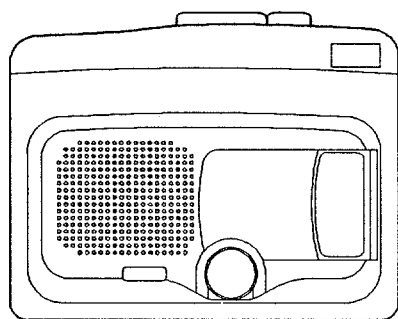


# aiwa



## TP-VS600



CASSETTE RECORDER

• BASIC TAPE MECHANISM: TN-9XR-107

• TYPE: Y, YU, YJ, YH, YL

MANUAL  
SERVICE

## SPECIFICATIONS

<b>Track system</b>	2 tracks 1 channel, monaural
<b>Frequency response</b>	250 – 8,000Hz (4.8 cm/sec) EIAJ
<b>Microphone</b>	Electret condenser microphone (monaural)
<b>Maximum output</b>	200 mW (EIAJ/DC)
<b>Input jack</b>	EXT MIC jack (monaural mini-jack) (1)
<b>Output jack</b>	EARPHONE jack (monaural mini-jack) (1)
<b>Other jack</b>	DC 3V jack
<b>Speaker</b>	Diameter 36 mm, 8 Ω
<b>Recording system</b>	DC bias
<b>Erasing system</b>	Magnet erasure
<b>Power sources</b>	DC 3V using two R6 (size AA) dry cell batteries Domestic AC power using an optional AC adaptor (Aiwa AC-620/AC-302/AC-300)
<b>Battery life</b>	See "Battery life" above.
<b>Dimensions</b>	90.4 (W) × 113 (H) × 38.8 (D) mm (3 9/16 × 4 1/2 × 1 9/16 in.)
<b>Weight</b>	Approx. 167 g, 5.8 oz (excluding batteries)

- Design and specifications are subject to change without notice.

## ACCESSORIES / PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S0-100-050-000		HAND STRAP (BLK)
2	S0-302-340-000		INSTRUC, BOOK<YU>
2	S0-302-300-000		INSTRUC, BOOK EX-ESC<EXCEPT YU>
3	S0-302-310-000		INSTRUC, BOOK EX-GF1<Y>

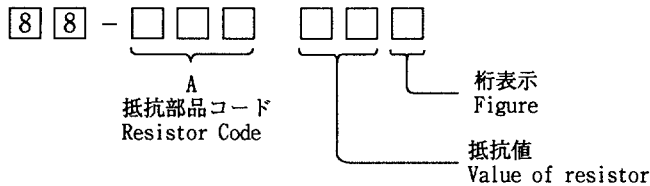
# ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。  
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				S102	S3-110-017-400		SW,SLIDE 1P2T
	S2-541-686-000	IC,LA4168M		S151	S3-110-019-102		SW,SLIDE SS-350-B12W-CT
	87-017-643-080	IC,MM1206XFF		S181	S3-110-019-102		SW,SLIDE SS-350-B12W-CT
				SP101	S1-010-012-301		MYLAR SPKR,36MM 8 OHM
				TH201	87-A90-377-080		C-THMS SP20-3SL102KT
TRANSISTOR				TH202	S5-210-010-300		C-THMS,K39G22D
	89-333-266-080	C-TR,2SC3326B		VR101	S1-010-010-200		VR,RTRY 10K H NOBLE
	89-327-125-080	C-TR,2SC2712GR		VR201	S1-710-100-300		VR,RTRY 3KB
	87-026-210-010	C-TR,DTC144EK		VR202	S7-010-050-001		SFR,5K
	87-026-213-080	C-TR,DTC114YK		VR402	S7-010-050-300		SFR,50K
DIODE				LED C.B			
	87-020-027-080	C-DIODE,ISS184		D302	87-070-313-080		C-LED,SEC1401C-01(GRN)
				D303	87-070-311-080		C-LED,SEC1901C-01(ORN)
				D304	87-017-827-010		C-LED SEC1201C-01(RED)
MAIN C.B				S103	S3-110-019-102		SW,SLIDE SS-350-B12W-CT
	J101	S1-210-012-800	JACK,3.5MM	S201	S3-110-020-200		SW,SHDE SSSS82
	J102	S6-210-020-401	JACK,DC POWER				
	J103	S1-210-012-800	JACK,3.5MM				
	MIC101	S6-010-404-740	ECM,KUC3523				
	S101	S3-110-019-500	SW,SL 2-2-2				

## ○ チップ抵抗部品コード/CHIP RESISTOR PART CODE

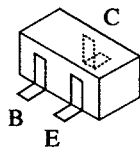
チップ抵抗部品コードの成り立ち  
Chip Resistor Part Coding



チップ抵抗  
Chip resistor

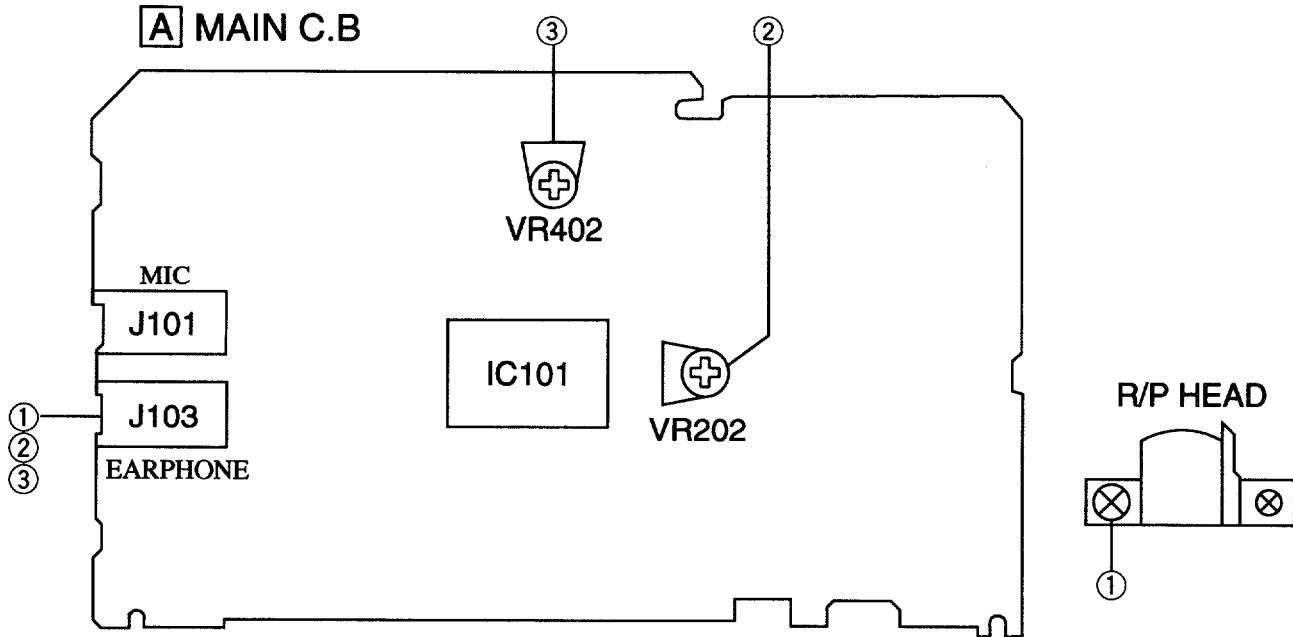
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード :A Resistor Code:A	
				外形/Form	L	W		t
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

## TRANSISTOR ILLUSTRATION



2SC2712  
2SC3326B  
DTC114YK  
DTC144EK

# ADJUSTMENT



## 1. Head Azimuth Adjustment

Setting: • Test tape : TTA-330

- Test point: J103 (Earphone Jack)
- Rec mode : 4.8cm / S
- Playback speed : center
- V-sensor : OFF
- NFR : OFF
- VOLUME :MAX (non clip point)
- Adjustment point : Head Azimuth

Adjustment screw

Method : Playback the 8kHz signal of the test tape and adjust the Head Azimuth Adjustment screw so that the output becomes maximum.

## 2. Tape Speed Adjustment (4.8cm / S)

Setting: • Test tape : TTA-100

- Test point: J103 (Earphone Jack)
- Rec mode : 4.8cm / S
- Playback speed : center
- VOLUME :MAX
- Adjustment point : VR202

Method : Playback the test tape (TTA-100) and adjust the VR202 become  $3000\text{Hz} \pm 10\text{Hz}$ .

## 3. Tape Speed Adjustment (2.4cm / S)

Setting: • Test tape : TTA-160

- Test point: J103 (Earphone Jack)
- Rec mode : 2.4cm / S
- Playback speed : center
- VOLUME :MAX
- Adjustment point : VR402

Method : Playback the test tape (TTA-100) and adjust the VR402 become  $3000\text{Hz} \pm 10\text{Hz}$ .

## PRACTICAL SERVICE FIGURE

Tape speed :  $3000\text{Hz} \pm 60\text{Hz}$

Wow & flutter (4.8cm/s) : Less than 0.55% (R.M.S)  
(2.4cm/s) : Less than 0.8% (R.M.S)

Take-up torque : 20~50g-cm (FWD)

F.F torque : More than 55g-cm

Rew torque : More than 55g-cm

Back tension : 0.5~4.0g-cm (FWD)

Erasing ratio (1kHz) : More than 44dB

S/N : More than 56dB (Vol : MAX-10dB)

Distortion : Less than 3% (Vol : MAX-10dB)

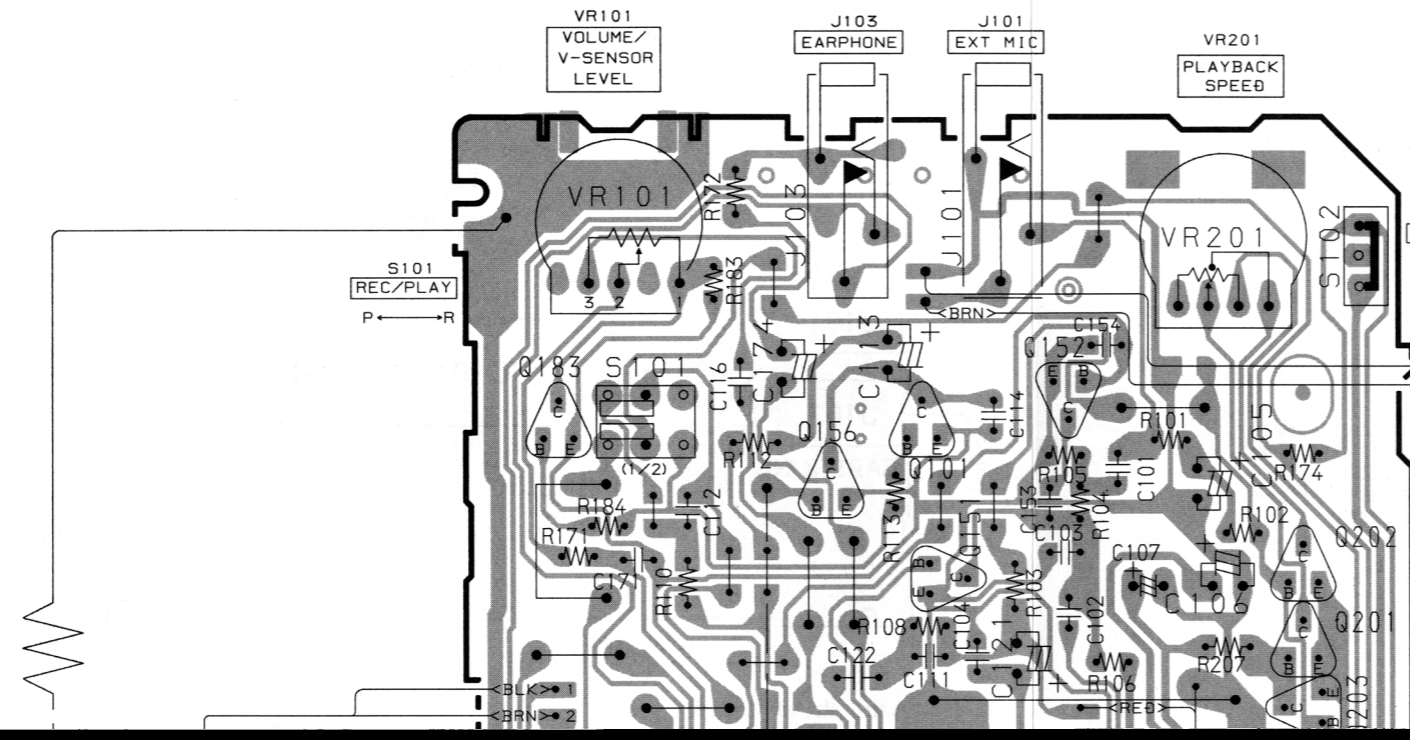
Noise level : Less than 2.0mV (Vol : MAX)

Test tape : TTA-100

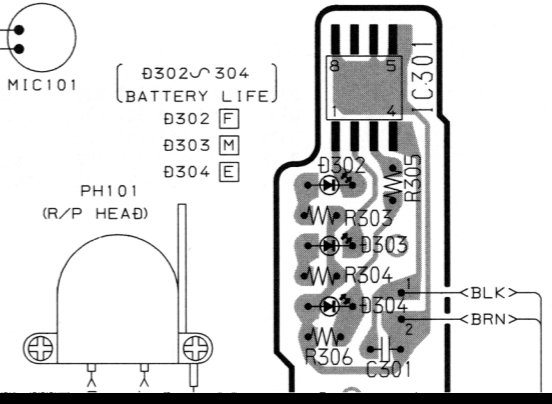
TTA-160

TTA-330

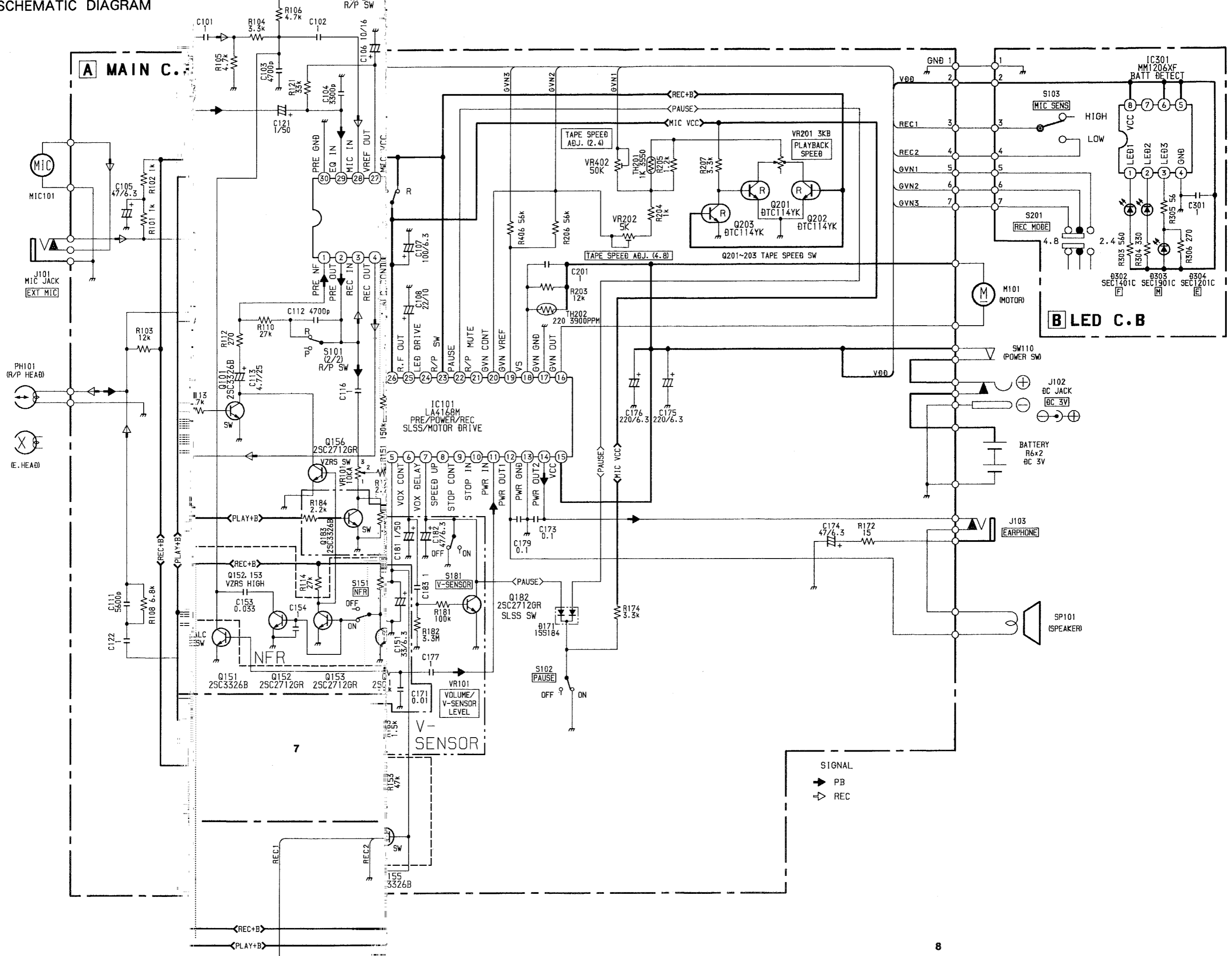
# A MAIN C.B



# B LED C.B



**SCHEMATIC DIAGRAM**



**A MAIN C.**

**B LED C.B**

SIGNAL  
➔ PB  
➔ REC

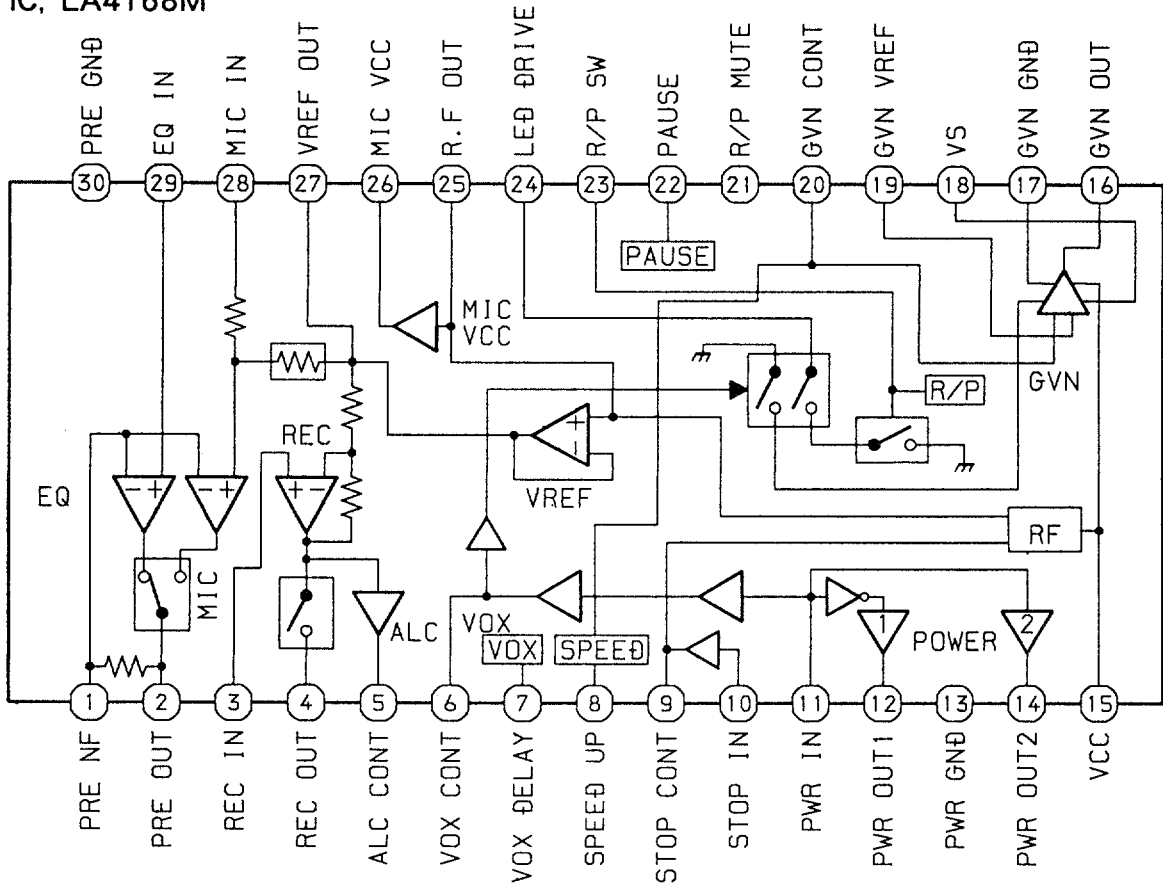
IC PIN VOLTAGE TABLE

IC,LA41468M

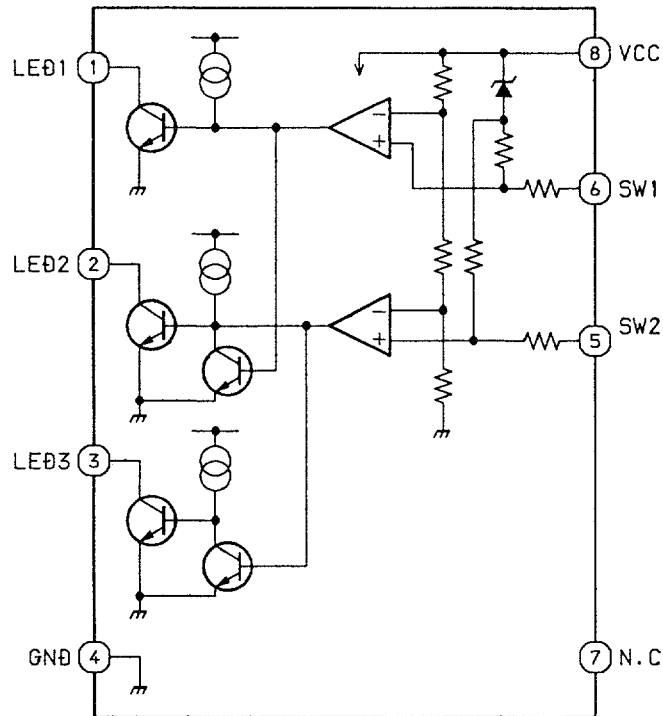
Pin No.	MODE				SLSS (PAUSE)
	Rec sens H/L = "REC" VZRS(NFR) ON/OFF = "REC"				
	4.8cm/S		2.4cm/S		
	PB	REC	PB	REC	
1	1.55	1.55	1.55	1.55	1.55
2	1.52	1.55	1.52	1.55	1.55
3	1.52	1.55	1.52	1.55	1.55
4	1.55	1.5	1.55	1.5	1.5
5	0	0.2 (INPUT SHORT)	0	0.2 (INPUT SHORT)	0.2
6	0	0 (INPUT SHORT)	0	0 (INPUT SHORT)	0
7	0	0	0	0	0
8	0.77	0.77	0.77	0.77	0.77
9	0	0	0	0	0
10	0	0	0	0	0
11	1.54	1.55	1.54	1.55	1.55
12	1.24	1.2	1.24	1.2	1.2
13	0	0	0	0	0
14	1.12	1.16	1.12	1.16	1.16
15	3.0	3.0	3.0	3.0	3.0
16	1.3	1.3	1.97	1.97	3.0
17	0	0	0	0	0
18	2.5	2.5	2.5	2.5	3.0
19	1.3	1.3	1.3	1.3	0
20	0.2	0.2	0.1	0.1	0
21	1.55	1.55	1.55	1.55	1.55
22	0.7	0.7	0.7	0.7	0.7
23	0	2.65	0	2.65	2.65
24	3.0	0	3.0	0	3.0
25	1.55	1.55	1.55	1.55	1.55
26	2.65	2.65	2.65	2.65	2.65
27	1.55	1.55	1.55	1.55	1.55
28	1.55	1.55	1.55	1.55	1.55
29	1.55	1.55	1.55	1.55	1.55
30	0	0	0	0	0
	NORMAL	REC SENS HIGH VZRS OFF SLSS OFF PAUSE OFF	REC SENS HIGH VZRS OFF SLSS OFF PAUSE OFF		TAPE SPEED 4.8cm/S REC SENS HIGH VZRS OFF

# IC BLOCK DIAGRAM

## IC, LA4168M



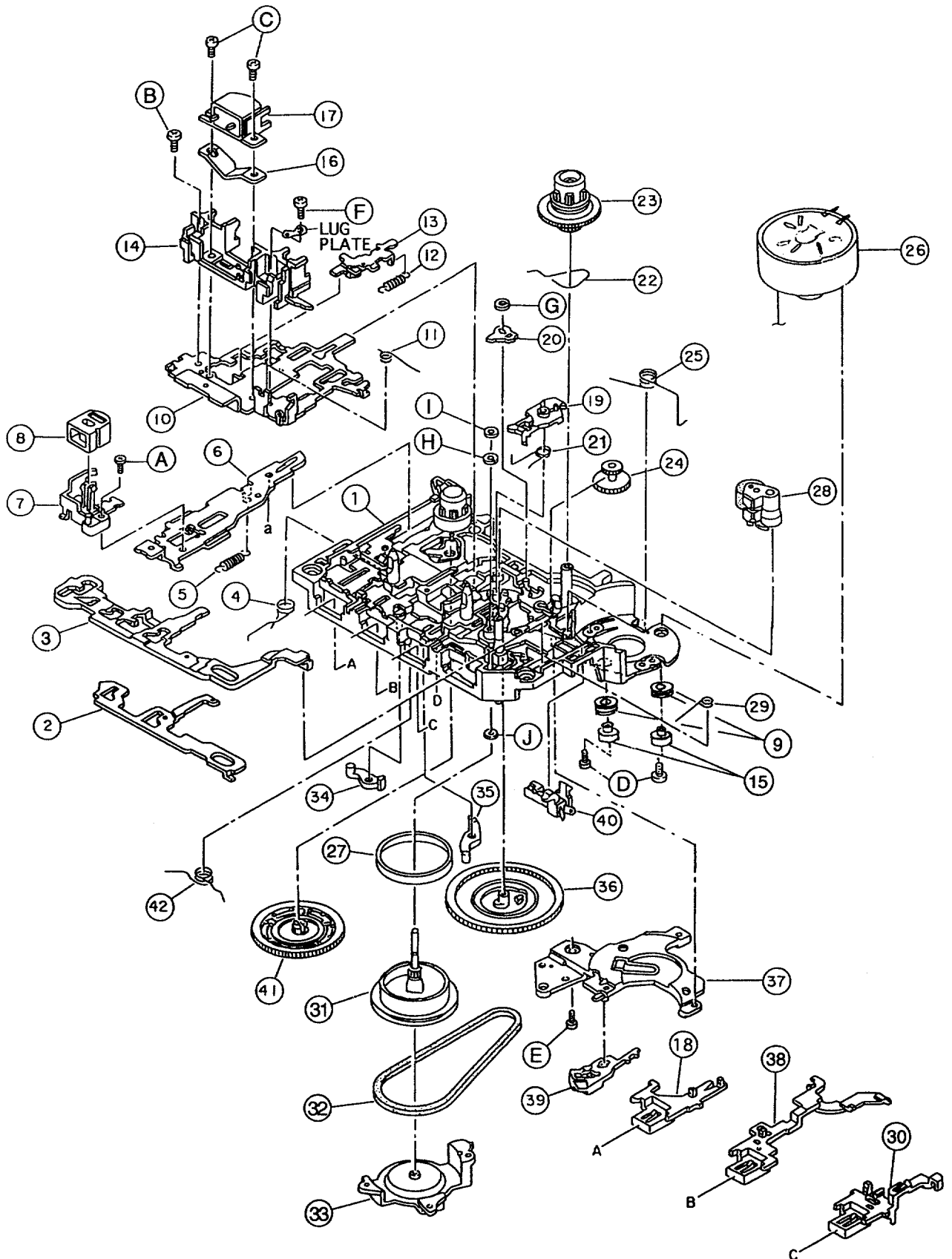
## IC, MM1206XF



BATTERY REMAIN VOLUME	2.50V 2.25V		
	LED1	L	H
LED2	H	L	H
LED3	H	H	L



# TAPE MECHANISM EXPLODED VIEW 1/1



# TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。  
 If can't understand for Description please kindly refer to “REFERENCE NAME LIST”

NO.	DESCRIPTION	REF. NO.	PAV. NO.	DESCRIPTION	NO.
1-909-013-050	CHASSIS ASSY	31	S1-909-053-040	FLYWHEEL ASSY	1
1-909-020-190	FR PLATE	32	S1-909-080-100	MAIN BELT	2
1-909-020-090	LOCK PLATE	33	S1-909-050-100	FL BRACKET	3
1-909-020-140	STOP SPRING	34	S1-909-020-150	R/C LEVER (R)	4
1-909-120-080	REC LEVER SPRING	35	S1-909-020-160	R/C LEVER (F)	5
1-909-120-070	REC LEVER	36	S1-909-060-120	CAM GEAR	6
1-909-120-020	MG GUIDE	37	S1-909-020-170	R/C BRACKET	7
6-207-100-020	HEAD E TC-230AN(SL)	38	S1-909-020-110	RWD LEVER	8
1-852-140-020	M LUBBER	39	S1-909-020-180	FF STOPPER	9
1-909-030-050	HEAD PANEL	40	S6-401-011-630	LEAF SW MSW-1541TA	10
1-909-040-060	P/R SPRING	41	S1-909-070-020	RWD GEAR	11
1-909-030-080	R/C SPRING	42	S1-909-020-130	FR SPRING	12
1-909-030-070	R/C PLATE	A	S9-C01-174-030	CAMERA 1.7-4	13
1-909-030-060	TAPE GUIDE	B	S9-C01-173-530	CAMERA 1.7-3.5	14
1-852-140-030	M COLLOR	C	S9-P14-203-310	+/- SCREW M2-3.3	15
1-944-030-020	HEAD SPRING PLATE	D	S9-C18-300-100	CAMERA 1.7-3	16
6-205-020-130	FR HEAD RM-7521-A	E	S9-P08-173-410	PST 1.7-3.4	17
1-909-020-100	STOP LEVER	F	S9-P14-206-320	+/- SCREW M2-3.6	18
1-909-110-040	AUTO LEVER	G	S9-W02-300-100	P WASHER CUT 1.2-3.8-0.3	19
1-909-110-020	A PUSH ARM	H	S9-W08-350-200	LUMILER WASHER CUT 0.98-3-0.3	20
1-909-110-050	M CONTROL SPRING	I	S9-W05-200-600	HL WASHER 1.16-3-0.2	21
1-909-060-150	SENSOR SPRING C	J	S9-W05-200-100	HL WASHER 1.55-3-0.13	22
1-909-063-030	T REEL ASSY				23
1-909-060-130	TAKE UP GEAR				24
1-909-030-090	HP SPRING				25
1-909-083-060	MOTOR ASSY				26
1-909-050-130	BRAKE BELT				27
1-909-043-010	PINCH ROLLER ASSY				28
1-909-020-200	FR PLATE SPRING				29
1-909-020-120	FF LEVER				30

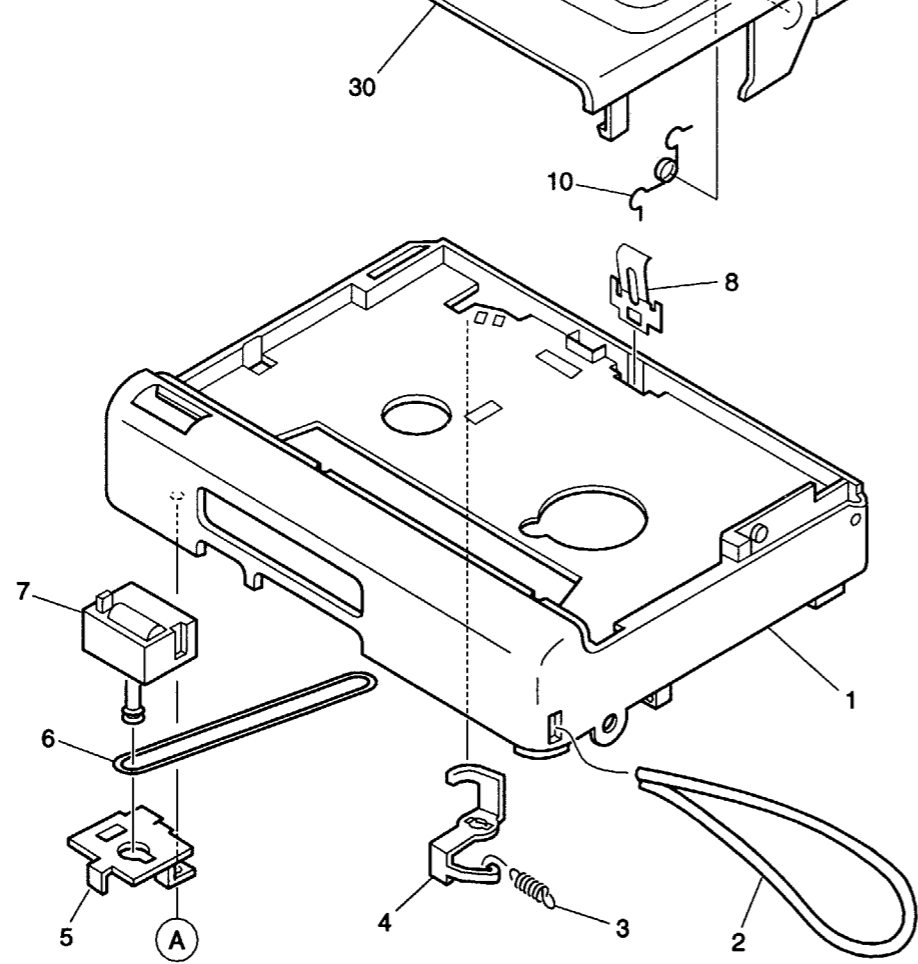
MECHAN

15

D,M

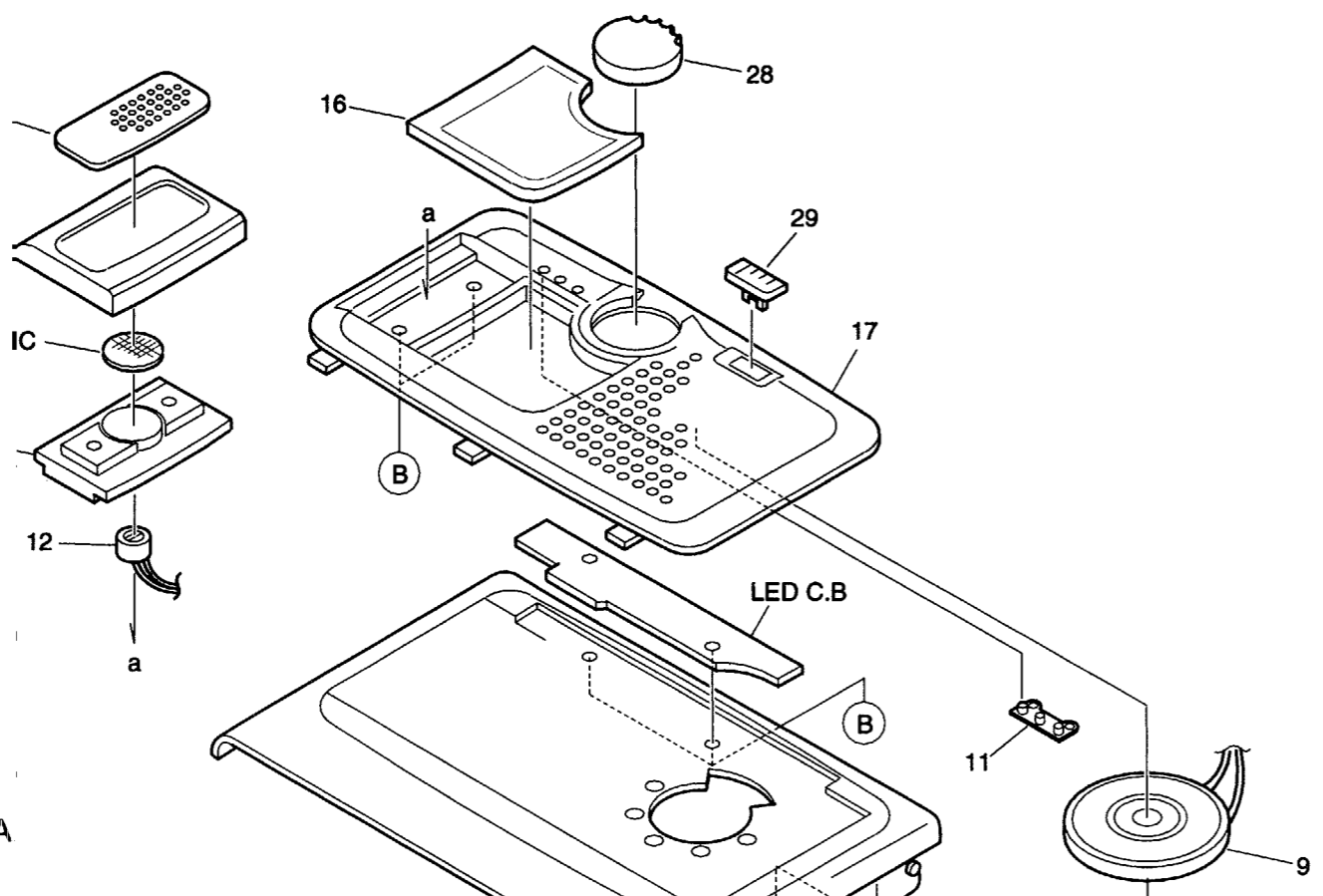
BLN

14

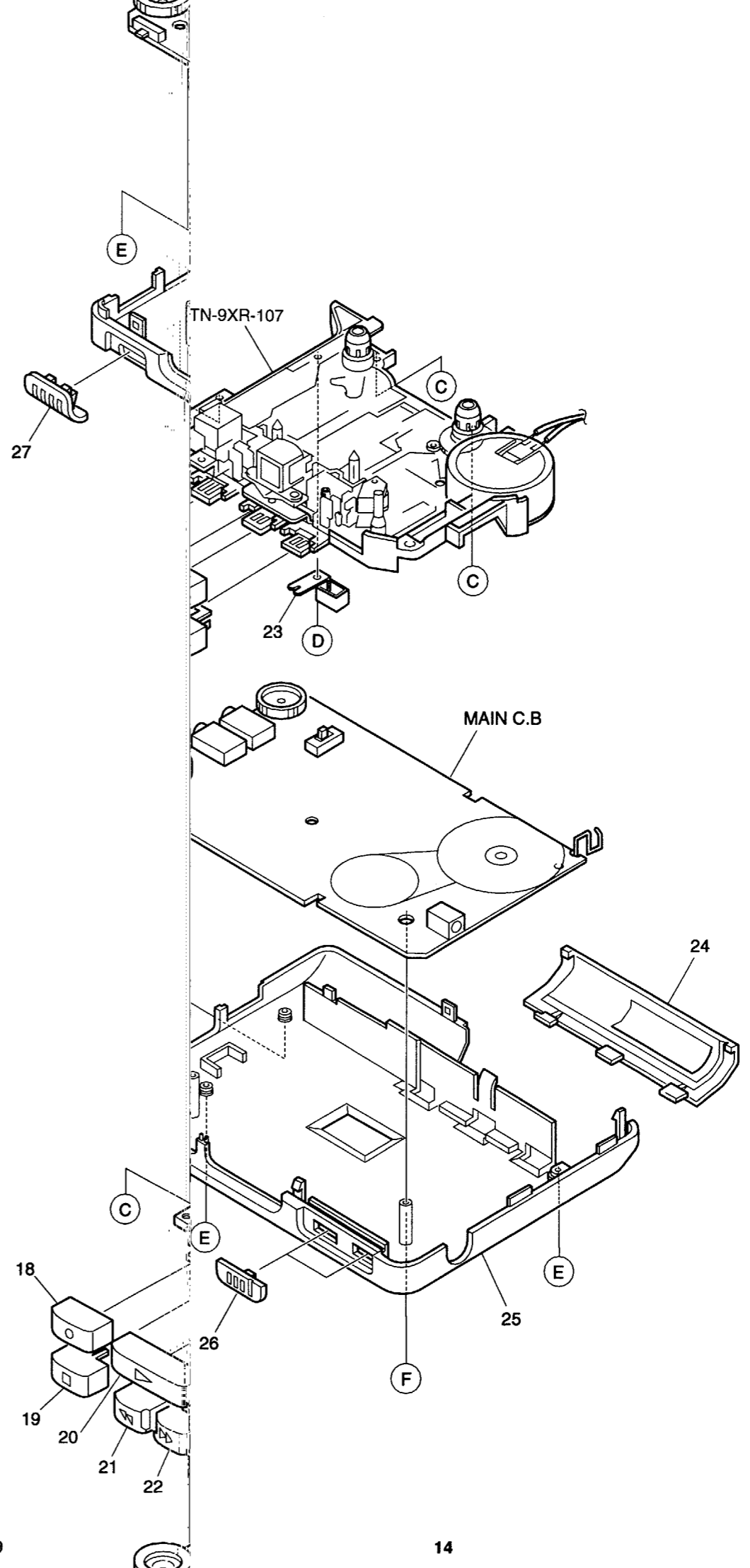


13

L EXPLODED VIEW 1/1



CA



14

# MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。  
 If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カリ NO.	DESCRIPTION	REF. NO	PART NO.	カリ NO.	DESCRIPTION
1	S1-101-750-400		FRAME CENTER	21	S0-400-910-000		BTN, REW
2	S0-100-050-000		HAND STRAP (BLK)	22	S0-400-920-000		BTN, F.F
3	S0-201-030-000		SPR-E REC SAFETY	23	S0-601-030-000		LEVER, REC ACATUATOR
4	S1-000-140-000		LEVER REC SAFETY	24	S0-300-880-000		LID, BATT
5	S0-601-020-000		HLDR, COUNTER	25	S0-200-850-101		CAB, REAR<YU, Y>
6	S1-300-630-000		BELT, COUNTER	25	S0-200-850-102		CAB, REAR<YH, YJ, YL>
7	87-040-196-010		COUNTER	26	S0-502-390-000		KNOB, SL SLSS/VZRS
8	S0-201-020-000		SPR-T LID CASS	27	S0-502-330-000		KNOB, SL PAUSE
9	S1-010-012-301		MYLAR SPKR, 36MM 8 OHM	28	S0-502-380-100		KNOB, RTRY SPEED
10	S0-200-990-000		SPR-P CASS	29	S1-005-024-000		KNOB, SLREL SENS
11	S0-800-790-000		LENS, LED	30	S0-300-910-100		LID, CASS (TU)
12	S6-010-404-740		ECM, KUC3523	31	S0-900-040-001		COVER SP
13	S1-300-640-000		COVER, MIC	A	87-351-529-310		VT2+1.7-4.0
	14	S1-101-760-000	FRAME MIC	B	87-351-508-310		VT2+1.4-3.5
	15	S0-900-310-000	PANEL, MIC	C	87-067-271-010		VFT2+1.7-4
	16	S0-800-780-100	WINDOW, CASS	D	87-067-640-010		V+1.7-1.6
	17	S1-600-530-100	PANEL, CASS	E	87-067-769-010		VT2+1.7-8
	18	S0-400-930-000	BTN, REC	F	87-357-042-010		S-SCREW, VT2+2-18
	19	S0-400-900-000	BTN, STOP				
	20	S0-400-890-000	BTN, PLAY				

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING

CPRA-SOL ELEC  
FLY-WHL FR  
FLYWHEEL FRONT  
CAP, CER  
CAP, B

FILM  
CERA-SOL  
CERA-SOL SS  
TANTALUM  
R, CERAMIC  
FUN  
G-CU  
HDL  
HIMERON  
HINGE, BAT  
FUNCTION  
G-CUSHION  
HANDOL  
CLOTH  
HINGE, BATTERY  
CAP, M/F  
CAP, TC  
CAP, TC-U  
CAP, TN  
CERA FIL  
CAP,  
CAP,  
CAP,  
CAP,  
FILTE

R, CERAMIC  
Y LINE  
ELECT  
R  
R  
HLDR  
HT-SINK  
IB  
IDLE  
IND, L-R  
HOLDER  
HEAT SINK  
INSTRUCTION BOOKLET  
IDLER  
INDICATOR, L-R  
CF  
DL  
E/CAP  
FILT  
FLTR  
FILTE  
DELA  
CAP,  
FILTE  
FILTE

FUSE  
OR  
O DIODE  
O SENSER  
O TRANSISTOR  
KEY, CONT  
KEY, PRGM  
KNOB, SL  
LBL  
LID, BATT  
KEY, CONTROL  
KEY, PROGRAM  
KNOB, SLIDE  
LABEL  
LID, BATTERY  
FUSE RES  
MOT  
P-DIODE  
P-SNSR  
P-TR  
RES,  
MOTO  
PHOT  
PHOT  
PHOT

ABLE CAPACITOR  
PP  
ER TRANSFORMER  
MELF  
OTE CONTROLLER  
LID, CASS  
LVR  
P-SP  
PANEL, CONT  
PANEL, FR  
LID, CASSETTE  
LEVER  
P-SPRING  
PANEL, CONTROL  
PANEL, FRONT  
POLY VARI  
PPCAP  
PT  
PTR, RES  
RC  
VARI  
CAP,  
POW  
PTR,  
REMO

NON-FLAMMABLE  
ONATOR  
D  
NOID  
KER  
PRGM  
PULLY, LOAD MO  
RBN  
S-  
SEG  
PROGRAM  
PULLY, LOAD MOTOR  
RIBBON  
SPECIAL  
SEGMENT  
RES NF  
RESO  
SHLD  
SOL  
SPKR  
RES,  
RESO  
SHIEI  
SOLE  
SPEA

CH LEVER  
SH  
SHEET  
SW, R-TRY  
SW, SL  
TC CAP  
THMS  
SWITCH, ROTARY  
SWITCH, SLIDE  
CAP, CERA-SOL  
THERMISTOR  
SW, LVR  
S-  
SL  
SP  
SP-SCREW  
SWIT

SPACER, BATTERY  
SPRING  
P-SPRING  
P-SPRING, C-PUSH  
T-SPRING  
TR  
TRIMMER  
TUN-CAP  
VIB, CER  
VIB, XTAL  
TRANSISTOR  
CAP, TRIMMER  
VARIABLE CAPACITOR  
RESONATOR, CERAMIC  
RESONATOR, CRYSTAL  
SPACER, BAT  
SPR  
SPR-P  
SPR-PC-PUSH  
T-SP

TERMINAL  
TRIGGER  
TUNING  
VOLUME  
WASHER  
VR  
ZENER  
サージサプレッサ  
セラコン  
VOLUME  
DIODE, ZENER  
SERGESUPPRESSOR  
CAP, CERA  
TERM  
TRIG  
TUN  
VOL  
W

WHEEL  
WORM-WHEEL  
ARM, SHAFT  
GUIDE, SHAFT  
WHL  
WORM-WHL  
ジグアーム  
ジグガイド

STRAP  
S-SCREW  
HINGE  
S-SCREW  
SCREW, SERRART  
ストラップ  
トクナベ  
ヒンジ  
ヒンジビス  
ビスセレート

931196, 750038

Tokyo Japan

サービス技術ニュース	
番号	連絡内容
G - -	
G - -	
G - -	

アイワ株式会社  
AIWA CO., LTD.