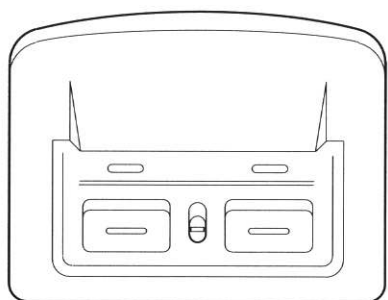


aiwa



HS-AP400



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM: TN-8SA-128

• TYPE: YZ1

SERVICE MANUAL

SPECIFICATIONS

Maximum output	8 mW + 8 mW (EIAJ 16 ohms) 9 mW + 9 mW (EIAJ 32 ohms)
Power source	DC 3V using two R6 (size AA) batteries AC house current using an optional AC adaptor Aiwa AC-300/AC-302
Maximum dimensions	114 (W) × 92 (H) × 36.2 (D) mm (4 1/2 × 3 5/8 × 1 7/16 in.)
Weight	Approx. 140 g, 4.9 oz (excluding batteries)

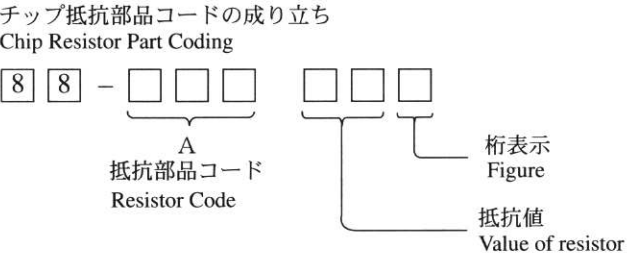
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
“DOLBY” and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

ELECTRICAL MAIN PARTS LIST

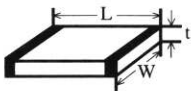
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C121	87-010-401-010		CAP,E 1-50V
	87-A20-460-080	IC,MM1336CF		C123	87-015-674-010		CAP,E 22-6.3V
	87-001-875-080	IC,BA1106FS		C125	87-015-674-010		CAP,E 22-6.3V
				C126	87-015-674-010		CAP,E 22-6.3V
				J102	83-HRL-602-010		JACK,EARPHONE 3.5 STEREO
TRANSISTOR				SFR101	S1-020-650-010		SFR,1K
	87-026-460-080	C-TR, IMX1		SFR102	S1-020-650-010		SFR,1K
				SFR103	S1-020-650-010		SFR,1K
DIODE				SW101	83-HR6-605-010		SW,SLIDE 2P2T
	87-020-339-080	C-DIODE,1SS226		TH101	87-026-577-010		THERMISTOR HT-100
MAIN C.B				VR101	87-024-326-010		RES,VARIABLE RK08H1210GUA
				DOLBY C.B			
C105	87-015-676-010	CAP,E 47-6.3V		C212	87-010-473-080		C-CAP,E 47-4V
C106	87-015-676-010	CAP,E 47-6.3V		SW200	87-A90-214-080		SW,SLIDE 1P2T
C116	87-015-691-010	CAP,E 0.1-50V		SW201	87-A90-214-080		SW,SLIDE 1P2T
C119	87-016-350-040	CAP,E 470-4V		SW202	87-A90-215-080		SW,SLIDE 1P3T
C120	87-016-350-040	CAP,E 470-4V					

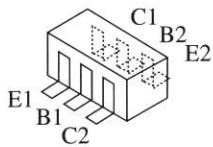
○ チップ抵抗部品コード / CHIP RESISTOR PART CODE



チップ抵抗
Chip resistor

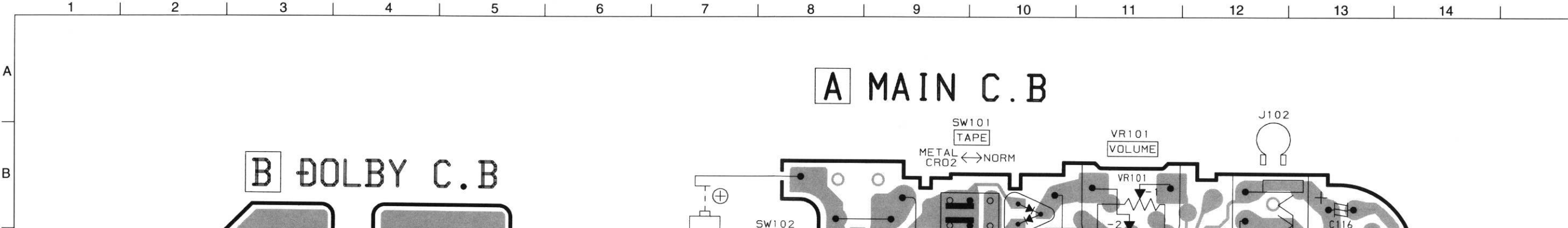
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

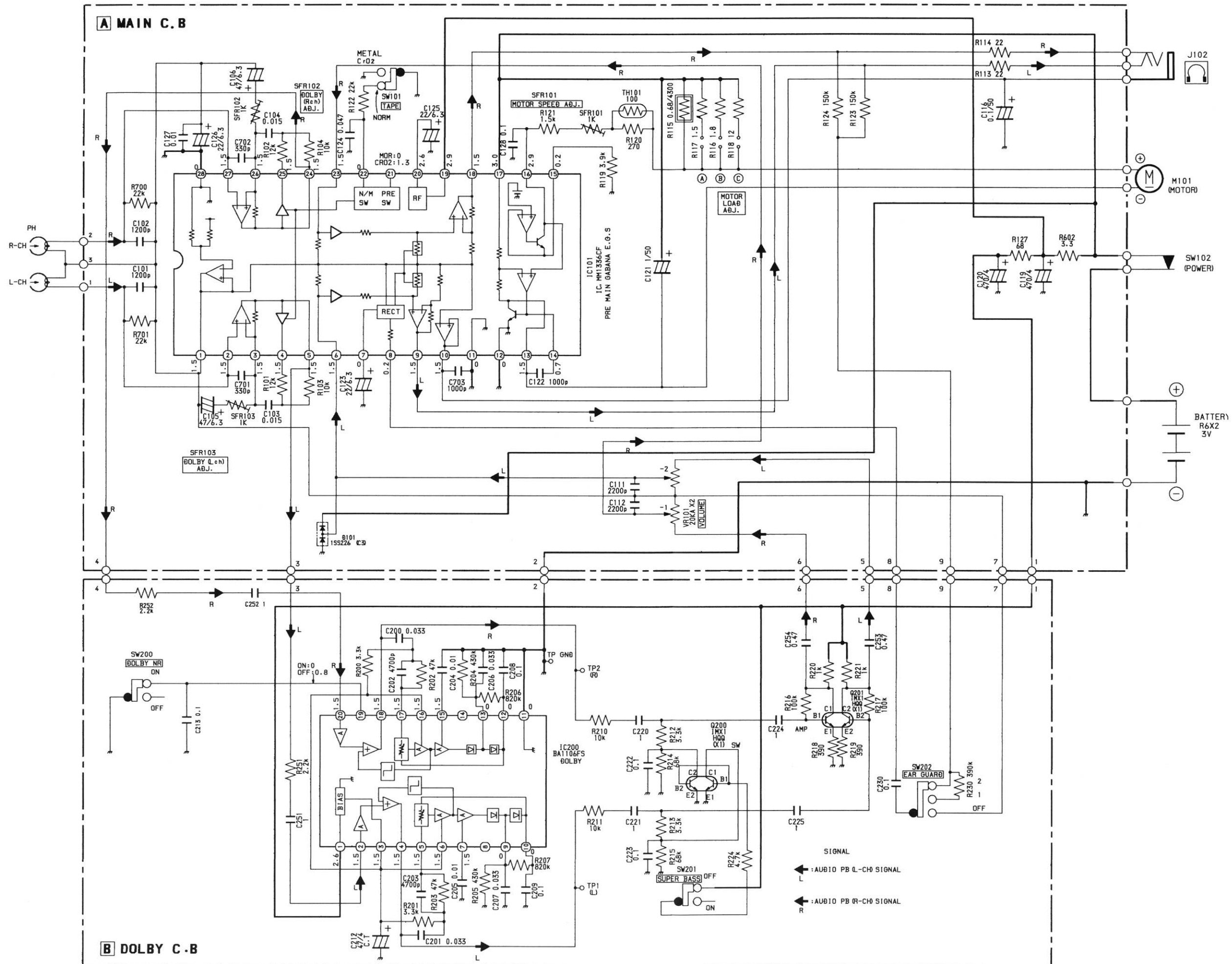


IMX1

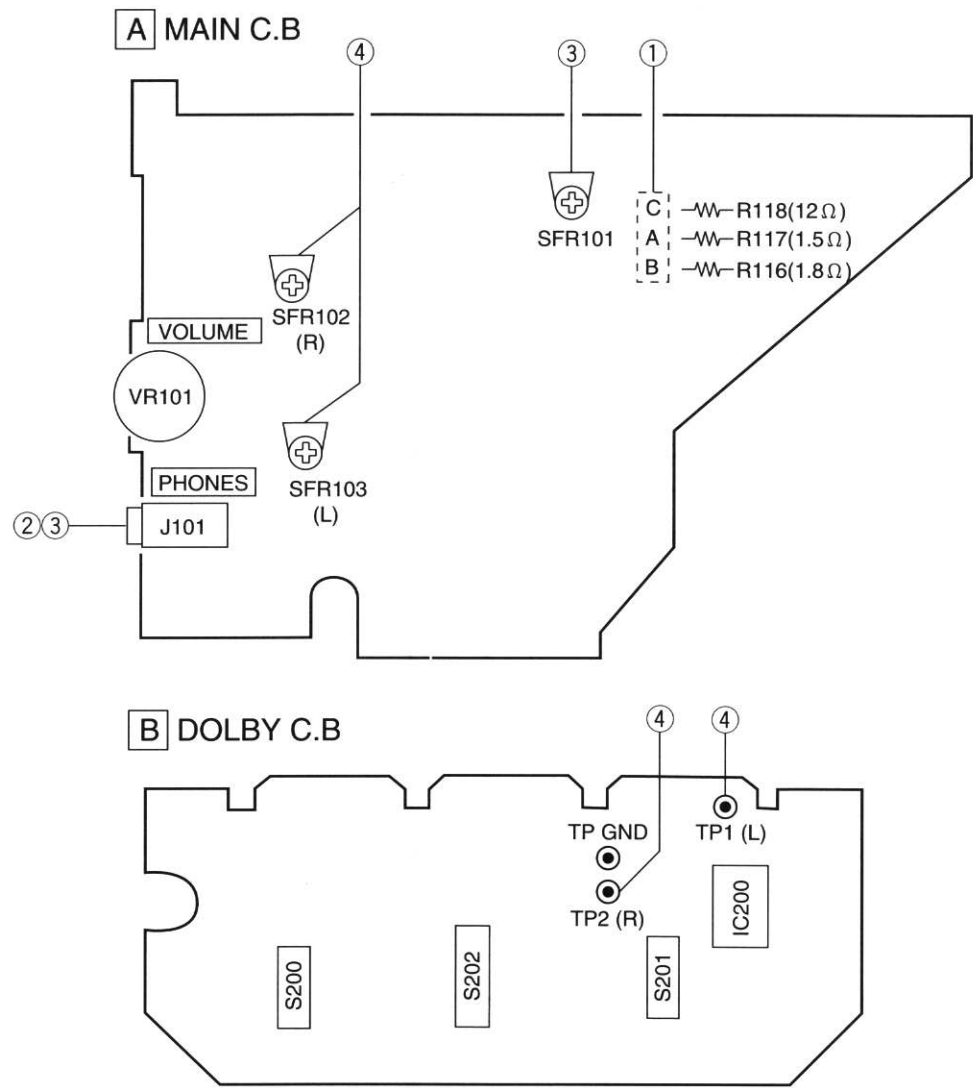
WIRING



SCHEMATIC DIAGRAM



ELECTRICAL ADJUSTMENT



PRACTICAL SERVICE FIGURE

Tape speed :	3015±40Hz
Wow & flutter :	Less than 0.55 % (RMS)
Take - up torque :	27 ~ 60 g-cm
F. F torque :	27 ~ 60 g-cm
REW torque :	More than 55 g-cm
Back tension :	1.5 ~ 5.5 g-cm
S/N ratio :	More than 42 dB
Distortion :	Less than 2 %
Noise level :	Less than 7.0 mV (Vol MAX)
Frequency response :	63Hz +2 -6dB ~ 8kHz +4 -6dB

2. Azimuth Adjustment

Settings : · Test tape : TTA-320

 - Test point : PHONES JACK (J101)
 - Adjustment location : Azimuth adjustment screw

· VOLUME : MAX

· S-BASS : OFF

Method : Play back the 8kHz signal of the test tape and adjust so that the output becomes maximum.
3. Tape Speed Adjustment

Settings : · Test tape : TTA-100

 - Test point : PHONES JACK (J101)
 - Adjustment location : SFR101

Method : Play back the test tape and adjust for 3015Hz±40Hz.
4. Dolby Level Adjustment

Settings : · Test tape : TTA-200

 - Test point : TP1(Lch), TP2(Rch)
 - Adjustment location : SFR102(Rch), SFR103(Lch)
 - Load : 16 Ohm
 - Volume : MIN "0"
 - Super Bass : OFF
 - Ear Gurd : OFF
 - Dolby SW : OFF
 - Tape selector : NORMAL

Method : Connect an electrolytic capacitor (10 μ F / 16V) between equipment and test point, check the voltage for 100 mV ± 1.0dB.

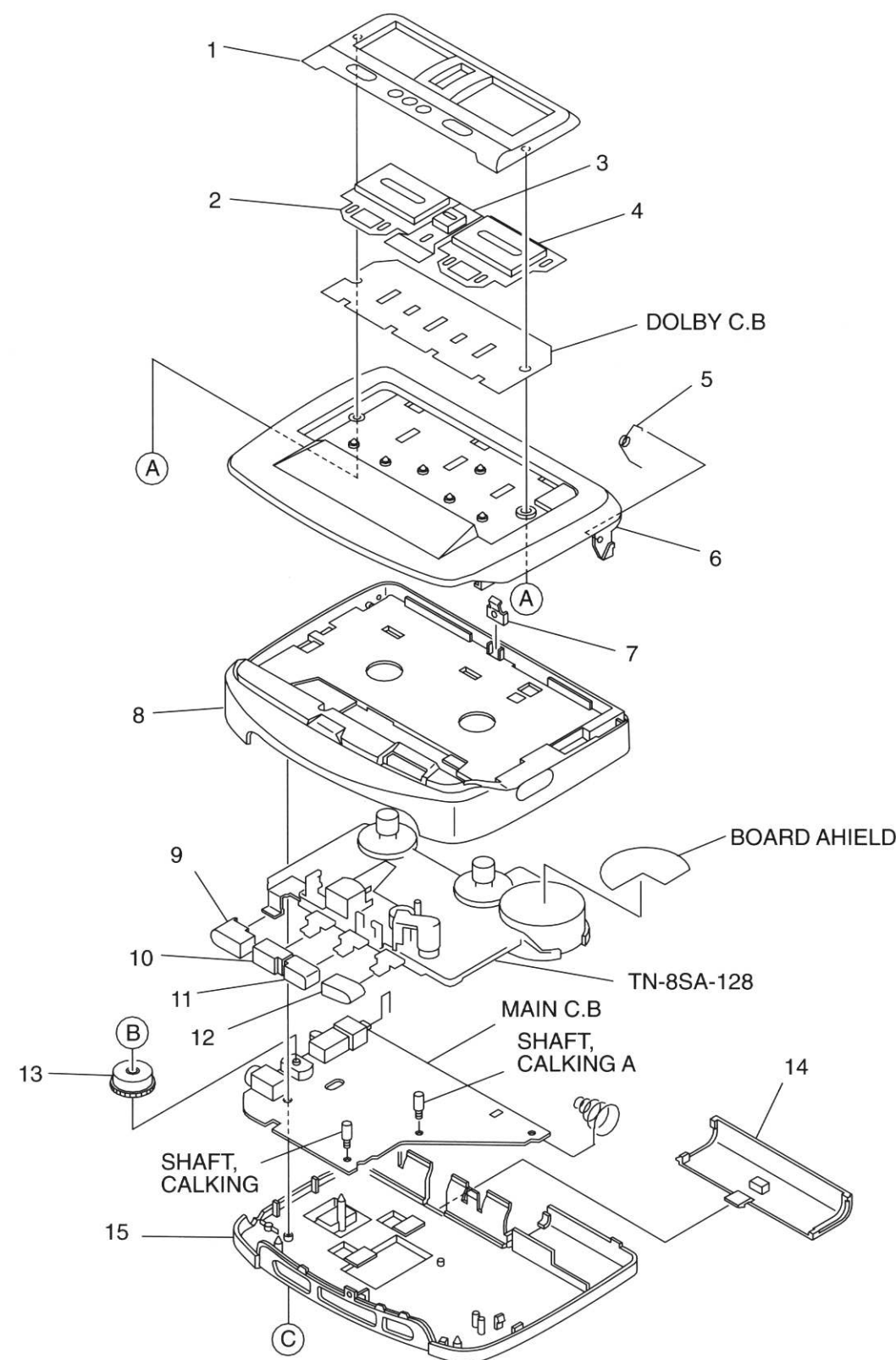
<TAPE PLAYER>

1. Motor Load Adjustment
- Perform the STOP→PLAY after the motor is replaced. When the tape starts running smooth, this adjustment is not necessary. this adjustment following the procedure below.
- 1) Solder only medium resistor pattern (B) of the MOTOR AND GOVERNOR MATCHING ADJ. resistor group.
 - 2) Set the tape speed (using speed adjustment SFR).
 - 3) Restrict the motor rotation by hand (or turn PAUSE ON).
 - 4) Remove your hand and listen to the beginning of the tape-run.
 - 5) When the rise of tape running is smooth, no more adjustment is necessary.
If wow continues for 1 to 2 seconds at the rise time, reduce the combined resistance according to procedure 6 and check that the tape starts running smooth.

6) Solder the resistor pattern according to the table below.

Pattern	(Procedure 1 above)	Step(1)	Step(2)	Step(3)
High resistance(C)	Open	Open	Solder	Open
Medium resistance(B)	Solder	Open	Open	Solder
Low resistance(A)	Open	Solder	Solder	Solder

- 7) Finally re-check the tape speed.
- Caution : Cool the patterns down to normal temperature after soldering. If the pattern remains heated, the governor circuit does not operate normally.

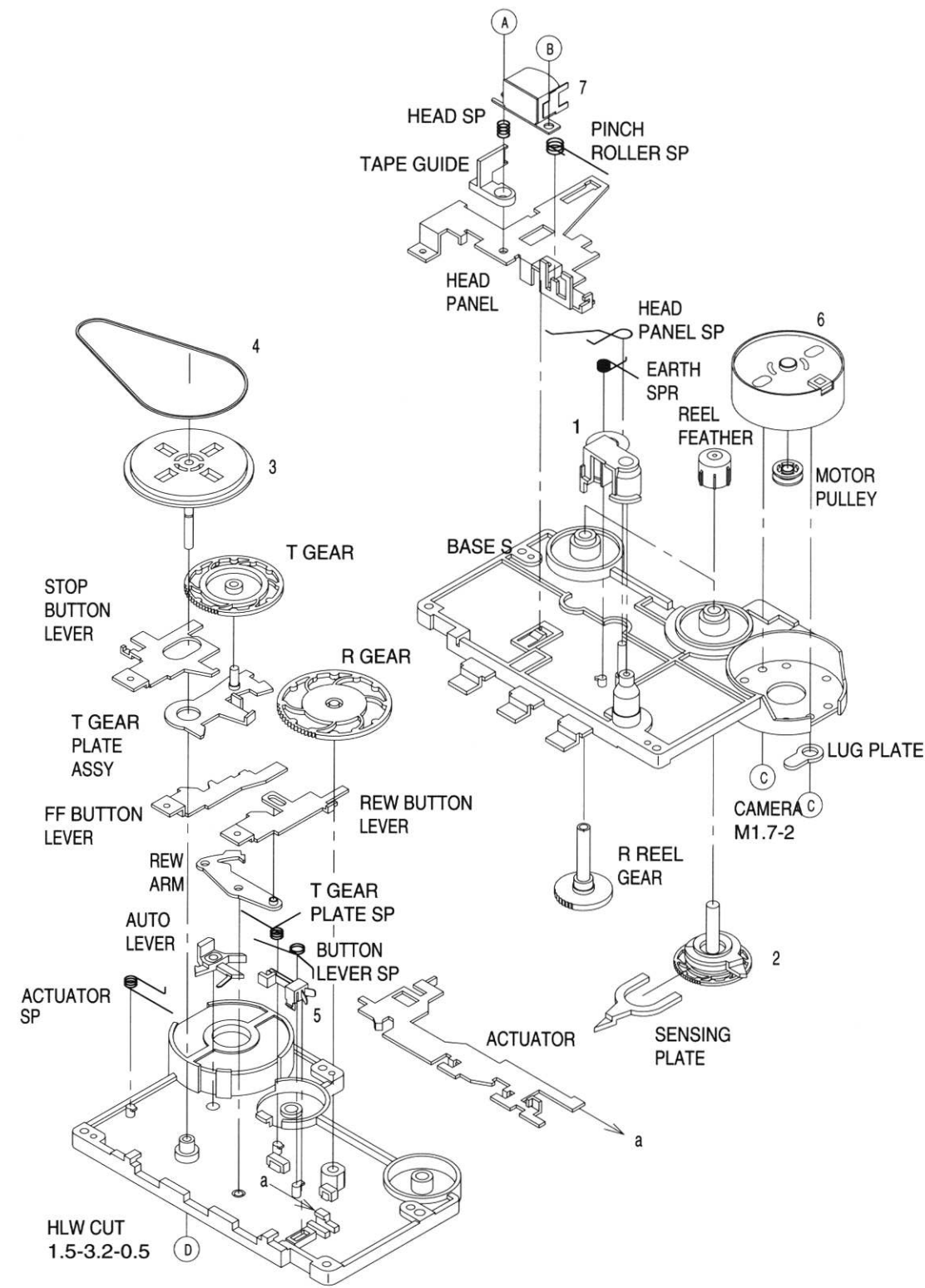


MECHANICAL PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S6-K08-020-100		PANEL, CASS	11	S7-G08-090-000		KNOB, CASS F.F
2	S6-K08-040-000		KNOB, SLIDE DOLBY	12	S7-G08-110-000		KNOB, CASS STOP
3	S6-K08-050-000		KNOB, SLIDE EGS	13	S7-G08-150-000		KNOB, VOLUME
4	S6-K08-030-000		KNOB, SLIDE S-BASS	14	S7-G08-070-020		DOOR, BATTERY
5	S7-G08-190-000		SPR, DOOR CASS	15	S7-G10-130-010		CAB, REAR
6	S6-K08-010-100		LID, CASS	A	87-067-340-010		VT2+1.4-3.5
7	S7-G08-160-000		PLATE SPR CASS	B	87-262-505-310		SCREW 1.4-2.5 PM(BLK)
8	S7-G10-120-000		FRAME CENTER	C	87-261-533-310		SCREW, ST1.7-6
9	S7-G08-080-000		KNOB, CASS PLAY				
10	S7-G08-100-000		KNOB, CASS REW				

TAPE MECHANISM EXPLODED VIEW 1/1



TAPE MECHANISM PARTS LIST 1/1

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1~B	M8-02K-193-019		TN-8S 128	5	S6-401-011-630		LEAF SW MSW-1541TA(SW1)
1	S1-903-073-010		PINCH ROLLER ASSY	6	87-045-351-019		MOTOR BDH3B09 (M1)
2	S1-908-043-010		TAKE UP REEL ASSY	7	S6-202-010-960		HEAD, M12P-31005 (PH)
3	S1-908-053-030		FLYWHEEL ASSY	A	S9-P13-200-610		SCREW, 2-6
4	S1-908-050-080		MAIN BELT	B	S9-P01-200-040		SCREW, 2-4

ACCESSORIES 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	87-B30-078-010		HEADPHONE SET
2	S6-K08-910-100		INSTRUCTION BOOK (EX)

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
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

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
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G- -	
G- -	
G- -	

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