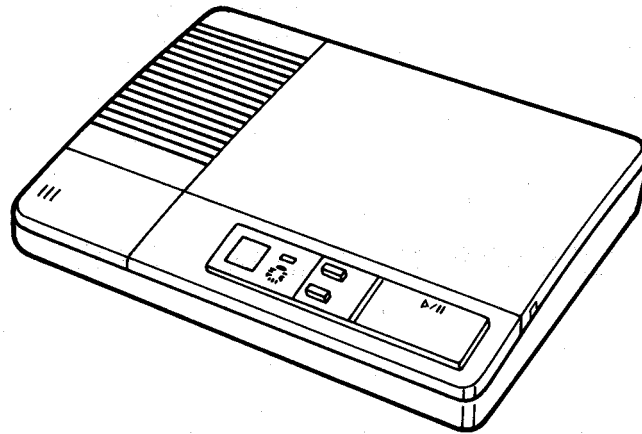
and Technical Guide

AUTO-LOGIC™

EASA-PHONE
AUTOMATIC TELEPHONE
ANSWERING SYSTEM

Telephone Equipment

KX-T1000



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MEASUREMENT AND ADJUSTMENT METHOD/ИЗМЕРЕНИЯ И РЕГУЛИРОВКИ
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КОРПУСА И ЭЛЕКТРИЧЕСКИХ ЧАСТЕЙ
REPLACEMENT PARTS LIST/СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

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■ SPECIFICATIONS

Power Source:	AC adaptor (12 V, DC), KX-A11-W
Outgoing Message (OGM):	Recorded on a microchip.
Incoming Message (ICM):	Recording Time is up to 30 seconds.
Tape Deck:	Micro Cassette (MC-30)
Ring Control:	(1 MIN/VOX)
Call Counter:	Logic control dual cassette system
Power Output:	5/Auto
Monitor Speaker:	1-digit LED display, up to 9 calls
Microphone:	350 mW max. across the monitor speaker
Connection:	5 cm (1 ³¹ / ₃₂ ") PM dynamic (8 ohms)
Dimensions:	Condenser microphone
Weight:	2 built-in modular jacks, DC-IN jack
	5 ⁵ / ₃₂ " × 1 ²³ / ₃₂ " × 6 ³¹ / ₃₂ "
	[131 (W) × 44 (H) × 177 (D) mm]
	1 lb 1.93 oz (480 g) with cassette tape

Design and specifications are subject to change without notice.

DISASSEMBLY INSTRUCTIONS

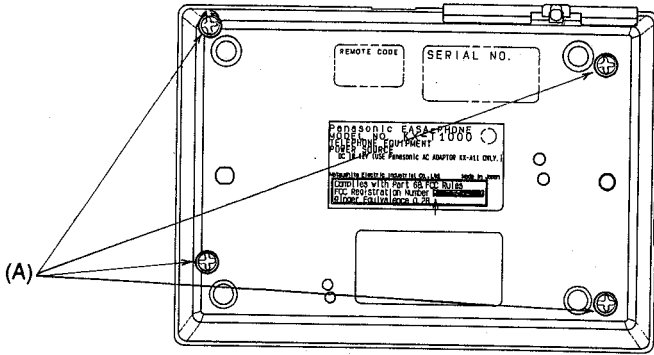


Fig. 2

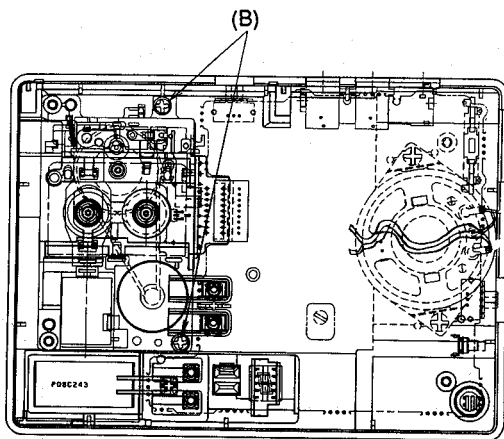


Fig. 3

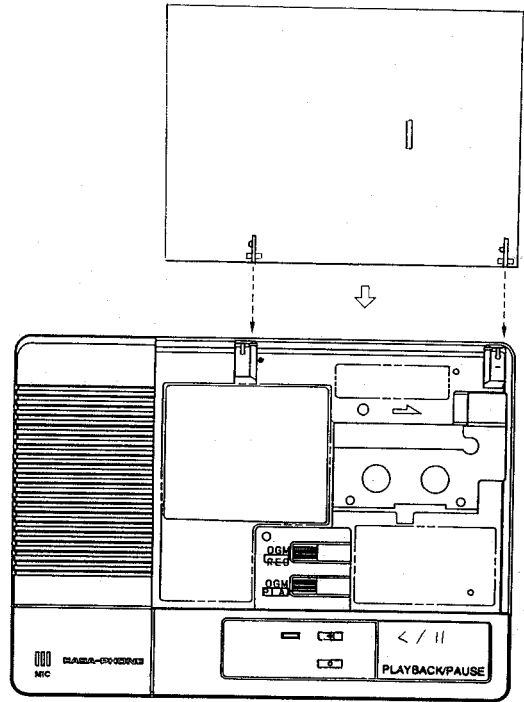
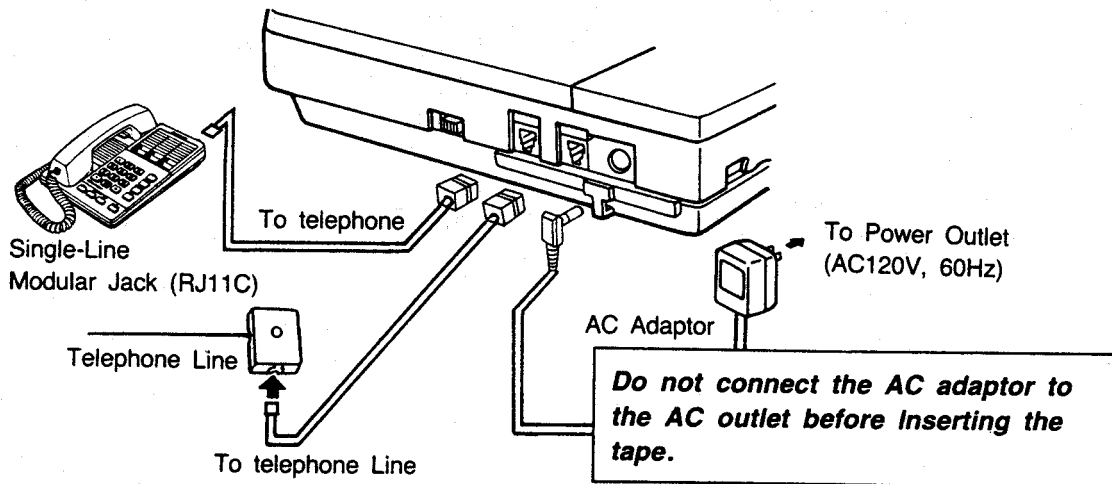


Fig. 4

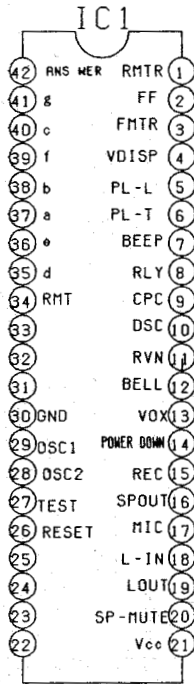
Procedure	To remove—	Remove—	Shown in Fig.—
1	Lower Cabinet	Screws (3×20) (A)×4	2
2	Main Printed Circuit Board and Cassette Deck	Screw (3×10) (B)×2	3
3	Cassette Lid	Remove the Cassette Lid.	4

CONNECTION



CPU DATA

Part No: PQVI4148SA59
 Program ROM: 4K x 10 bit
 Power Supply Voltage: 4-6 V



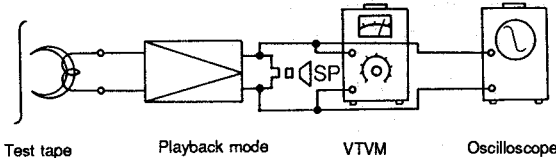
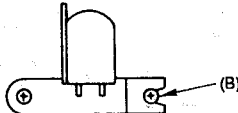
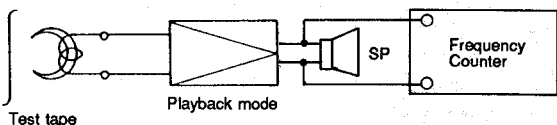
OPTION

	No.	Open	Short
VOX	A	6 sec	4 sec
REMOTE	B	O	X
CALL COUNTER	C	O	X
TEST	D	Normal	Test

Pin No.	Function	High	Low	Pin No.	Function	High	Low
1	RMTR	Active	GND	22	Key in	GND	Key in
2	FF			23	Key in		
3	FMTR	Active	GND	24	Key in	GND	Key in
4	V disp			25	Key in		
5	PLL	Active	GND	26	Reset	Reset	Normal
6	PLT			27	TEST	Vcc	
7	BEEP	Active	GND	28	OSC1	GND	Key in
8	RLY			29	OSC2		
9	CPC	CPC in	GND	30	GND	GND	Key in
10	DSC	DSC in		31	Key in		
11	RVN	Bell in	Bell in	32	Key in	Normal	Active
12	BELL			33	Strobe Out		
13	Vox	Disable	Enable	34	Remote	Normal	Remote
14	Power Down	Power down		35	7-seg d		
15	REC	Active	GND	36	7-seg e	ON	OFF
16	SP out/ Play			37	7-seg a		
17	Mic	Active	GND	38	7-seg b		
18	Line in			39	7-seg f		
19	Line out	4~6V	GND	40	7-seg c		
20	SP Mute			41	7-seg g		
21	Vcc	42	Answer -LED				

MEASUREMENT AND ADJUSTMENT METHOD

- Notes:
1. Make sure the heads are clean.
 2. Make sure the capstan and pressure roller are clean.
 3. Room temperature for measuring and adjusting: $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)
 4. Test equipments are not treated as replacement parts.

ITEM	MEASUREMENT & ADJUSTMENT	REMARKS
<p>1. Head azimuth adjustment</p>	<p>1. Play back test tape (QZZMWA). 2. Adjust screw (B) shown in fig. B for maximum output at SP terminal. (Test equipment connection is shown below.)</p>  <p style="text-align: center;">Fig. A</p>	<p>*Record/playback head</p>  <p style="text-align: center;">Fig. B</p>
<p>2. Tape speed adjustment</p>	<p>1. Play back test tape (QZZMWA). 2. Adjust VR4 for 2990 ± 10 Hz on frequency counter reading.</p>  <p style="text-align: center;">Fig. C</p>	

PLL Adjustment

① fH Adjustment

1. Connect IC5 ③ pin and ⑦ pin, with a capacitor (10 μF).
2. Connect the frequency counter and oscilloscope.
 ⊕ side...IC5 ⑤ pin
 ⊖ side...IC5 ⑦ pin
3. Adjust VR2 for $fH \pm 7$ Hz on the frequency counter reading
 (Refer to below table).

Label No.
(Bottom of the cradle)

Code	fH (Hz)
1	1209
2	Not Used
3	1477
4	1209
5	Not Used
6	1477
7	1209
8	Not Used
9	1477

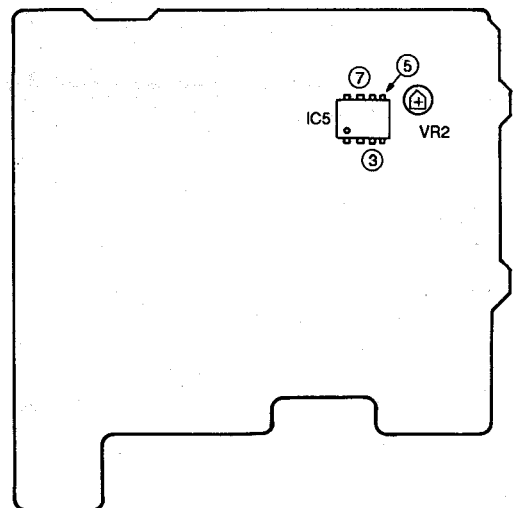


Fig. 5

IC BLOCK DIAGRAM

IC5 PQVIIR3N05

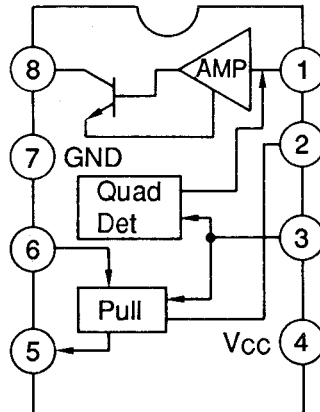
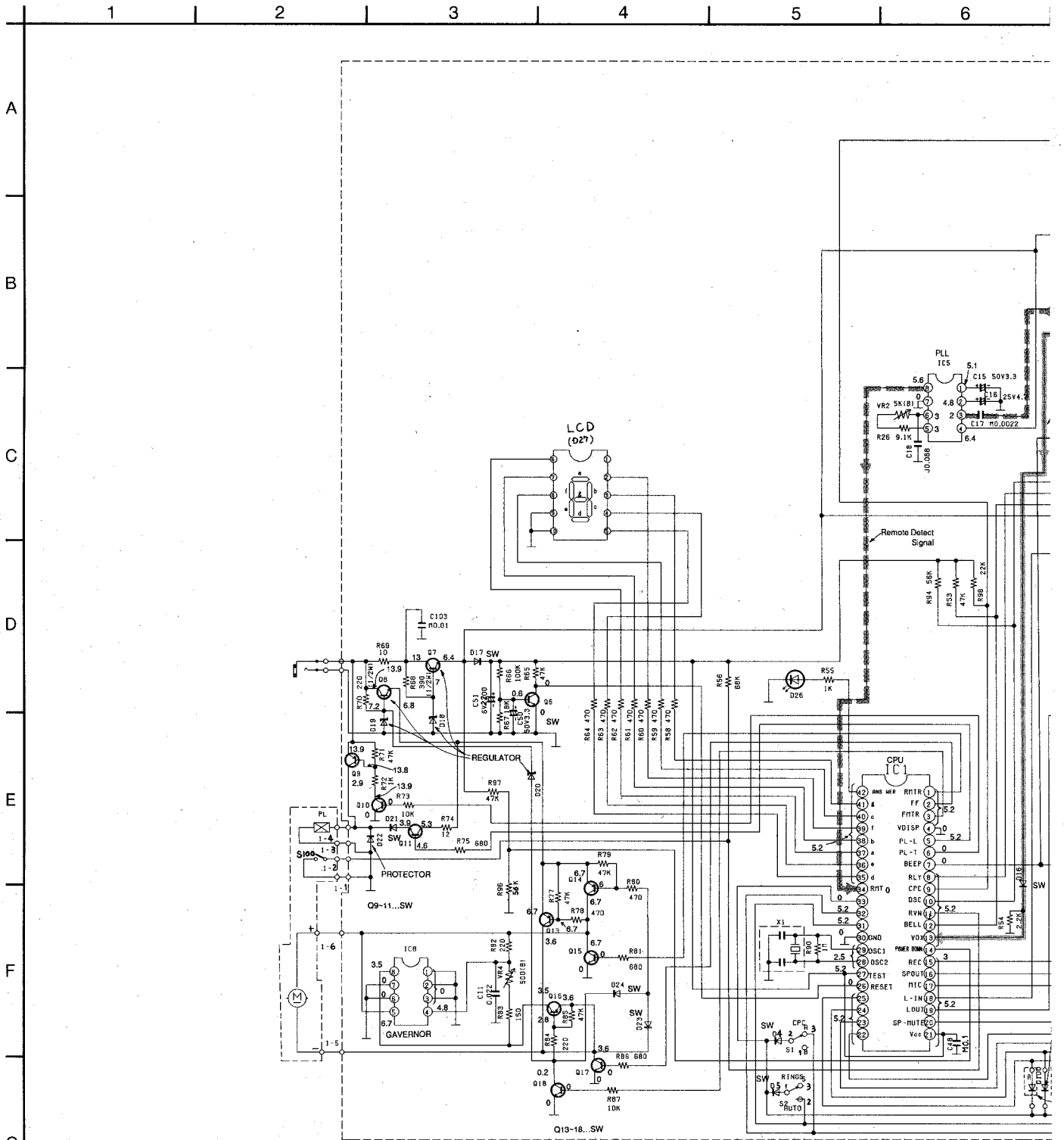


Fig. 6

TERMINAL GUIDE OF IC's, TRANSISTORS AND DIODES

<p>PQVI4148SA59</p>	<p>PQVITA7628P</p>	<p>PQVDSLZ155B2</p>	<p>PQVIIR3N05 PQVIBA6220 PQVINJM4558D</p>	<p>2SA1625 2SC2120</p>
<p>2SB1322 2SD662B</p>	<p>2SD1819 2SD601A</p>	<p>2SC1740</p>	<p>2SD2136</p>	<p>2SC3330 2SA854</p>
<p>PQVDS5688G</p>	<p>PQVDHDS7303 PQVDMTZ11B PQVDMTZ6R8 ISS119 ISS131</p>	<p>MA4180</p>		

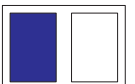


FOR SCHEMATIC DIAGRAM

Notes:

1. S1: CPC switch in "A" position.
2. S2: Ring selector switch in "AUTO" position.
3. S3: OGM recording switch.
4. S4: Rewind switch.
5. S5: Memo switch.
6. S6: Playback/Pause switch.
7. S7: Power switch.
8. S8: OGM-Play switch.
9. S100: Reed Switch.
10. DC voltage measurements are taken with electronic voltmeter from negative line.
11. This schematic diagram may be modified at any time with the development of new technology.

Important safety notice
 The shaded area on this schematic diagram incorporates special features important for protection from line and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.



C DIAGRAM

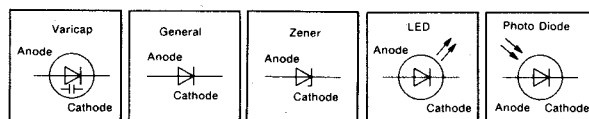
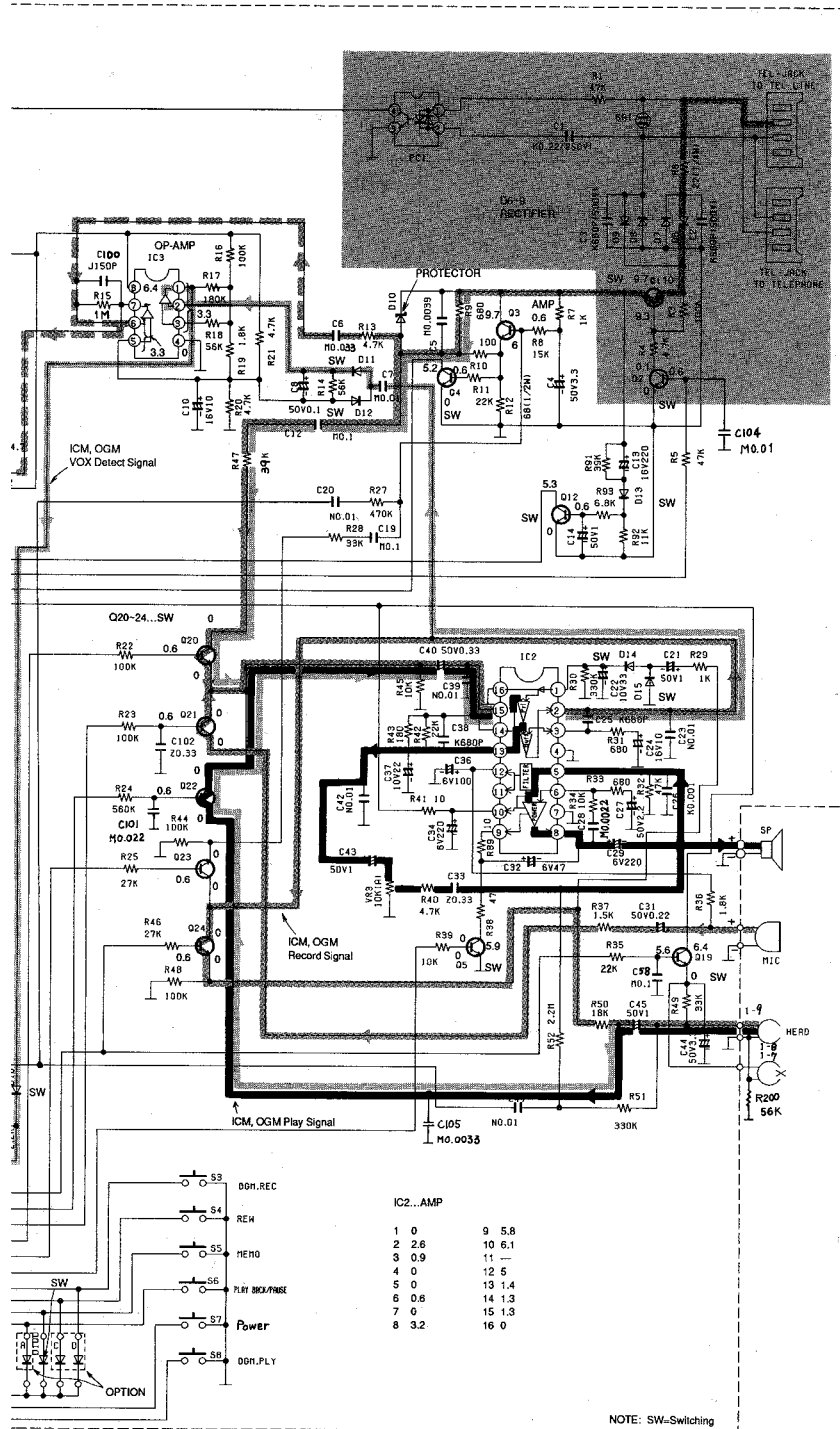
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8

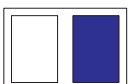
9

10

11



(Add 40 mA to telephone line from the loop simulator.)
 ● Off-hook condition



BLOCK DIAGRAM

KX-T1000

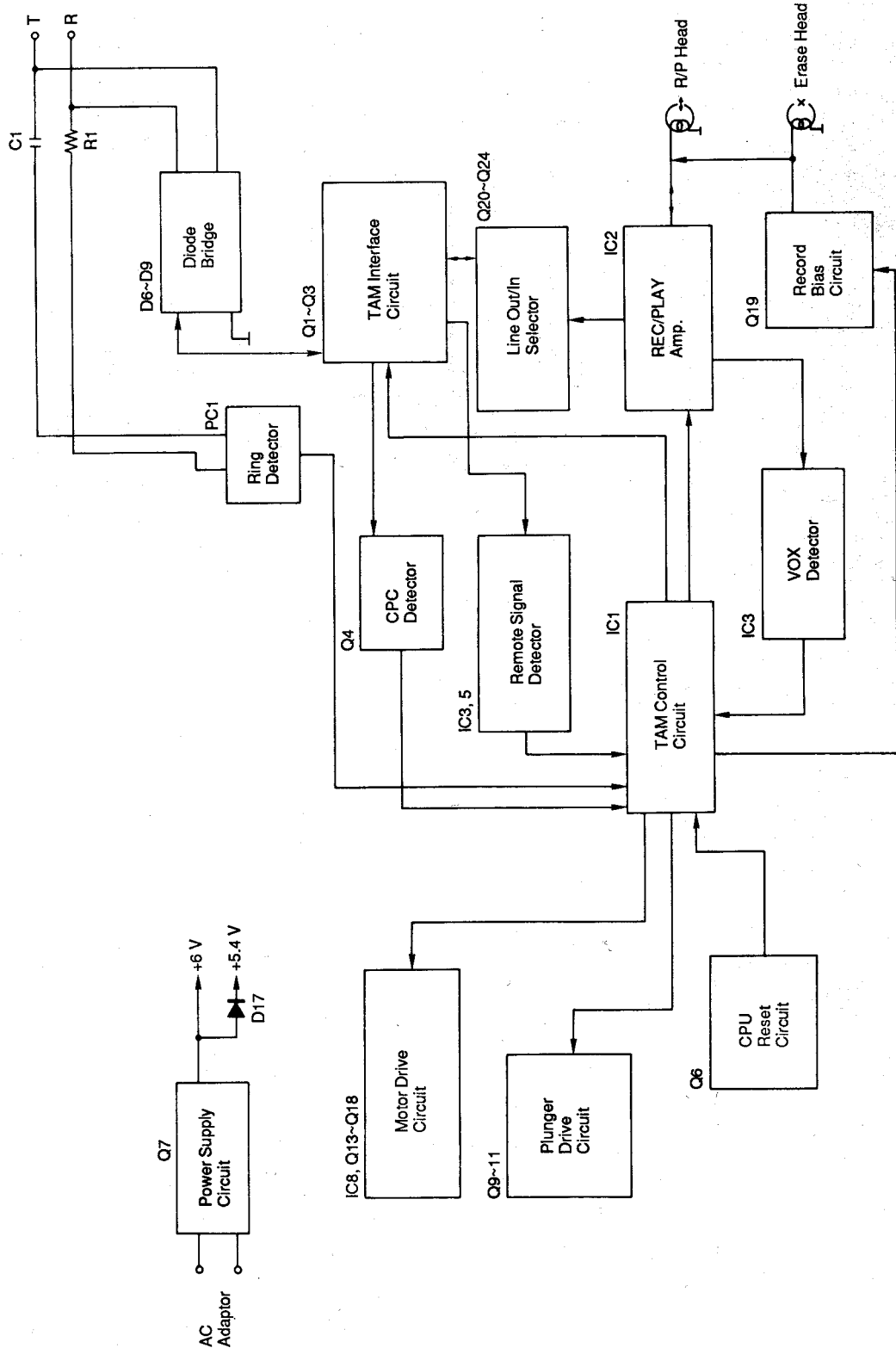


Fig. 7

TROUBLE SHOOTING GUIDE

■ SERVICE HINTS

SYMPTOM	CURE
Answering machine answers itself.	Check PC1 and R98.
ICM will not cut off.	Check C7, IC2 and IC3.
OGM won't store memory.	Check Q19.
No PWR/AFTER PWR fixed no plunger a activation.	Check Q7, Q8 and D18~D20.
Intermittent rewind.	Check Q15 and Q13.
Loss of OGM message even with good batteries.	Check Q19, Q5 and Q20~Q24.
No OGM.	Check Q19, Q5 and Q20~Q24.
Holds line constantly.	Check Q1 and Q2.
Shuts off after OGM.	Check leaky IC1.
Would not record all OGM.	Check Q19, C45, R50, IC1 and Q20~Q24.

ACCESSORIES AND PACKING MATERIALS

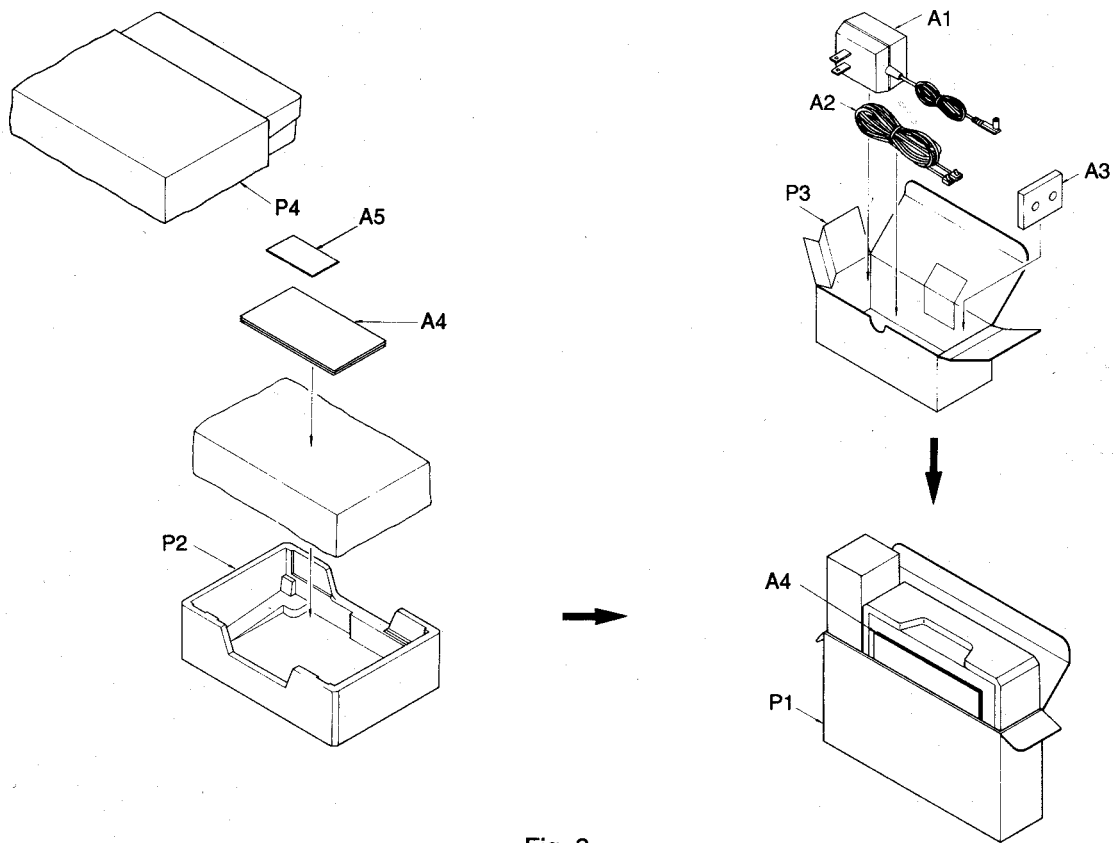


Fig. 8

EXTENSION CORD CONNECTING METHOD

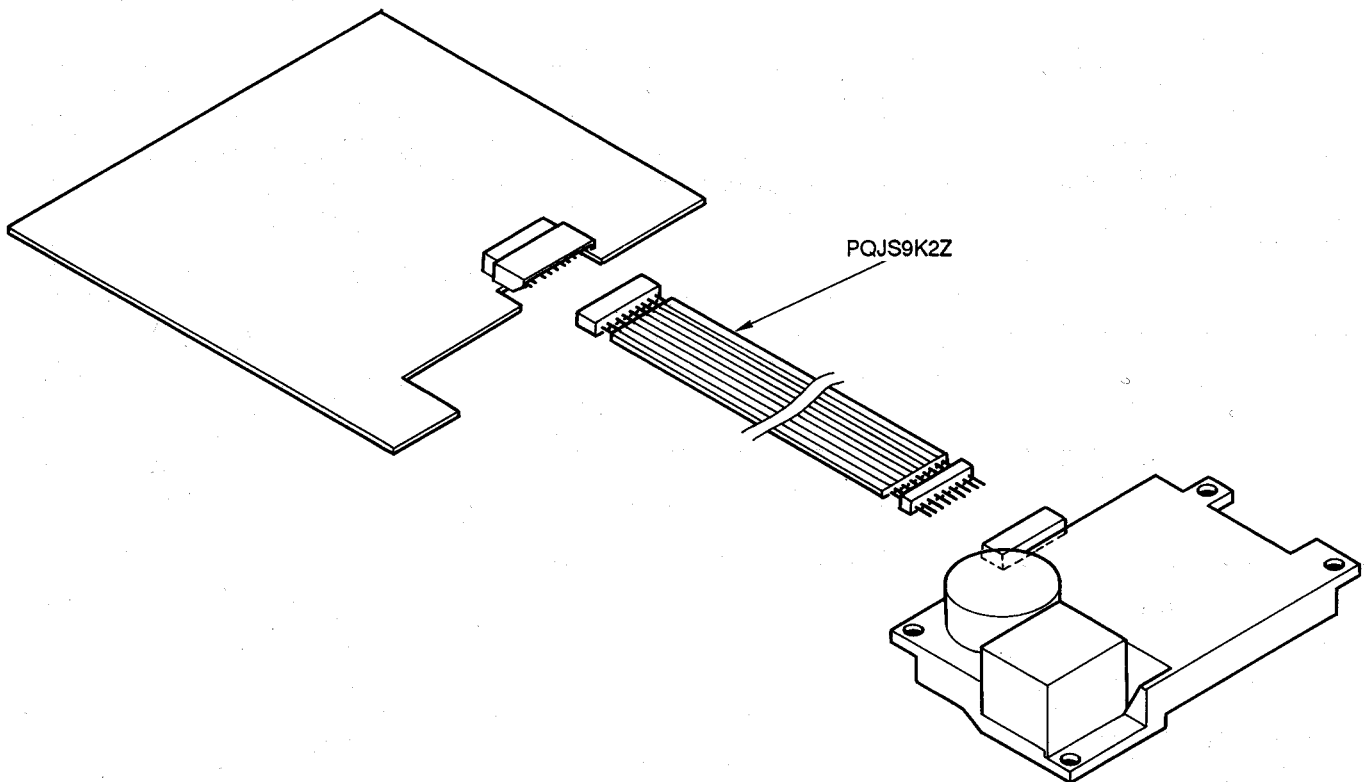


Fig. 9

CASSETTE DECK PARTS LOCATION

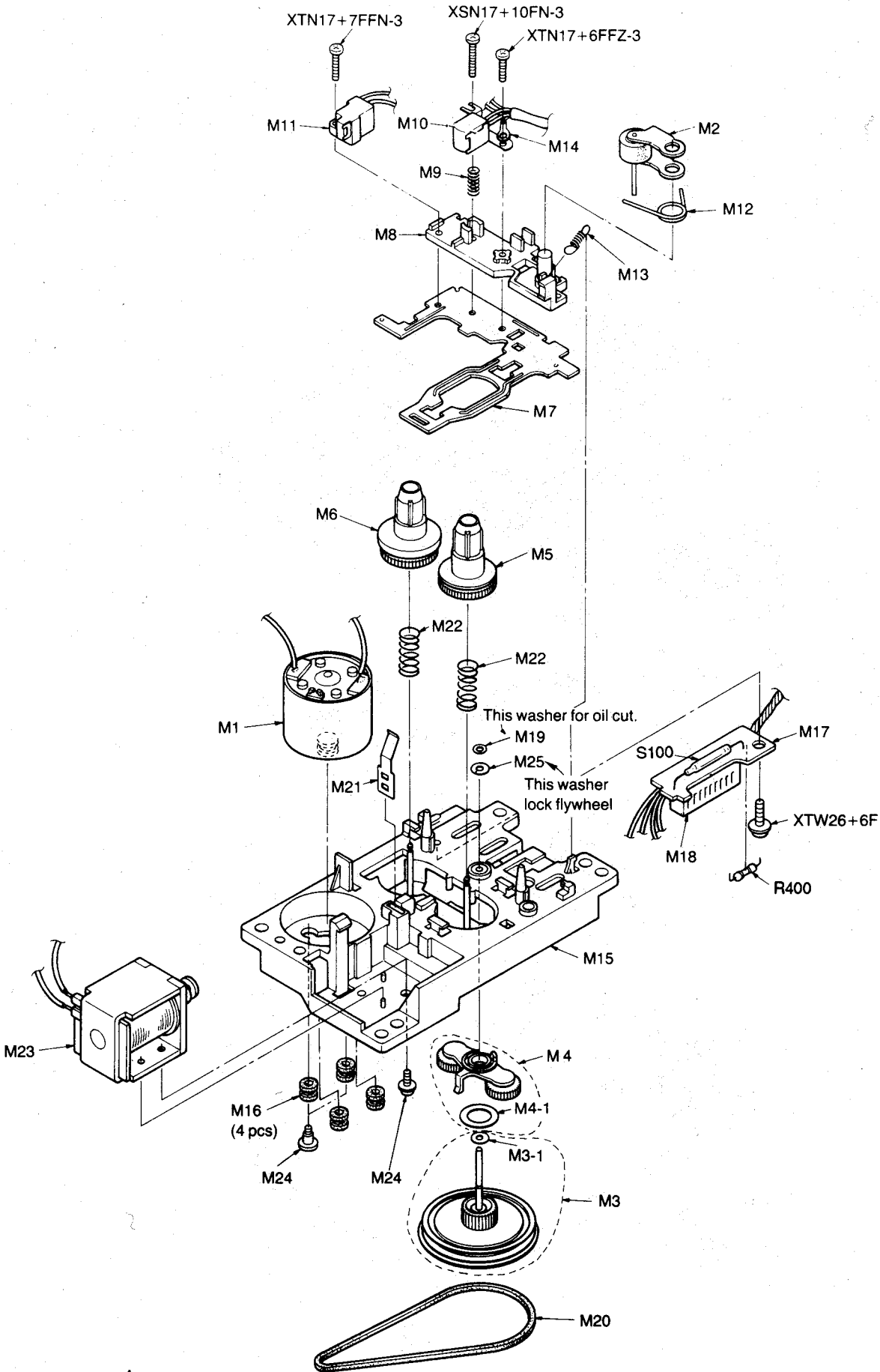


Fig. 10

CABINET AND ELECTRICAL PARTS LOCATION

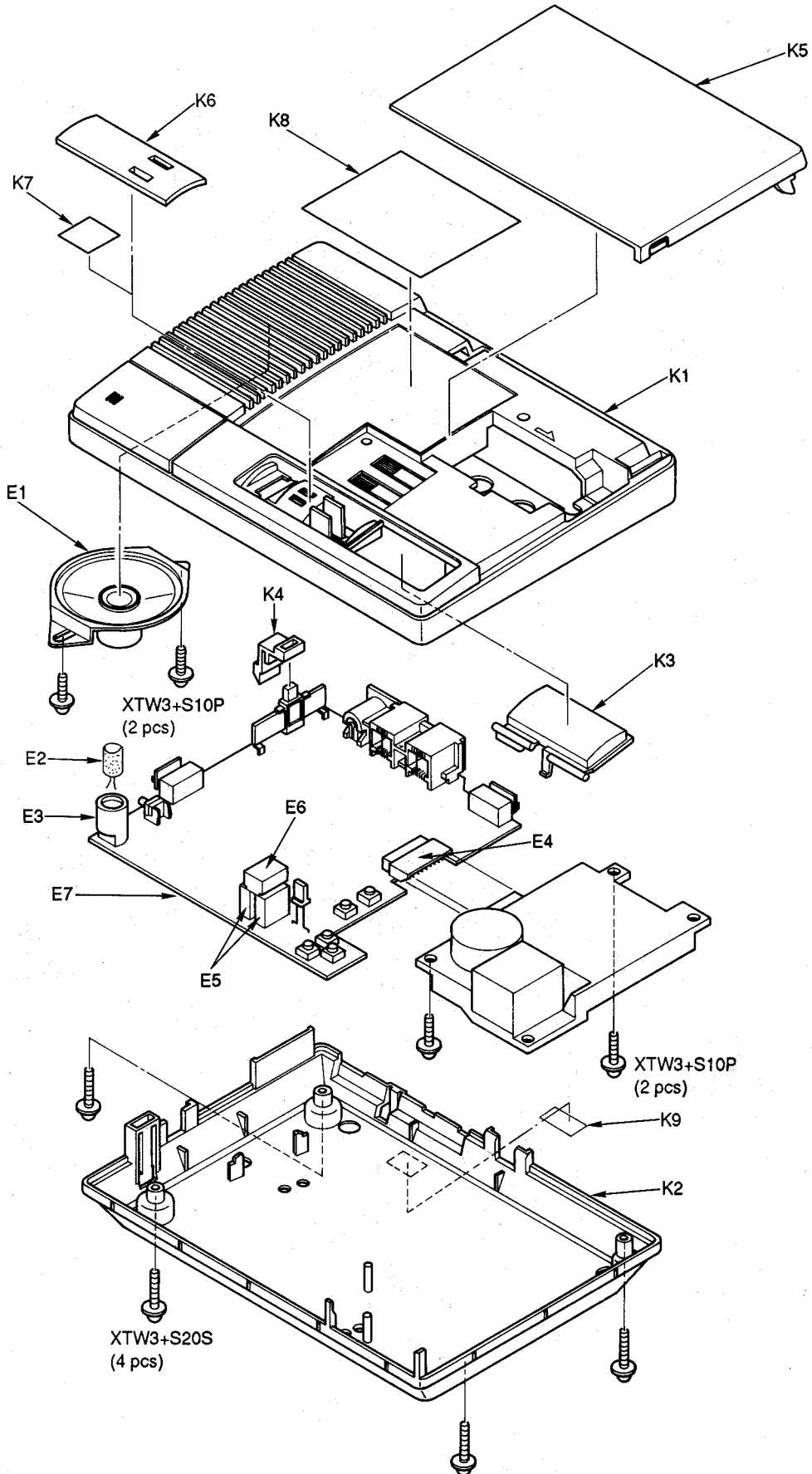


Fig. 11