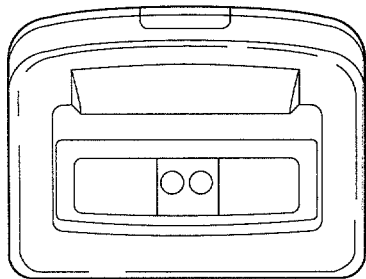


# aiwa



## HS-AP600



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM : 3ZM-1 P2N

• TYPE: YZ

### SPECIFICATIONS

|                                             |                                                                                                                              |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Maximum output :</b>                     | 15 mW + 15 mW (EIAJ/16 $\Omega$ )<br>10 mW + 10mW (EIAJ/32 $\Omega$ )                                                        |
| <b>Power source :</b>                       | Battery DC 3V, R6 (size AA) x2<br>Domestic AC power (using optional<br>AC adaptor : Aiwa AC-300/AC-302)                      |
| <b>Battery life :</b>                       | Using manganese batteries, R6P (size AA)<br>Approx. 4.5 hours<br>Using alkaline batteries, LR6 (size AA)<br>Approx. 13 hours |
| <b>Maximum dimensions<br/>(W x H x D) :</b> | 113 X 88.5 X 35 mm<br>(4 1/2 x 3 1/2 x 1 7/16 in.)                                                                           |
| <b>Weight :</b>                             | Approx. 134 g (4.5oz) (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

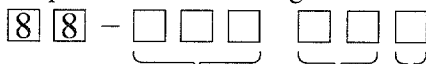
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

| REF. NO.   | PART NO.       | KANRI NO. | DESCRIPTION                | REF. NO.      | PART NO.       | KANRI NO. | DESCRIPTION                |
|------------|----------------|-----------|----------------------------|---------------|----------------|-----------|----------------------------|
| IC         |                |           |                            |               |                |           |                            |
|            | 87-070-248-040 |           | C-IC,MM1104BFFK            | C142          | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-001-934-080 |           | C-IC,BA1106F               | C143          | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |
|            |                |           |                            | C144          | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |
|            |                |           |                            | C145          | 87-010-501-040 |           | CAP,E 47-4 M 5L SRE        |
|            |                |           |                            | C151          | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |
| TRANSISTOR |                |           |                            | C152          | 87-010-501-040 |           | CAP,E 47-4 M 5L SRE        |
|            | 89-327-125-080 |           | C-TR,2SC2712GR             | C153          | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |
|            |                |           |                            | D101          | 87-020-339-080 |           | C-DIODE,1SS226             |
|            |                |           |                            | JK101         | 87-099-816-010 |           | JACK,3.5 ST                |
|            |                |           |                            | JK102         | 87-A60-122-010 |           | JACK,DC 3.8 W/SW           |
| MAIN C.B   |                |           |                            |               |                |           |                            |
| C101       | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       | R115          | 87-022-343-080 |           | C-RES,S 820-1/10W F        |
| C102       | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       | R116          | 87-022-343-080 |           | C-RES,S 820-1/10W F        |
| C103       | 87-010-197-080 |           | C-CAP,S 0.01-25 K B        | R117          | 87-022-344-080 |           | C-RES,S 1K-1/10W F         |
| C104       | 87-010-197-080 |           | C-CAP,S 0.01-25 K B        | R118          | 87-022-344-080 |           | C-RES,S 1K-1/10W F         |
| C105       | 87-010-501-040 |           | CAP,E 47-4 M 5L SRE        | R126          | 87-022-037-080 |           | M-RES,0.68-1/4W J 4300     |
| C106       | 87-010-501-040 |           | CAP,E 47-4 M 5L SRE        | SFR101        | 87-024-050-010 |           | SFR,1K V VZ066H1           |
| C107       | 87-010-198-080 |           | C-CAP,S 0.022-25 K B       | SW101         | 87-036-360-010 |           | SW,SL 2-2-2                |
| C108       | 87-010-198-080 |           | C-CAP,S 0.022-25 K B       | SW103         | 87-036-145-010 |           | C-SW,SL 1-1-3 SSSS81       |
| C109       | 87-016-462-080 |           | C-CAP,S 1-16 Z F           | SW104         | 87-036-110-010 |           | SW,MICRO SPPB62            |
| C110       | 87-016-462-080 |           | C-CAP,S 1-16 Z F           | TH101         | 87-026-256-090 |           | THMS,HT-100                |
| C111       | 87-010-503-040 |           | CAP,E 220-4 M 5L SRE       | VR101         | 87-024-555-010 |           | VR,RTRY 20KAX2 1 H XV0102G |
| C112       | 87-010-503-040 |           | CAP,E 220-4 M 5L SRE       |               |                |           |                            |
| C113       | 87-010-502-040 |           | CAP,E 100-4 M 5L SRE       | HEAD FLEX C.B |                |           |                            |
| C114       | 87-010-503-080 |           | CAP,E 220-4 M 5L SRE       | PH1           | 87-046-418-010 |           | HEAD ASSY,PH               |
| C115       | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |               |                |           |                            |
| C116       | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   | S-BASS C.B    |                |           |                            |
| C117       | 87-010-425-080 |           | C-CAP,0.22-25 Z F          | C201          | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C118       | 87-016-462-080 |           | C-CAP,S 1-16 Z F           | C202          | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C119       | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       | SW201         | 87-036-236-080 |           | C-SW,SL 1-1-2 SSSS81       |
| C120       | 87-010-180-080 |           | C-CAP,S 1500P-50 K B       | SW202         | 87-036-244-080 |           | C-SW,SL 1-2-2 SSSS82086A   |
| C121       | 87-010-180-080 |           | C-CAP,S 1500P-50 K B       |               |                |           |                            |
| C122       | 87-010-197-080 |           | C-CAP,S 0.01-25 K B        |               |                |           |                            |
| C123       | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       |               |                |           |                            |
| C124       | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       |               |                |           |                            |
| C131       | 87-010-193-080 |           | C-CAP,S 0.033-25 Z F C2012 |               |                |           |                            |
| C132       | 87-010-193-080 |           | C-CAP,S 0.033-25 Z F C2012 |               |                |           |                            |
| C133       | 87-010-186-080 |           | C-CAP,S 4700P-50 K B       |               |                |           |                            |
| C134       | 87-010-186-080 |           | C-CAP,S 4700P-50 K B       |               |                |           |                            |
| C135       | 87-010-197-080 |           | C-CAP,S 0.01-25 K B        |               |                |           |                            |
| C136       | 87-010-197-080 |           | C-CAP,S 0.01-25 K B        |               |                |           |                            |
| C137       | 87-010-193-080 |           | C-CAP,S 0.033-25 Z F C2012 |               |                |           |                            |
| C138       | 87-010-193-080 |           | C-CAP,S 0.033-25 Z F C2012 |               |                |           |                            |
| C139       | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |               |                |           |                            |
| C140       | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |               |                |           |                            |
| C141       | 87-016-462-080 |           | C-CAP,S 1-16 Z F           |               |                |           |                            |

## 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



A  
抵抗部品コード  
Resistor Code

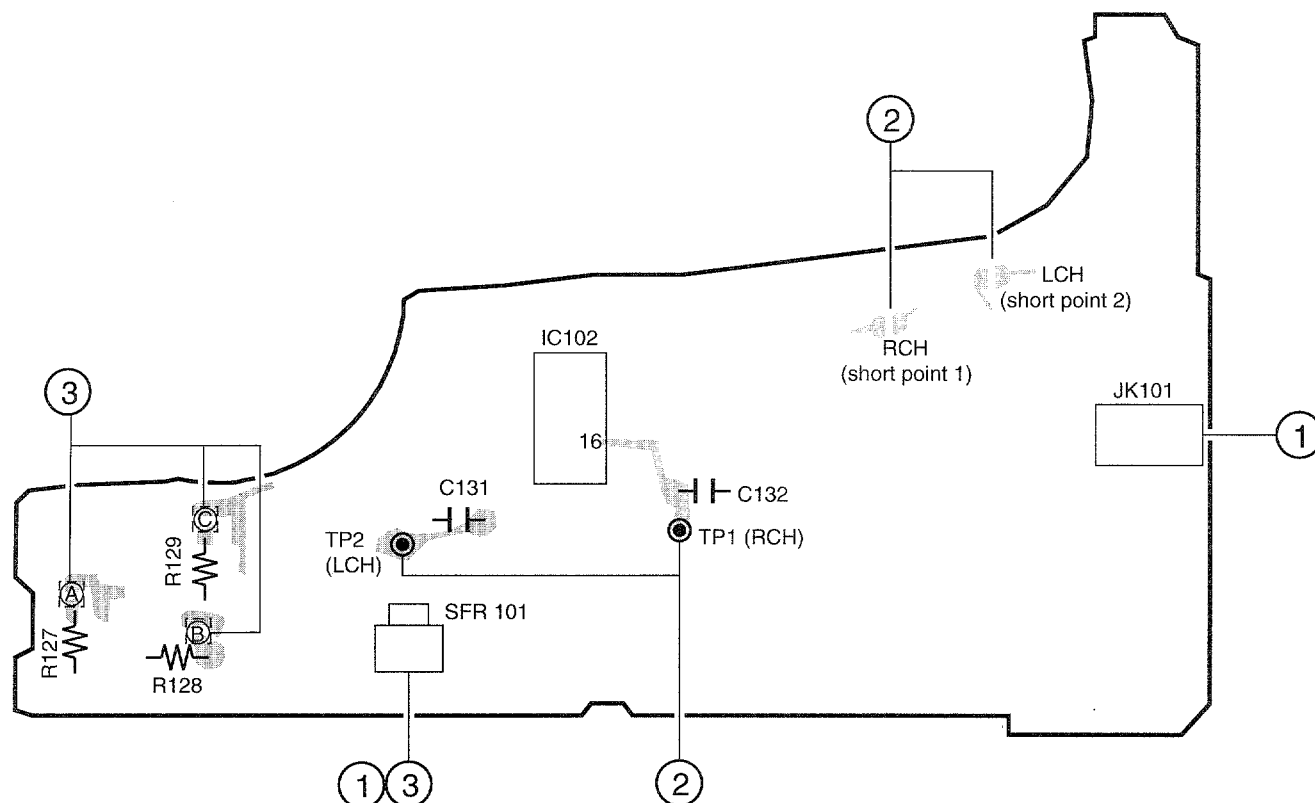
桁表示  
Figure  
抵抗値  
Value of resistor

## チップ抵抗 Chip resistor

| 容量<br>Wattage | 種類<br>Type | 許容誤差<br>Tolerance | 記号<br>Symbol | 寸法／Dimensions (mm)                                                                  |     |      |      | 抵抗コード : A         |
|---------------|------------|-------------------|--------------|-------------------------------------------------------------------------------------|-----|------|------|-------------------|
|               |            |                   |              | 外形／Form                                                                             | L   | W    | t    | Resistor Code : A |
| 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               |

## ADJUSTMENT

### A MAIN C.B



#### <TAPE PLAYER SECTION>

##### 1. Tape Speed Adjustment.

- Settings:
- Test tape : TTA-100 (TAPE CENTER)
  - Test point : PHONES JACK (JK101)
  - Adjustment location : SFR101
  - S-BASS : OFF

Method: Play back the test tape, adjust for 3015Hz $\pm$ 10Hz at FWD and less than 50Hz at REV.

##### 2. Dolby Level Check

- Settings:
- Test tape : TTA-200
  - Test point : TP1 (Rch), TP2(Lch)
  - Dolby NR: OFF
  - Tape selector : NORM
  - Volume : MIN '0'
  - Direction : FORWARD
  - S-BASS : OFF
  - Solder two shorting point : Shorting point 2 (LCH)  
Shorting point 1 (RCH)

Method: Connect an electrolytic capacitor (10 $\mu$ /16V) to measured equipment and TP1(2), check the voltage for 100mV $\pm$ 1dB.

##### 3. Motor load adjustment.

Perform the STOP $\rightarrow$ PLAY and REVERSE operations ( or PAUSE ON $\rightarrow$ OFF ) after the motor is replaced. When the tape starts running smooth, this adjustment is not necessary. If wow is conspicuous at the begining of the tape-run, perform 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 begining of the tape-run.
- 5) When the rise of tape is 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.

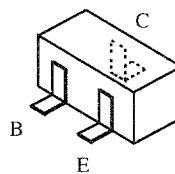
| Pattern          | (Procedure 1 above) | Step(1) | Step(2) | Step(3) |
|------------------|---------------------|---------|---------|---------|
| 10 $\Omega$ (C)  | Open                | Solder  | Solder  | Open    |
| 5.6 $\Omega$ (B) | Solder              | Open    | Solder  | Open    |
| 3.3 $\Omega$ (A) | Open                | Open    | Open    | Solder  |

##### 7) Finally re-check the tape speed.

Caution : Cool the pattern down to normal temperature after soldering .If the pattern remains heated, the governor circuit does not operate normally.

## &lt;TAPE PLAYER SECTION&gt;

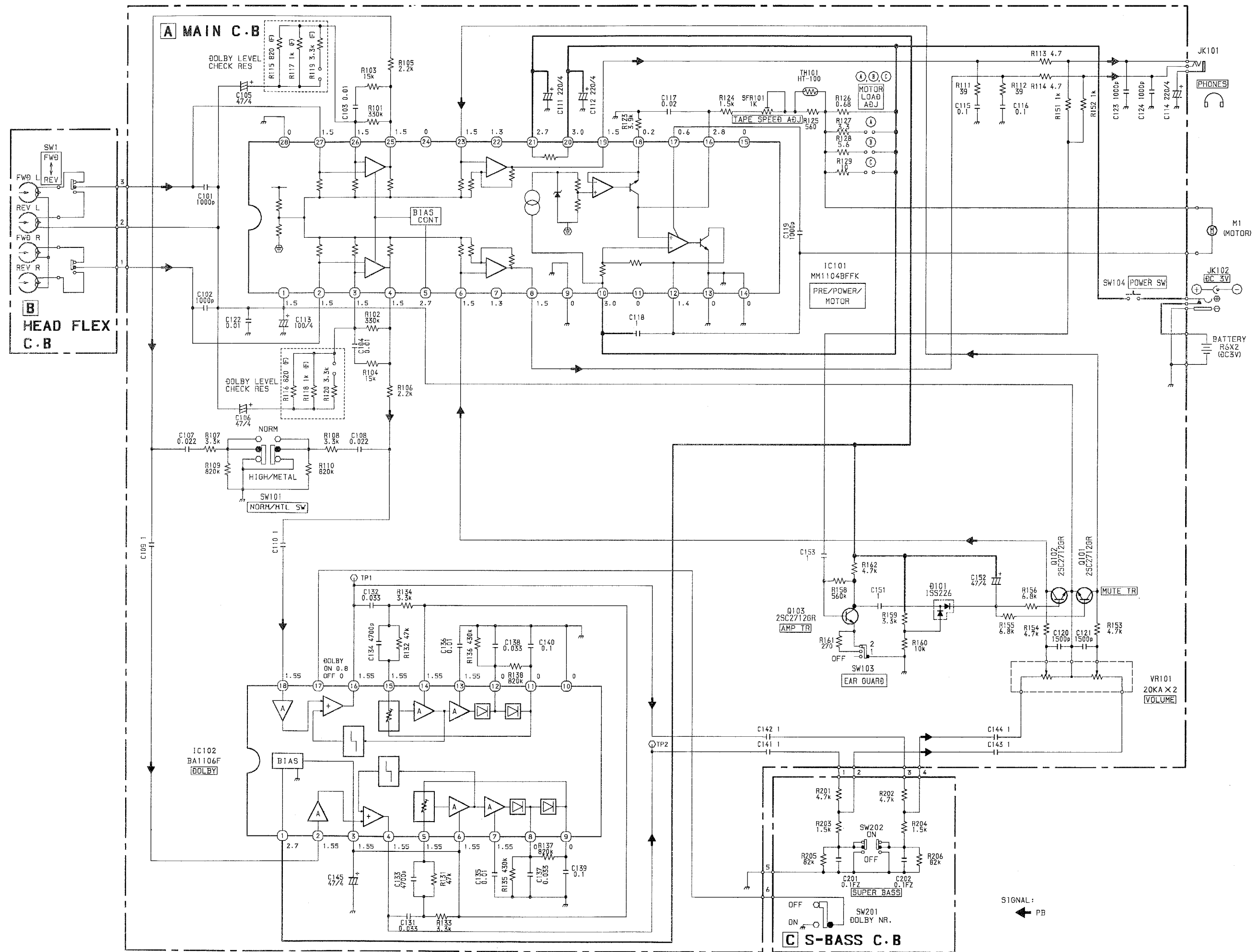
|                        |                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------|
| Tape speed:            | 3015Hz $\pm$ 50Hz                                                                               |
| Wow & flutter:         | Less than 0.55% (RMS)                                                                           |
| Pinch roller pressure: | 150 ~ 180g (FWD)<br>135 ~ 165g (RVS)                                                            |
| Take-up torque:        | 25 ~ 45g-cm (FWD, REV)                                                                          |
| F.F torque:            | More than 60g-cm                                                                                |
| Rew torque:            | More than 60g-cm                                                                                |
| Back tension:          | 1 ~ 4g-cm (FWD)<br>1 ~ 4g-cm (REV)                                                              |
| S/N ratio:             | More than 42dB (PB,DC)                                                                          |
| Distortion:            | Less than 2.5% (PB,DC)                                                                          |
| Noise level:           | Less than 3.5mV<br>(Vol MAX, DC)                                                                |
| Frequency response:    | 63Hz + 0dB - 8dB ~ 8kHz + 4dB - 4dB<br>(NORM)<br>63Hz + 0dB - 8dB ~ 10kHz + 4dB - 4dB<br>(CRO2) |
| Test tape :            | TTA-100<br>TTA-200<br>TTA-210<br>TTA-320(NORM)/TTA-310(CRO2)                                    |



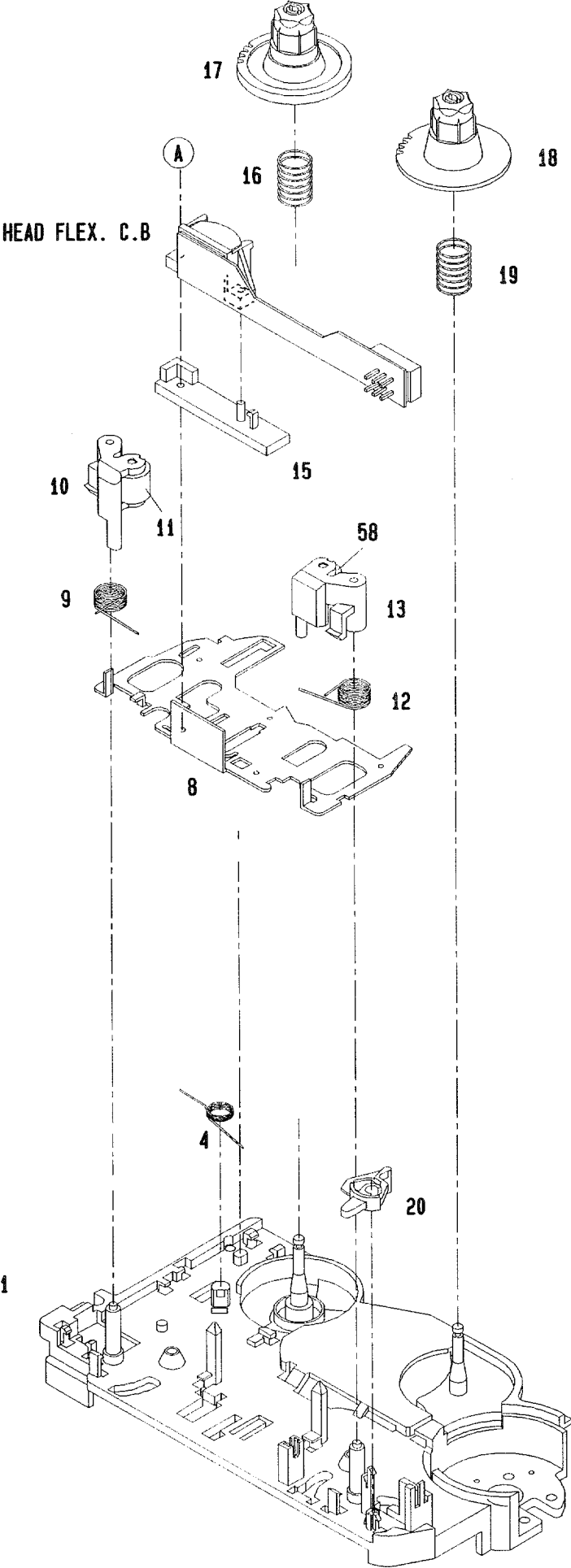
2SC2712

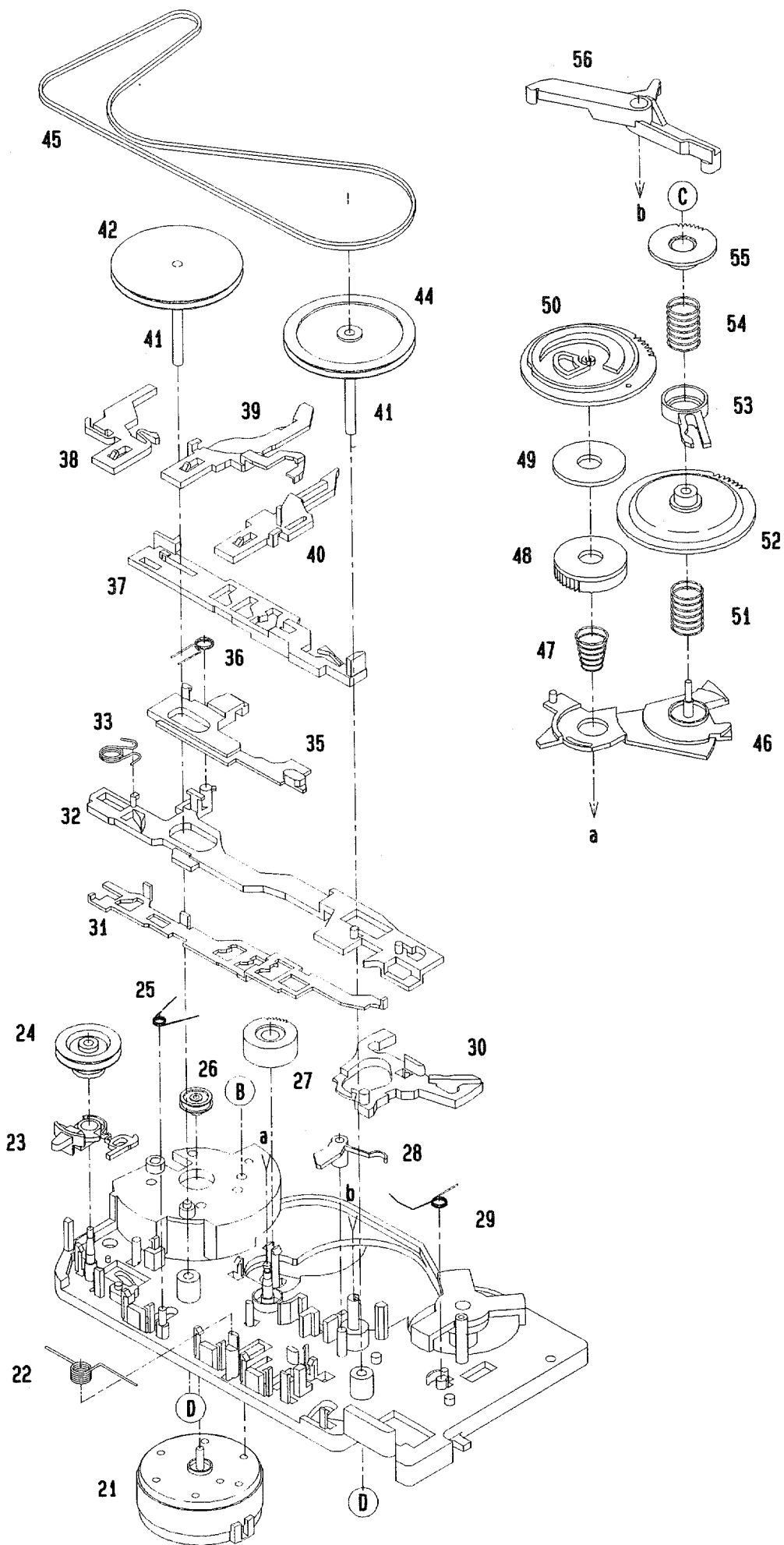


# SCHEMATIC DIAGRAM



TAPE MECHANISM EXPLODED VIEW 1/1

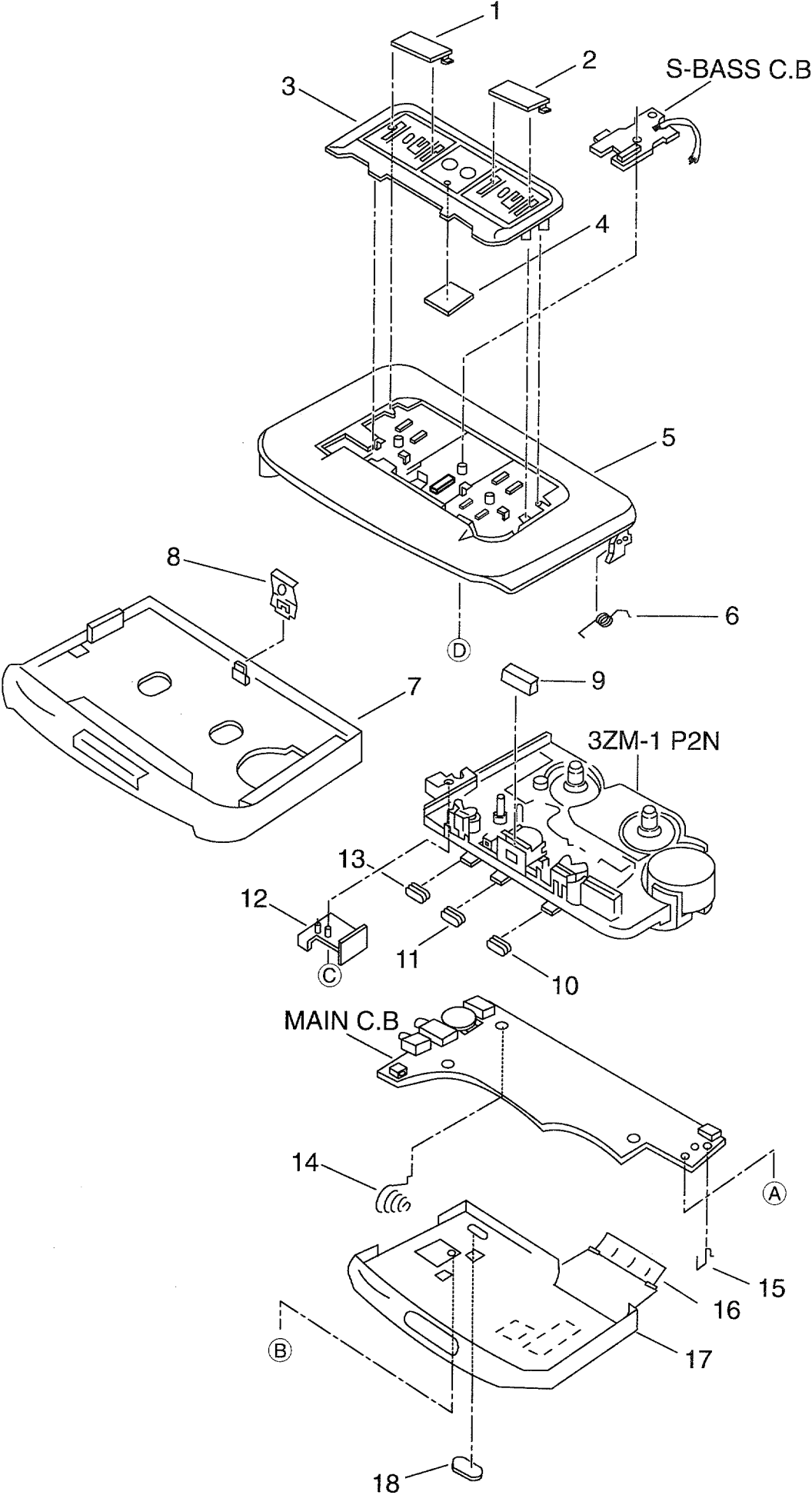




# TAPE MECHANISM PARTS LIST 1 / 1

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           |
|----------|----------------|-----------|-------------------|----------|----------------|-----------|-----------------------|
| 1        | 83-ZM1-201-71K |           | CHAS, MAIN        | 38       | 83-ZM1-209-219 |           | LVR, BTN STOP         |
| 4        | 83-ZM1-281-010 |           | SPR-T, PLAY P     | 39       | 83-ZM1-207-119 |           | LVR, BTN FF           |
| 8        | 83-ZM1-206-219 |           | LVR, BTN PLAY     | 40       | 83-ZM1-208-119 |           | LVR, BTN REW          |
| 9        | 83-ZM1-244-019 |           | SPR-T, PINCH L    | 42       | 83-ZM1-222-310 |           | FLY-WHL, R            |
| 10       | 83-ZM1-220-119 |           | LVR, PINCH L      | 43       | 83-ZM1-282-010 |           | SHAFT, CAP 2.0 RR     |
| 11       | 83-ZM1-289-010 |           | PINCH ROL ASSY, L | 44       | 83-ZM1-225-310 |           | FLY-WHL, L            |
| 12       | 83-ZM1-252-319 |           | SPR-T, PINCH JR   | 45       | 83-ZM1-259-310 |           | BELT, P               |
| 13       | 83-ZM1-219-119 |           | LVR, PINCH R      | 46       | 83-ZM1-217-219 |           | LVR, PLAY             |
| 15       | 83-ZM1-286-01K |           | GUIDE, HEAD       | 47       | 83-ZM1-230-119 |           | SPR-C, SLIP           |
| 16       | 83-ZM1-269-119 |           | SPR-C, BT L       | 48       | 83-ZM1-229-019 |           | GEAR, SLIP            |
| 17       | 83-ZM1-235-31K |           | GEAR, REEL L      | 49       | 83-ZM1-228-119 |           | FELT                  |
| 18       | 83-ZM1-234-31K |           | GEAR, REEL R      | 50       | 83-ZM1-227-21K |           | GEAR, AUTO            |
| 19       | 83-ZM1-240-119 |           | SPR-C, BT R       | 51       | 83-ZM1-241-219 |           | SPR-C, PLAY           |
| 20       | 83-ZM1-210-119 |           | BTN DIR           | 52       | 83-ZM1-231-219 |           | GEAR, PLAY            |
| 21       | 87-045-385-019 |           | MOTOR (BCY3B11)   | 53       | 83-ZM1-218-219 |           | LVR, SLIP             |
| 22       | 83-ZM1-247-119 |           | SPR-T, FF REW     | 54       | 83-ZM1-265-019 |           | SPR-C, AUTO           |
| 23       | 83-ZM1-266-219 |           | BTN, MODE CHG     | 55       | 83-ZM1-232-119 |           | GEAR, FR              |
| 24       | 83-ZM1-236-01K |           | PULLEY, BELT      | 56       | 83-ZM1-273-019 |           | LVR, AUTO 2           |
| 25       | 83-ZM1-264-019 |           | SPR-T, LOCK       | 58       | 83-ZM1-255-010 |           | PINCH ROL ASSY        |
| 26       | 83-ZM1-237-21K |           | PULLEY, MOTOR     | A        | 87-078-111-019 |           | S-SCRW, V+1.7-6       |
| 27       | 83-ZM1-233-119 |           | GEAR, R           | B        | 87-078-100-019 |           | S-SCRW, V+1.7-2.5     |
| 28       | 83-ZM1-267-119 |           | LVR, DEF AUTO     | C        | 87-078-132-010 |           | PW, 1.2-3.5-0.25C-CUT |
| 29       | 83-ZM1-248-019 |           | SPR-T, AUTO       | D        | 87-078-086-019 |           | SOMA, 1.5-3.5-0.3 SLT |
| 30       | 83-ZM1-211-110 |           | LINK, AUTO        |          |                |           |                       |
| 31       | 83-ZM1-216-419 |           | LVR, LOCK         |          |                |           |                       |
| 32       | 83-ZM1-214-419 |           | LVR, DIR          |          |                |           |                       |
| 33       | 83-ZM1-245-219 |           | SPR-T, DIR        |          |                |           |                       |
| 35       | 83-ZM1-215-119 |           | LVR, FR           |          |                |           |                       |
| 36       | 83-ZM1-246-119 |           | SPR-T, R L        |          |                |           |                       |
| 37       | 83-ZM1-213-11K |           | LVR, SW           |          |                |           |                       |

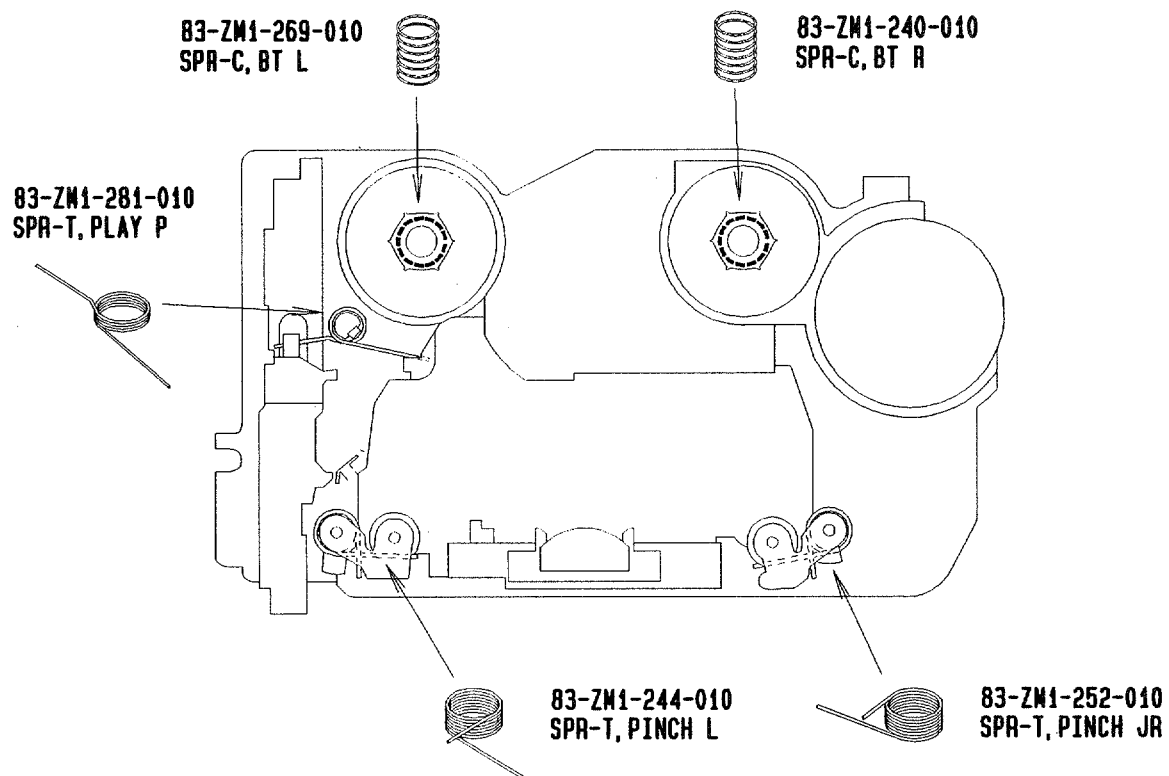
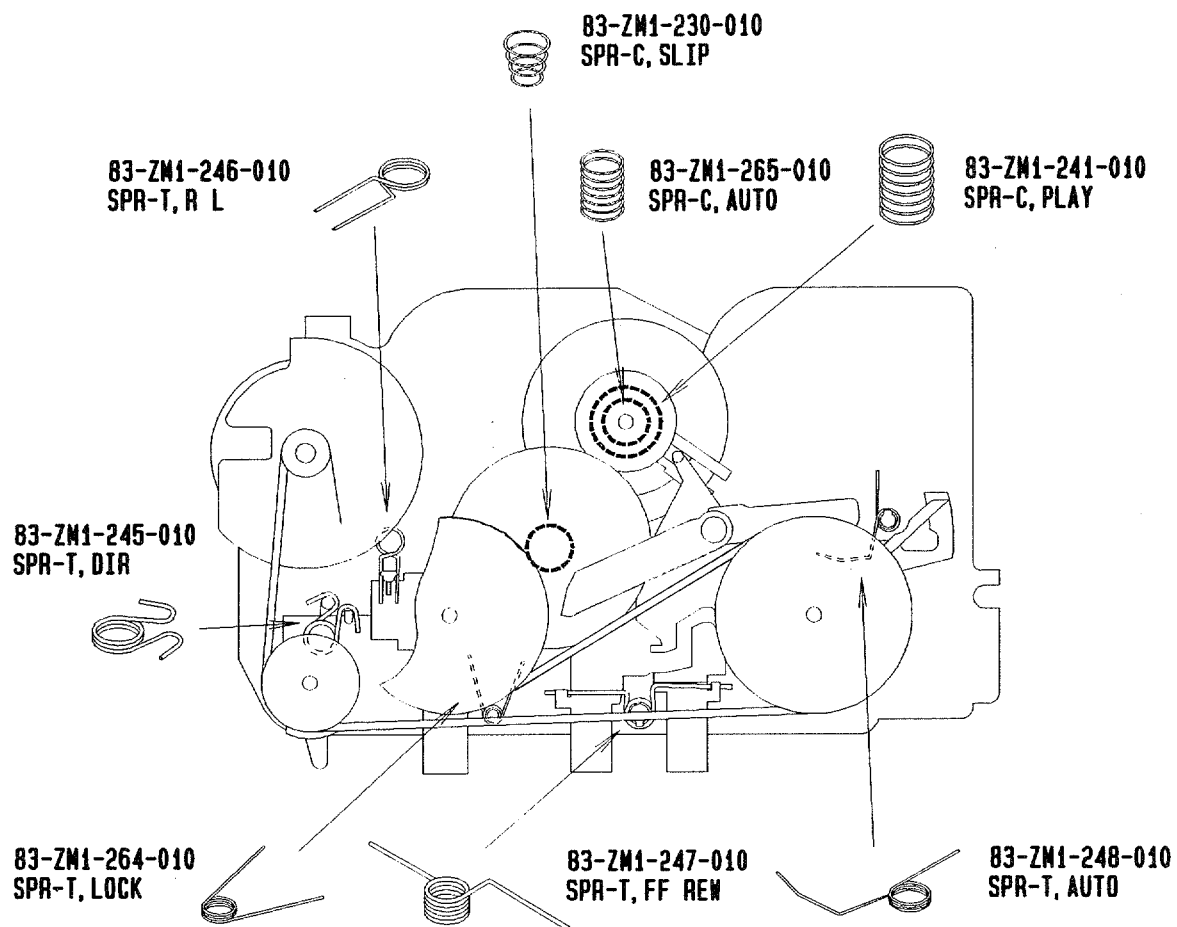


# MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

| REF. NO. | PART NO.       | KANRI<br>NO. | DESCRIPTION                  |
|----------|----------------|--------------|------------------------------|
| 1        | 86-HK7-017-010 |              | KNOB,SL DOL AP600            |
| 2        | 86-HK7-016-010 |              | KNOB,SL SB AP600             |
| 3        | 86-HK7-015-010 |              | PANEL,CASS AP600             |
| 4        | 86-HK7-005-010 |              | WINDOW,IND                   |
| 5        | 86-HK7-013-010 |              | LID,CASS AP600               |
| 6        | 85-HG7-203-010 |              | T-SPR,CASS                   |
| 7        | 86-HK7-020-010 |              | FRAME,CTR AP600              |
| 8        | 81-HK9-208-210 |              | SPR-P,CASS A                 |
| 9        | 86-HK7-010-010 |              | BTN,PLAY                     |
| 10       | 85-HG7-011-010 |              | BTN,STOP                     |
| 11       | 85-HG7-012-010 |              | BTN,FF                       |
| 12       | 85-HG7-208-010 |              | HLDR,JACK                    |
| 13       | 85-HG7-013-010 |              | BTN,REW                      |
| 14       | 85-HG7-207-010 |              | BATT-CONT(-)                 |
| 15       | 85-HG7-206-010 |              | BATT-CONT(+)                 |
| 16       | 85-HG7-025-010 |              | LID,BATT GM                  |
| 17       | 85-HG8-018-310 |              | CABI,REAR (YH)GRA            |
| 18       | 85-HG7-014-010 |              | KNOB,SL R                    |
| A        | 87-266-529-310 |              | V+1.7-4                      |
| B        | 87-067-405-010 |              | VT2+1.4-6 SWCH HL            |
| C        | 87-067-430-010 |              | VT2+1.4-5 SWCH/CR BLK HL     |
| D        | 87-078-052-010 |              | S-SCREW,+1.4-3.5 SWCH BLK HL |

# SPRING APPLICATION POSITION



## ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

| REF. NO. | PART NO.       | KANRI<br>NO. | DESCRIPTION         |
|----------|----------------|--------------|---------------------|
| 1        | 87-B30-042-010 |              | HEADPHONE, HP-24NSH |
| 2        | 87-080-045-010 |              | HLDR, BELT          |
| 3        | 86-HK7-902-010 |              | IB, EX AP600        |

# 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         |
| TRIMER      | 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- -       |      |
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**アイワ株式会社**  
**AIWA CO.,LTD.**

9630472, 750038

Tokyo Japan