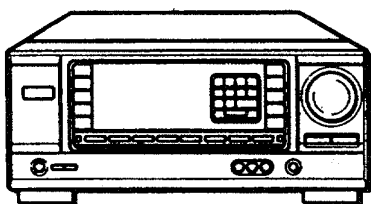


# aiwa



## AV-X120 AV-X220



STEREO RECEIVER

• TYPE: U

# SERVICE MANUAL

## SPECIFICATIONS

### FM tuner section

|                                 |                      |
|---------------------------------|----------------------|
| <b>Tuning range</b>             | 87.5 MHz to 108 MHz  |
| <b>Usable sensitivity (IHF)</b> | 13.2 dBf             |
| <b>Antenna terminals</b>        | 75 ohms (unbalanced) |

### AM tuner section

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| <b>Tuning range</b>       | 530 kHz to 1710 kHz (10 kHz step),<br>531 kHz to 1602 kHz (9 kHz step) |
| <b>Usable sensitivity</b> | 350 $\mu$ V/m                                                          |
| <b>Antenna</b>            | Loop antenna                                                           |

### Amplifier section

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power output (AV-X220)</b> | <b>[Stereo Mode]</b><br><b>Front</b><br>125 watts per channel, Min. RMS at 4 or 8 ohms, from 40 Hz to 20 kHz, with no more than 0.8% Total Harmonic Distortion<br><b>[Dolby Pro Logic Mode]</b><br><b>Front</b><br>120 watts per channel, Min. RMS at 4 or 8 ohms (selectable), from 40 Hz to 20 kHz, with no more than 0.9% Total Harmonic Distortion<br><b>Rear (Surround)</b><br>60 watts per channel, Min. RMS at 8 ohms, 1 kHz, with no more than 0.9% Total Harmonic Distortion<br><b>Center</b><br>120 watts, Min. RMS at 4 or 8 ohms (selectable), 1 kHz, with no more than 0.9% Total Harmonic Distortion |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power output (AV-X120)</b> | <b>[Stereo Mode]</b><br><b>Front</b><br>75 watts per channel, Min. RMS at 4 or 8 ohms, from 40 Hz to 20 kHz, with no more than 0.8% Total Harmonic Distortion<br><b>[Dolby Pro Logic Mode]</b><br><b>Front</b><br>70 watts per channel, Min. RMS at 4 or 8 ohms, from 40 Hz to 20 kHz, with no more than 0.9% Total Harmonic Distortion<br><b>Rear (Surround)</b><br>35 watts per channel, Min. RMS at 8 ohms, 1 kHz, with no more than 0.9% Total Harmonic Distortion<br><b>Center</b><br>70 watts, Min. RMS at 4 or 8 ohms, 1 kHz, with no more than 0.9% Total Harmonic Distortion |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                         |                                                                                                                                                                                     |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Total harmonic distortion inputs</b> | 0.07 % (105 W, 1 kHz, 8 ohms, Front)                                                                                                                                                |
| <b>AUDIO IN</b>                         | PHONO: 2.8 mV (50 kohms)<br>CD: 300 mV (50 kohms)<br>TAPE MONITOR: 200 mV (25 kohms)<br>VIDEO 1, VIDEO 2/LD/MD,<br>VIDEO 3, AUX/TV: 250 mV (50 kohms)<br>VIDEO IN: 1 Vp-p (75 ohms) |

### Outputs

AUDIO OUT (REC OUT): 200 mV (2 kohms)  
VIDEO OUT (MONITOR): 1 Vp-p (75 ohms)  
SUPER WOOFER: 3.1 V  
FRONT SPEAKERS IMP: 8 $\Omega$ /4 $\Omega$  selectable (front speakers A and B):  
With the SPEAKER IMPEDANCE SELECTOR set to 4 $\Omega$ , accepts speakers of 4 ohms.  
With the SPEAKER IMPEDANCE SELECTOR set to 8 $\Omega$ , accepts speakers of 8 ohms or more.  
SURROUND SPEAKERS IMP: 8 $\Omega$  (surround speakers): accepts speakers of 8 ohms or more

CENTER SPEAKER IMP: 8 $\Omega$ /4 $\Omega$  selectable  
With the SPEAKER IMPEDANCE SELECTOR set to 4 $\Omega$ , accepts speaker of 4 ohms.  
With the SPEAKER IMPEDANCE SELECTOR set to 8 $\Omega$ , accepts speaker of 8 ohms or more.  
PHONES (stereo jack): accepts headphones of 32 ohms or more  
-20 dB

### Muting

### General (AV-X220)

|                               |                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------|
| <b>Power requirements</b>     | 120 V AC, 60 Hz                                                                     |
| <b>Power consumption</b>      | 210 W                                                                               |
| <b>Dimensions (W x H x D)</b> | 360 x 153.5 x 335 mm<br>(14 $\frac{1}{4}$ x 6 $\frac{1}{8}$ x 13 $\frac{1}{4}$ in.) |
| <b>Weight</b>                 | 10.3 kg (22 lb 11 oz.)                                                              |

### General (AV-X120)

|                               |                                                                                  |
|-------------------------------|----------------------------------------------------------------------------------|
| <b>Power requirements</b>     | 120 V AC, 60 Hz                                                                  |
| <b>Power consumption</b>      | 160 W                                                                            |
| <b>Dimensions (W x H x D)</b> | 360 x 153.5 x 335 mm (14 $\frac{1}{4}$ x 6 $\frac{1}{8}$ x 13 $\frac{1}{4}$ in.) |
| <b>Weight</b>                 | 8.5 kg (18 lb 12 oz.)                                                            |

- Design and specifications are subject to change without notice.
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# 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         |                |           |                         | 87-017-932-080 |                |           | ZENER,MTZJ6.2B<220U>       |
|            | 87-A20-514-010 |           | C-IC,M62460FP           | MAIN C.B       |                |           |                            |
|            | 87-AR4-600-010 |           | IC,LC866440W-5E85       | C102           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-070-083-010 |           | IC,GPIU281X             | C103           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-017-915-080 |           | C-IC,BU4094BCF          | C104           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-017-022-080 |           | C-IC,NJM2068M-D(T1)     | C105           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            |                |           |                         | C106           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-001-222-080 |           | C-IC,NJU4051BM(T1)      | C107           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-002-779-010 |           | IC,LA7956               | C108           | 87-A10-462-090 |           | CAP,E 6800-63 SMG VB<120U> |
|            | 87-017-917-080 |           | C-IC,BU4066BCF          | C108           | 87-A10-416-090 |           | CAP,E 6800-80 SMG VB<220U> |
|            | 87-017-888-080 |           | C-IC,NJM4558MD          | C109           | 87-A10-462-090 |           | CAP,E 6800-63 SMG VB<120U> |
|            | 87-A20-056-010 |           | IC,BA3880S              | C109           | 87-A10-416-090 |           | CAP,E 6800-80 SMG VB<220U> |
|            |                |           |                         | C110           | 87-A10-056-090 |           | CAP,E 4700-35 M            |
|            | 87-017-726-080 |           | C-IC,BU4052BCF          | C111           | 87-A10-056-090 |           | CAP,E 4700-35 M            |
|            | 87-A20-069-040 |           | C-IC,BA3842F            | C113           | 87-010-235-080 |           | CAP,E 470-16 SME           |
|            | 87-070-127-110 |           | IC,LC72131D             | C123           | 87-010-260-080 |           | CAP,E 47-25 SME            |
|            | 87-017-714-110 |           | IC,LA1836L              | C124           | 87-010-403-080 |           | CAP,E 3.3-50 M SME         |
| TRANSISTOR |                |           |                         | C201           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 89-213-702-010 |           | TR,2SB1370E             | C202           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 89-110-372-080 |           | C-TR,2SA1037K(R)        | C205           | 87-010-179-080 |           | C-CAP,1200P-50 K B<120U>   |
|            | 89-324-122-080 |           | C-TR,2SC2412KR          | C205           | 87-015-629-080 |           | C-CAP,2200P-50 K B<220U>   |
|            | 87-A30-066-080 |           | TR,2SA1175FE            | C206           | 87-010-182-080 |           | C-CAP,S 2200P-50 K B       |
|            | 89-332-665-080 |           | TR,2SC3266GR            |                |                |           |                            |
|            | 87-A30-076-080 |           | C-TR,2SC3052F           | C207           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 87-026-263-080 |           | C-TR,RN1410             | C208           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 89-110-155-080 |           | C-TR,2SA1015GR          | C209           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 87-026-610-080 |           | TR,KTC3198GR            | C210           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 87-026-238-080 |           | C-TR,DTC144WK           | C211           | 87-010-179-080 |           | C-CAP,S 1200P-50 K B       |
|            |                |           |                         | C212           | 87-010-179-080 |           | C-CAP,S 1200P-50 K B       |
|            | 87-026-230-080 |           | C-TR,DTA114YK           | C213           | 87-010-260-080 |           | CAP,E 47-25 SME            |
|            | 87-A30-086-080 |           | C-TR,CSD1306E           | C214           | 87-010-260-080 |           | CAP,E 47-25 SME            |
|            | 87-A30-106-080 |           | C-TR,CMBT5551           | C215           | 87-016-461-080 |           | C-CAP,S 0.47-16 Z F        |
|            | 87-A30-111-080 |           | TR,C2N5401              | C217           | 87-010-247-080 |           | CAP,E 100-50 M SME         |
|            | 87-A30-097-010 |           | TR,FN1016               |                |                |           |                            |
|            | 87-A30-098-010 |           | TR,FP1016               | C218           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-A30-089-010 |           | FET,2SK2723             | C220           | 87-010-247-080 |           | CAP,E 100-50 M SME         |
|            | 87-A30-072-080 |           | C-TR,RT1P 144C          | C223           | 87-015-835-080 |           | C-CAP,0.047-50 K B         |
|            | 87-A30-075-080 |           | C-TR,2SA1235F           | C225           | 87-010-322-080 |           | C-CAP,S 100P-50 J CH       |
|            | 87-A30-073-080 |           | C-TR,RT1N 141C          | C226           | 87-010-322-080 |           | C-CAP,S 100P-50 J CH       |
|            |                |           |                         | C229           | 87-010-805-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-026-228-080 |           | C-TR,DTA124EK           | C230           | 87-010-805-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-A30-132-080 |           | C-TR,2SC2235Y           | C231           | 87-010-805-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-A30-074-080 |           | C-TR,RT1P 141C          | C232           | 87-010-805-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-A30-047-080 |           | TR,CSD655E              | C239           | 87-010-305-080 |           | C-CAP,470P-50 J CH         |
|            | 89-109-521-080 |           | TR,2SA952K              |                |                |           |                            |
|            |                |           |                         | C240           | 87-010-305-080 |           | C-CAP,470P-50 J CH         |
|            | 89-421-141-080 |           | C-TR,2SD2114KU          | C241           | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       |
|            | 87-026-232-080 |           | C-TR,DTA144WK           | C242           | 87-010-178-080 |           | C-CAP,S 1000P-50 K B       |
|            | 87-026-236-080 |           | C-TR,DTC124EK           | C301           | 87-010-405-080 |           | CAP,E 10-50 M SME          |
|            | 87-026-638-080 |           | C-TR,UN221E             | C302           | 87-010-405-080 |           | CAP,E 10-50 M SME          |
|            | 89-327-143-080 |           | C-TR,2SC2714(O)         |                |                |           |                            |
|            |                |           |                         | C305           | 87-010-182-080 |           | C-CAP,S 2200P-50 K B       |
|            | 87-026-214-080 |           | TR,DTA114YS             | C306           | 87-010-182-080 |           | C-CAP,S 2200P-50 K B       |
|            | 89-505-434-540 |           | C-FET,2SK543-TB(4/5)    | C307           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
| DIODE      |                |           |                         | C308           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            |                |           |                         | C309           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 87-A40-186-080 |           | ZENER,UZ5.1BSC          | C310           | 87-010-406-080 |           | CAP,E 22-50 M SME          |
|            | 87-A40-246-080 |           | DIODE,1N4148T-72        | C311           | 87-010-179-080 |           | C-CAP,S 1200P-50 K B       |
|            | 87-A40-115-060 |           | DIODE,RS603M            | C312           | 87-010-179-080 |           | C-CAP,S 1200P-50 K B       |
|            | 87-A40-224-010 |           | DIODE,GBU8DL            | C313           | 87-010-260-080 |           | CAP,E 47-25 SME            |
|            | 87-070-274-080 |           | DIODE,1N4003 SEM        | C314           | 87-010-260-080 |           | CAP,E 47-25 SME            |
|            |                |           |                         | C315           | 87-016-461-080 |           | C-CAP,S 0.47-16 Z F        |
|            | 87-A40-270-080 |           | C-DIODE,MC2838          | C316           | 87-010-408-040 |           | CAP,E 47-50 M SME          |
|            | 87-A40-269-080 |           | C-DIODE,MC2836          | C317           | 87-010-247-080 |           | CAP,E 100-50 M SME         |
|            | 87-017-436-080 |           | ZENER,UZ-4.7BSA         | C318           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F         |
|            | 87-A40-206-080 |           | ZENER,UZ10BSC           | C319           | 87-012-368-080 |           | C-CAP,S 0.1-50 Z F<220U>   |
|            | 87-A40-199-080 |           | ZENER,UZL6H2            |                |                |           |                            |
|            |                |           |                         | C320           | 87-010-247-080 |           | CAP,E 100-50 M SME         |
|            | 87-A40-209-080 |           | ZENER,UZ27BSD           | C323           | 87-010-194-080 |           | C-CAP,S 0.047-25 Z F       |
|            | 87-017-437-080 |           | DIODE,1N4148M           | C325           | 87-010-322-080 |           | C-CAP,S 100P-50 J CH       |
|            | 87-070-178-090 |           | DIODE,1N5402-BD54<120U> | C326           | 87-010-322-080 |           | C-CAP,S 100P-50 J CH       |
|            | 87-A40-274-010 |           | DIODE,FMB-G16L<220U>    | C329           | 87-010-805-080 |           | C-CAP,S 1-16 Z F           |
|            | 87-A40-202-080 |           | ZENER,UZ5.1BSB          |                |                |           |                            |
|            |                |           |                         |                |                |           |                            |
|            | 87-002-743-080 |           | ZENER,MTZJ33B           |                |                |           |                            |

| REF. NO | PART NO.       | KANRI NO.                   | DESCRIPTION | REF. NO | PART NO.       | KANRI NO.                   | DESCRIPTION |
|---------|----------------|-----------------------------|-------------|---------|----------------|-----------------------------|-------------|
| C330    | 87-010-805-080 | C-CAP,S 1-16 Z F            |             | C708    | 87-010-546-080 | CAP,E 0.33-50 SME           |             |
| C331    | 87-010-805-080 | C-CAP,S 1-16 Z F            |             | C711    | 87-010-263-080 | CAP,E 100-10 SME            |             |
| C332    | 87-010-805-080 | C-CAP,S 1-16 Z F            |             | C712    | 87-010-112-080 | CAP,E 100-16 M SME          |             |
| C339    | 87-010-305-080 | C-CAP,470P-50 J CH          |             | C722    | 87-010-152-080 | C-CAP,S 8P-50 D CH          |             |
| C340    | 87-010-305-080 | C-CAP,470P-50 J CH          |             | C723    | 87-010-178-080 | C-CAP,S 1000P-50 K B        |             |
| C341    | 87-010-178-080 | C-CAP,S 1000P-50 K B        |             | C725    | 87-010-178-080 | C-CAP,S 1000P-50 K B        |             |
| C342    | 87-010-178-080 | C-CAP,S 1000P-50 K B        |             | C727    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C345    | 87-010-408-040 | CAP,E 47-50 M SME           |             | C728    | 87-010-248-080 | CAP,E 220-10 SME            |             |
| C501    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | C729    | 87-018-134-080 | CAP,TC U 0.01-16 N Y UP050  |             |
| C502    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | C731    | 87-012-153-080 | C-CAP,S 120P-50 J CH GRM    |             |
| C503    | 87-012-157-080 | C-CAP,S 330P-50 J CH GRM    |             | C732    | 87-012-155-080 | C-CAP,S 180P-50 J CH GRM    |             |
| C504    | 87-012-157-080 | C-CAP,S 330P-50 J CH GRM    |             | C733    | 87-012-155-080 | C-CAP,S 180P-50 J CH GRM    |             |
| C511    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | C771    | 87-010-405-080 | CAP,E 10-50 M SME           |             |
| C512    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | C772    | 87-010-194-080 | C-CAP,S 0.047-25 Z F        |             |
| C513    | 87-010-260-080 | CAP,E 47-25 SME             |             | C774    | 87-010-263-080 | CAP,E 100-10 SME            |             |
| C514    | 87-010-260-080 | CAP,E 47-25 SME             |             | C775    | 87-010-405-080 | CAP,E 10-50 M SME           |             |
| C515    | 87-010-370-080 | CAP,E 330-6.3 M SME         |             | C776    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C516    | 87-010-370-080 | CAP,E 330-6.3 M SME         |             | C777    | 87-010-400-080 | CAP,E 0.47-50 M SME         |             |
| C525    | 87-010-184-080 | C-CAP,S 3300P-50 K B        |             | C778    | 87-010-401-080 | CAP,E 1-50 M SME            |             |
| C526    | 87-010-184-080 | C-CAP,S 3300P-50 K B        |             | C779    | 87-010-401-080 | CAP,E 1-50 M SME            |             |
| C531    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C780    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C532    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C789    | 87-010-194-080 | C-CAP,S 0.047-25 Z F        |             |
| C533    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C790    | 87-010-194-080 | C-CAP,S 0.047-25 Z F        |             |
| C534    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C791    | 87-010-401-080 | CAP,E 1-50 M SME            |             |
| C541    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C792    | 87-010-180-080 | C-CAP,S 1500P-50 K B        |             |
| C549    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C793    | 87-010-189-080 | C-CAP,S 8200P-50 K B        |             |
| C551    | 87-010-406-080 | CAP,E 22-50 M SME           |             | C794    | 87-010-260-080 | CAP,E 47-25 SME             |             |
| C552    | 87-010-406-080 | CAP,E 22-50 M SME           |             | C795    | 87-010-194-080 | C-CAP,S 0.047-25 Z F        |             |
| C553    | 87-010-406-080 | CAP,E 22-50 M SME           |             | C796    | 87-010-403-080 | CAP,E 3.3-50 M SME          |             |
| C554    | 87-010-406-080 | CAP,E 22-50 M SME           |             | C797    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C555    | 87-010-406-080 | CAP,E 22-50 M SME           |             | C799    | 87-010-405-080 | CAP,E 10-50 M SME           |             |
| C556    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C820    | 87-010-260-080 | CAP,E 47-25 SME             |             |
| C557    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C821    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C558    | 87-010-384-080 | CAP,E 100-25 M SME          |             | C823    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C559    | 87-010-371-080 | CAP,E 470-6.3 M SME         |             | C825    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C560    | 87-010-371-080 | CAP,E 470-6.3 M SME         |             | C834    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C561    | 87-010-371-080 | CAP,E 470-6.3 M SME         |             | C835    | 87-016-461-080 | C-CAP,S 0.47-16 Z F         |             |
| C604    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C836    | 87-010-401-080 | CAP,E 1-50 M SME            |             |
| C605    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C837    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C621    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | C849    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C631    | 87-010-322-080 | C-CAP,S 100P-50 J CH        |             | C850    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C632    | 87-018-209-080 | CAP,TC U 0.1-50 Z F UP050   |             | C901    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C641    | 87-010-405-080 | CAP,E 10-50 M SME           |             | C920    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C642    | 87-010-405-080 | CAP,E 10-50 M SME           |             | C955    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             |
| C643    | 87-010-301-080 | C-CAP,220P-50 J CH          |             | C960    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             |
| C644    | 87-012-156-080 | C-CAP,S 220P-50 J CH GRM    |             | C988    | 87-010-198-080 | C-CAP,S 0.022-25 K B        |             |
| C645    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             | C989    | 87-010-154-080 | C-CAP,S 10P-50 D CH         |             |
| C646    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             | CF801   | 87-008-261-080 | FLTR,CF SFE10.7MA5          |             |
| C647    | 87-010-195-080 | C-CAP,S 0.068-25 Z F C2012  |             | CF802   | 87-008-261-080 | FLTR,CF SFE10.7MA5          |             |
| C648    | 87-010-195-080 | C-CAP,S 0.068-25 Z F C2012  |             | EMI501  | 87-008-372-080 | FLTR,EMIBL01 RN1            |             |
| C649    | 87-010-260-080 | CAP,E 47-25 SME             |             | FFE801  | A8-62A-195-030 | 62A-1 YFEENM                |             |
| C651    | 87-010-378-080 | CAP,E 10-16 M SME           |             | J261    | 87-A60-198-010 | JACK,6.3 BLK ST W/O SW HPJ  |             |
| C652    | 87-010-378-080 | CAP,E 10-16 M SME           |             | J521    | 87-099-609-010 | JACK,PIN 4P BLK W/O SW      |             |
| C661    | 87-012-140-080 | C-CAP,S 470P-50 J CH        |             | J522    | 87-099-609-010 | JACK,PIN 4P BLK W/O SW      |             |
| C662    | 87-018-127-080 | CAP,TC U 470P-50 K B UP050  |             | J525    | 87-099-911-010 | JACK,PIN 3P YEL W/O SW      |             |
| C663    | 87-010-188-080 | C-CAP,S 6800P-50 K B        |             | J527    | 87-099-911-010 | JACK,PIN 3P YEL W/O SW      |             |
| C664    | 87-010-188-080 | C-CAP,S 6800P-50 K B        |             | J530    | 87-A60-197-010 | JACK,PIN 3P Y/W/R W/O SW H  |             |
| C665    | 87-010-101-080 | CAP,E 220-16 SME            |             | J583    | 87-099-911-010 | JACK,PIN 3P YEL W/O SW      |             |
| C666    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | J584    | 87-099-911-010 | JACK,PIN 3P YEL W/O SW      |             |
| C667    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | J586    | 87-099-911-010 | JACK,PIN 3P YEL W/O SW      |             |
| C668    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | J801    | 87-A60-202-010 | TERMINAL,ANT 4P MSP-154V-02 |             |
| C669    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | L551    | 87-005-444-080 | COIL,100UH K FLR50          |             |
| C670    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | L741    | 87-A50-015-010 | COIL,FM DET (TOK)           |             |
| C671    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | L742    | 87-A90-052-010 | FLTR, CFMT-450A(TOK)        |             |
| C672    | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012    |             | L770    | 87-005-849-080 | COIL,10UH K CECS            |             |
| C701    | 87-010-404-080 | CAP,E 4.7-50 M SME          |             | L832    | 87-005-847-080 | COIL,2.2UH K CECS           |             |
| C702    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             | L981    | 85-NF7-664-010 | TU UNIT, AM PACK 1,(SG1) R  |             |
| C703    | 87-010-197-080 | C-CAP,S 0.01-25 K B         |             | △PR104  | 87-026-691-080 | FUSE,10A 125V 251           |             |
| C704    | 87-018-131-080 | CAP,TC U 1000P-50 K B UP050 |             | △PR105  | 87-026-691-080 | FUSE,10A 125V 251           |             |
| C707    | 87-010-546-080 | CAP,E 0.33-50 SME           |             | △PR106  | 87-026-691-080 | FUSE,10A 125V 251           |             |

| REF. NO     | PART NO.       | KANRI NO. | DESCRIPTION                   | REF. NO     | PART NO.       | KANRI NO. | DESCRIPTION                |
|-------------|----------------|-----------|-------------------------------|-------------|----------------|-----------|----------------------------|
| △PR107      | 87-026-691-080 |           | FUSE,10A 125V 251             | LED313      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN |
| △PR201      | 87-026-691-080 |           | FUSE,10A 125V 251             | LED314      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN |
| △PR202      | 87-026-691-080 |           | FUSE,10A 125V 251             | LED315      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN |
| △PR301      | 87-026-691-080 |           | FUSE,10A 125V 251             | LED316      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN |
| △PR302      | 87-026-691-080 |           | FUSE,10A 125V 251             | LED317      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R229        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | LED318      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R230        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | LED319      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R231        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | LED320      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R232        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | LED321      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R295        | 87-A00-126-080 |           | RES,M/F 220-1W J VTP          | LED322      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R296        | 87-A00-126-080 |           | RES,M/F 220-1W J VTP          | LED323      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R297        | 87-A00-126-080 |           | RES,M/F 220-1W J VTP          | LED324      | 87-001-123-080 |           | LED,SLZ-981C-02H-AB-T2 RED |
| R298        | 87-A00-126-080 |           | RES,M/F 220-1W J VTP          | S201        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| R329        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | S202        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| R330        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | S203        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| R331        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | S204        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| R332        | 87-022-184-080 |           | RES,M/F 0.33-1W J             | S205        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| SFR722      | 87-024-171-080 |           | SFR,4.7K H RH0638C            | S206        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| SW261       | 87-A90-174-010 |           | SW,PUSH 2-2-2                 | S207        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| SW262       | 87-A90-174-010 |           | SW,PUSH 2-2-2                 | S208        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| TC721       | 87-011-253-080 |           | TRIMMER,CER 30P 4.0X4.5 ECRLA | S209        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| TH201       | 87-A90-221-080 |           | C-THMS,100K                   | S210        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| TH202       | 87-A90-221-080 |           | C-THMS,100K                   | S211        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| TH301       | 87-A90-221-080 |           | C-THMS,100K                   | S212        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| TH302       | 87-A90-221-080 |           | C-THMS,100K                   | S213        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| W101        | 87-AR4-676-010 |           | F-CABLE,8P 2.5 400MM BL       | S214        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| W103        | 87-AR4-678-010 |           | F-CABLE,2P 2.5 150MM BL       | S221        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| X703        | 84-508-618-010 |           | VIB,CER CSB 456 F15           | S222        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| X721        | 87-030-372-010 |           | VIB,XTAL 7.200MHZ CSA-309     | S223        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
|             |                |           |                               | S224        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| FRONT-1 C.B |                |           |                               | S225        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C101        | 87-018-209-010 |           | CAP,TC U 0.1-50 Z F UP050     | S226        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C103        | 87-010-316-080 |           | C-CAP,S 33P-50 CH             | S227        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C105        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      | S228        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C106        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      | S229        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C108        | 87-015-681-040 |           | CAP,E 10-16 7L SRA            | S230        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C109        | 87-010-178-080 |           | C-CAP,S 1000P-50 K B          | S231        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C111        | 87-010-263-040 |           | CAP,E 100-10 M SME            | S232        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C112        | 87-A10-189-040 |           | CAP,E 220-10 M                | S241        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C113        | 87-010-544-080 |           | CAP,E 0.1-50 M SME<120U>      | S242        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C113        | 87-010-546-080 |           | CAP,E 0.33-50 M SME<220U>     | S243        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C114        | 87-010-401-040 |           | CAP,E 1-50 M SME              | S244        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C115        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      | S245        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C117        | 87-010-320-080 |           | C-CAP,S 68P-50 J CH           | S246        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C118        | 87-010-312-080 |           | C-CAP,S 15P-50 J CH           | S247        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C120        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      | S248        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C121        | 87-010-178-080 |           | C-CAP,S 1000P-50 K B          | S249        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C161        | 87-010-408-040 |           | CAP,E 47-50 M SME             | S250        | 87-A90-095-080 |           | SW,TACT EVQ11G04M          |
| C162        | 87-010-405-040 |           | CAP,E 10-50 SME               | VR601       | 86-AR4-653-010 |           | VR,RTRY 100K3BMX1 1 H      |
| C163        | 87-010-405-040 |           | CAP,E 10-50 SME               | X101        | 87-A70-070-080 |           | VIB,CER 5.76MHZ CRHR       |
| C301        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      |             |                |           |                            |
| C302        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012      | FRONT-2 C.B |                |           |                            |
| C605        | 87-A10-224-040 |           | CAP,E 10-10 M 7L BP           | C601        | 87-010-384-040 |           | CAP,E 100-25 SME           |
| C606        | 87-A10-224-040 |           | CAP,E 10-10 M 7L BP           | C602        | 87-010-263-040 |           | CAP,E 100-10 M SME         |
| C607        | 87-A10-224-040 |           | CAP,E 10-10 M 7L BP           | C603        | 87-015-692-040 |           | CAP,E 0.22-50 M 7L SRA     |
| C608        | 87-A10-224-040 |           | CAP,E 10-10 M 7L BP           | C604        | 87-015-692-040 |           | CAP,E 0.22-50 M 7L SRA     |
| FL101       | 86-AR4-670-010 |           | FL,9-BT-153GK                 | C609        | 87-012-154-080 |           | C-CAP,S 150P-50 J CH GRM   |
| LED301      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C610        | 87-012-153-080 |           | C-CAP,S 120P-50 J CH GRM   |
| LED302      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C621        | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| LED303      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C701        | 87-010-402-040 |           | CAP,E 2.2-50 SME           |
| LED304      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C702        | 87-010-402-040 |           | CAP,E 2.2-50 SME           |
| LED305      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C703        | 87-012-154-080 |           | C-CAP,S 150P-50 J CH GRM   |
| LED306      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C704        | 87-012-154-080 |           | C-CAP,S 150P-50 J CH GRM   |
| LED307      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C705        | 87-016-460-080 |           | C-CAP,S 0.22-16 K B        |
| LED308      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C706        | 87-016-460-080 |           | C-CAP,S 0.22-16 K B        |
| LED309      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C707        | 87-010-182-080 |           | C-CAP,S 2200P-50 K B       |
| LED310      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C708        | 87-010-182-080 |           | C-CAP,S 2200P-50 K B       |
| LED311      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C709        | 87-010-597-080 |           | C-CAP,S 0.056-16 K R       |
| LED312      | 87-070-199-080 |           | LED,SLP-738F-81-S-T1 P-GRN    | C710        | 87-010-597-080 |           | C-CAP,S 0.056-16 K R       |

| REF. NO     | PART NO.       | KANRI NO.                       | DESCRIPTION |
|-------------|----------------|---------------------------------|-------------|
| C711        | 87-016-460-080 | C-CAP,S 0.22-16 K B             |             |
| C712        | 87-016-460-080 | C-CAP,S 0.22-16 K B             |             |
| C713        | 87-016-462-080 | C-CAP,S 1-16 Z F                |             |
| C714        | 87-010-260-080 | CAP,E 47-25 SME                 |             |
| C715        | 87-010-405-080 | CAP,E 10-50 M SME               |             |
| C716        | 87-010-260-080 | CAP,E 47-25 SME                 |             |
| C717        | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C718        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| MVR601      | 86-AR4-669-010 | VR,MOT 50KBX4 1 H               |             |
| SPEAKER C.B |                |                                 |             |
| C251        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C252        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C253        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C254        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C255        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C256        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C257        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C258        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C351        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C352        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C353        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| C354        | 87-010-196-080 | C-CAP,S 0.1-25 Z F C2012        |             |
| J201        | 87-A60-244-010 | JACK, PIN 1P BLK W/O SW         |             |
| J202        | 87-A60-199-010 | TERMINAL, SP 8P CJ-9034-07 V0   |             |
| J303        | 87-A60-200-110 | TERMINAL, SP 6P CJ-9033-21-3 V0 |             |
| L201        | 87-003-383-010 | COIL, 1UH K                     |             |
| L202        | 87-003-383-010 | COIL, 1UH K                     |             |
| L203        | 87-003-383-010 | COIL, 1UH K                     |             |
| L204        | 87-003-383-010 | COIL, 1UH K                     |             |
| L301        | 87-003-383-010 | COIL, 1UH K                     |             |
| L302        | 87-003-383-010 | COIL, 1UH K                     |             |
| S101        | 86-SP8-611-010 | SW, SL 1-1-2                    |             |
| W201        | 86-AR4-686-110 | F-CABLE, 8P 2.5 500MM           |             |
| W301        | 86-AR4-642-110 | F-CABLE, 4P 2.5 300MM           |             |
| PRO C.B     |                |                                 |             |
| C1          | 87-010-405-040 | CAP,E 10-50 M SME               |             |
| C2          | 87-010-405-040 | CAP,E 10-50 M SME               |             |
| C3          | 87-010-405-040 | CAP,E 10-50 M SME               |             |
| C4          | 87-010-260-040 | CAP,E 47-25 SME                 |             |
| C5          | 87-010-405-040 | CAP,E 10-50 M SME               |             |
| C6          | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C7          | 87-010-401-040 | CAP,E 1-50 M SME                |             |
| C8          | 87-010-318-080 | C-CAP,S 47P-50 J CH             |             |
| C9          | 87-010-318-080 | C-CAP,S 47P-50 J CH             |             |
| C10         | 87-012-368-080 | C-CAP,S 0.1-50 Z F              |             |
| C11         | 87-010-263-040 | CAP,E 100-10 M SME              |             |
| C12         | 87-016-456-040 | CAP,E 22-16 M SME               |             |
| C22         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C23         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C24         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C25         | 87-012-140-080 | C-CAP,S 470P-50 J CH            |             |
| C27         | 87-010-401-040 | CAP,E 1-50 M SME                |             |
| C28         | 87-010-177-080 | C-CAP,S 820P-50 J SL            |             |
| C31         | 87-A10-229-080 | C-CAP,S 0.68-10 K WSR           |             |
| C32         | 87-012-393-080 | C-CAP,S 0.22-16 K WSR CM/CB     |             |
| C33         | 87-012-393-080 | C-CAP,S 0.22-16 K WSR CM/CB     |             |
| C34         | 87-010-404-040 | CAP,E 4.7-50 SME                |             |
| C35         | 87-010-404-040 | CAP,E 4.7-50 SME                |             |
| C36         | 87-012-393-080 | C-CAP,S 0.22-16 K WSR CM/CB     |             |
| C37         | 87-012-393-080 | C-CAP,S 0.22-16 K WSR CM/CB     |             |
| C38         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C41         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C42         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C45         | 87-016-081-080 | C-CAP,S 0.1-16 K R              |             |
| C47         | 87-010-176-080 | C-CAP,S 680P-50 J SL            |             |
| C49         | 87-010-176-080 | C-CAP,S 680P-50 J SL            |             |

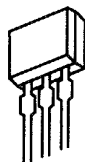
| REF. NO | PART NO.       | KANRI NO.                 | DESCRIPTION |
|---------|----------------|---------------------------|-------------|
| C52     | 87-016-456-040 | CAP,E 22-16 M LLA         |             |
| C53     | 87-016-251-040 | CAP,E 220-16 M SMG<220U>  |             |
| C54     | 87-010-405-080 | CAP,E 10-50 M SME         |             |
| C57     | 87-010-405-080 | CAP,E 10-50 M SME         |             |
| C58     | 87-010-405-080 | CAP,E 10-50 M SME         |             |
| C61     | 87-010-384-040 | CAP,E 100-25 SME          |             |
| C62     | 87-012-368-080 | C-CAP,S 0.1-50 Z F        |             |
| C63     | 87-010-315-080 | C-CAP,S 27P-50 CH         |             |
| C64     | 87-010-315-080 | C-CAP,S 27P-50 CH         |             |
| C65     | 87-010-315-080 | C-CAP,S 27P-50 CH         |             |
| C112    | 87-010-382-080 | CAP,E 22-25 M SME         |             |
| C114    | 87-010-384-080 | CAP,E 100-25 M SME        |             |
| C115    | 87-012-140-080 | C-CAP,S 470P-50 J CH      |             |
| C116    | 87-010-263-080 | CAP,E 100-10 SME          |             |
| C117    | 87-010-235-080 | CAP,E 470-16 SME          |             |
| C118    | 87-010-235-080 | CAP,E 470-16 SME          |             |
| C119    | 87-010-407-080 | CAP,E 33-50 SME           |             |
| C120    | 87-010-407-080 | CAP,E 33-50 SME           |             |
| C121    | 87-010-408-080 | CAP,E 47-50 SME           |             |
| C122    | 87-010-263-080 | CAP,E 100-10 SME          |             |
| C123    | 87-010-112-040 | CAP,E 100-16 SME<220U>    |             |
| C123    | 87-010-404-040 | CAP,E 4.7-50 SME<120U>    |             |
| L1      | 87-005-481-080 | COIL, 47UH J FLR50        |             |
| R27     | 87-025-407-080 | RES,M/F 100K-1/8W F       |             |
| △R144   | 87-029-060-010 | RES,FUSE 33-1/4W J        |             |
| RY201   | 87-A90-143-010 | RELAY, DG12D2-OS(M)<220U> |             |
| RY202   | 87-A90-143-010 | RELAY, DG12D2-OS(M)<220U> |             |
| AC1 C.B |                |                           |             |
| △       | 87-050-053-010 | AC CORD ASSY,U-2          |             |
| △       | 87-085-189-010 | BUSHING,AC CORD(U) CM-22C |             |
| △ F106  | 87-035-493-010 | FUSE,8A 125V T 237<120U>  |             |
| △ F106  | 87-035-494-010 | FUSE,10A 125V T 237<220U> |             |
| △ F107  | 87-035-493-010 | FUSE,8A 125V T 237<120U>  |             |
| △ F107  | 87-035-494-010 | FUSE,10A 125V T 237<220U> |             |
| △ FC101 | 87-033-147-010 | FUSE CLAMP,MT-20          |             |
| △ FC102 | 87-033-147-010 | FUSE CLAMP,MT-20          |             |
| △ FC103 | 87-033-147-010 | FUSE CLAMP,MT-20          |             |
| △ FC104 | 87-033-147-010 | FUSE CLAMP,MT-20          |             |
| △ P1    | 87-A60-317-010 | TERMINAL, 1P MSC          |             |
| △ P2    | 87-A60-317-010 | TERMINAL, 1P MSC          |             |
| △ PT101 | 87-AR6-662-010 | PT,U EI96-70 7AR-6<220U>  |             |
| △ PT101 | 87-AR7-662-010 | PT,U EI85-58 7AR-7<120U>  |             |
| AC2 C.B |                |                           |             |
| △ PR11  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| △ PR12  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| △ PR13  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| △ PR14  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| △ PR15  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| △ PR16  | 87-026-691-080 | FUSE,10A 125V 251         |             |
| RY101   | 87-A90-454-010 | RELAY, 12V DJ12D2-O(M)    |             |
| RY102   | 87-A90-454-010 | RELAY, 12V DJ12D2-O(M)    |             |

# TRANSISTOR ILLUSTRATION



ECB

2SA952  
2SC2235  
2SC3266  
C2N5401  
CSD655  
KTC3198



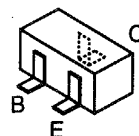
ECB

2SA1175  
DTA114YS

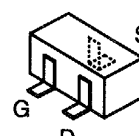


ECB

2SB1370



2SA1015  
2SA1037  
2SA1235  
2SC2412  
2SC2714  
2SC3052  
2SD2114  
CMBT5551  
CSD1306E  
DTA114YK  
DTA124EK  
DTA144WK  
DTC124EK  
DTC144WK  
RN1410  
RTIN141C  
RTIP141C  
RTIP144C  
UN221E



2SK543



GDS

2SK2723

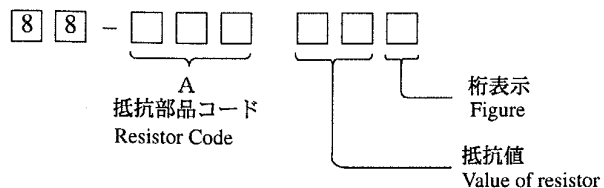


BCE

FN1016  
FP1016

## ○ 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<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<br>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                            |

**A MAIN C.B.**

**B FRONT-1 C.B.**

**C FRONT-2 C.B.**

**D SPEAKER C.B.**

**E PRO C.B.**

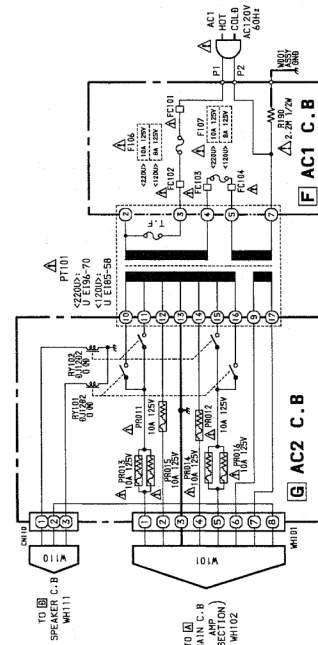
**F PRO C.B.**

**G AC C.B.**

**COMPONENTS**

**PARTS LIST**



[illegible]

**IC DESCRIPTION**  
**IC, LC866448W-5E85**

| Pin No. | Pin Name   | I/O | Description                                                         |
|---------|------------|-----|---------------------------------------------------------------------|
| 1       | O-OSD-CE   | O   | OSD data latch CE output.                                           |
| 2       | O-STB(M)   | O   | Main shift register data latch strobe output.                       |
| 3       | O-DATA(M)  | O   | Main shift register data output.                                    |
| 4       | O-CLK(M)   | O   | Main shift register clock output.                                   |
| 5       | O-POWER    | O   | System power supply ON/OFF output.                                  |
| 6       | HOLD       | I   | Power failure detected input "L" to stop clock and maintain memory. |
| 7       | RESET      | I   | Reset input.                                                        |
| 8       | I-RDS DATA | I   | RDS data input (TUNER).                                             |
| 9       | I-TUNE/IFC | I   | Tuner SD detect input. IF count serial data input.                  |
| 10      | VSS1       | —   | GND.                                                                |
| 11, 12  | CF1, 2     | —   | 5.7 MHz oscillator circuit.                                         |
| 13      | VDD1       | —   | Power supply input.                                                 |
| 14–16   | I-KEY1–3   | I   | Key input. (A/D).                                                   |
| 17      | I-STEREO   | I   | TUNER stereo signal input.                                          |
| 18      | I-SYNC DET | I   | VIDEO signal level input.                                           |
| 19      | -          | -   | Not used.                                                           |
| 20      | I-MIC      | I   | Microphone input for auto VF display.                               |
| 21      | I-SIG      | I   | RDS signal input (TUNER).                                           |
| 22      | I-RDS CLK  | I   | RDS clock input (TUNER).                                            |
| 23      | -          | -   | Not used.                                                           |
| 24      | I-RMS      | I   | System remote control signal input.                                 |
| 25–33   | G9–G1      | O   | FL grid output G9 to G1.                                            |
| 34–40   | P23–P17    | O   | FL segment output.                                                  |
| 41      | VDD2       | —   | Power supply input.                                                 |
| 42      | -VP        | —   | Power supply input for FL display. (-34.5 V)                        |
| 43–54   | P16–P5     | O   | FL segment output P16–P5.                                           |
| 55      | P4         | O   | FL segment output P4, AM stereo, FM-WIDE mode data input to diode.  |
| 56      | P3         | O   | FL segment output P3, RDS mode data input to diode.                 |
| 57      | P2         | O   | FL segment output P2, K-CON mode data input to diode.               |
| 58      | P1         | O   | FL segment output 1, AM 10kHz step data input to diode.             |
| 59      | O-SW SCAN  | O   | Switch cam timing output.                                           |
| 60      | O-RDS      | O   | RDS LED turn output.                                                |
| 61      | O-EON      | O   | EON LED turn output.                                                |
| 62      | O-AG       | O   | AG LED turn output.                                                 |
| 63      | DSP-CE     | O   | DSP data latch strobe output.                                       |
| 64      | PLL-CE     | I/O | PLL IC chip enable.                                                 |
| 65      | GEQ A      | O   | GEQ control output.                                                 |
| 66      | GEQ B      | O   | GEQ control output.                                                 |
| 67      | GEQ-C      | O   | GEQ/T-BASS IC GEQ control output.                                   |
| 68      | VR-UP      | O   | MVR motor control (up) output.                                      |
| 69      | VR-DOWN    | O   | MVR motor control (down) output.                                    |

| Pin No. | Pin Name                        | I/O | Description                                       |
|---------|---------------------------------|-----|---------------------------------------------------|
| 70      | O-STB(F)                        | O   | Front shift register, data latch strobe output.   |
| 71      | O-CLK(F)                        | O   | Front shift register, data transfer clock output. |
| 72      | O-DATA(F)                       | O   | Front shift register, data output.                |
| 73      | VSS2                            | —   | GND.                                              |
| 74      | I-TM BASE                       | I   | Reference clock input for timer watch.            |
| 75      | T-BSS A                         | O   | GEQ/T-BASS IC T-BASS control output.              |
| 76      | T-BSS B                         | O   | GEQ/T-BASS IC T-BASS control output.              |
| 77      | O-MUTE                          | O   | System mute output.                               |
| 78      | O-RT                            | O   | RT LED turn output.                               |
| 79      | O-TRFC                          | O   | TRFC LED turn output.                             |
| 80      | $\overline{\text{O-CLK SHIFT}}$ | O   | Micro clock shift output.                         |

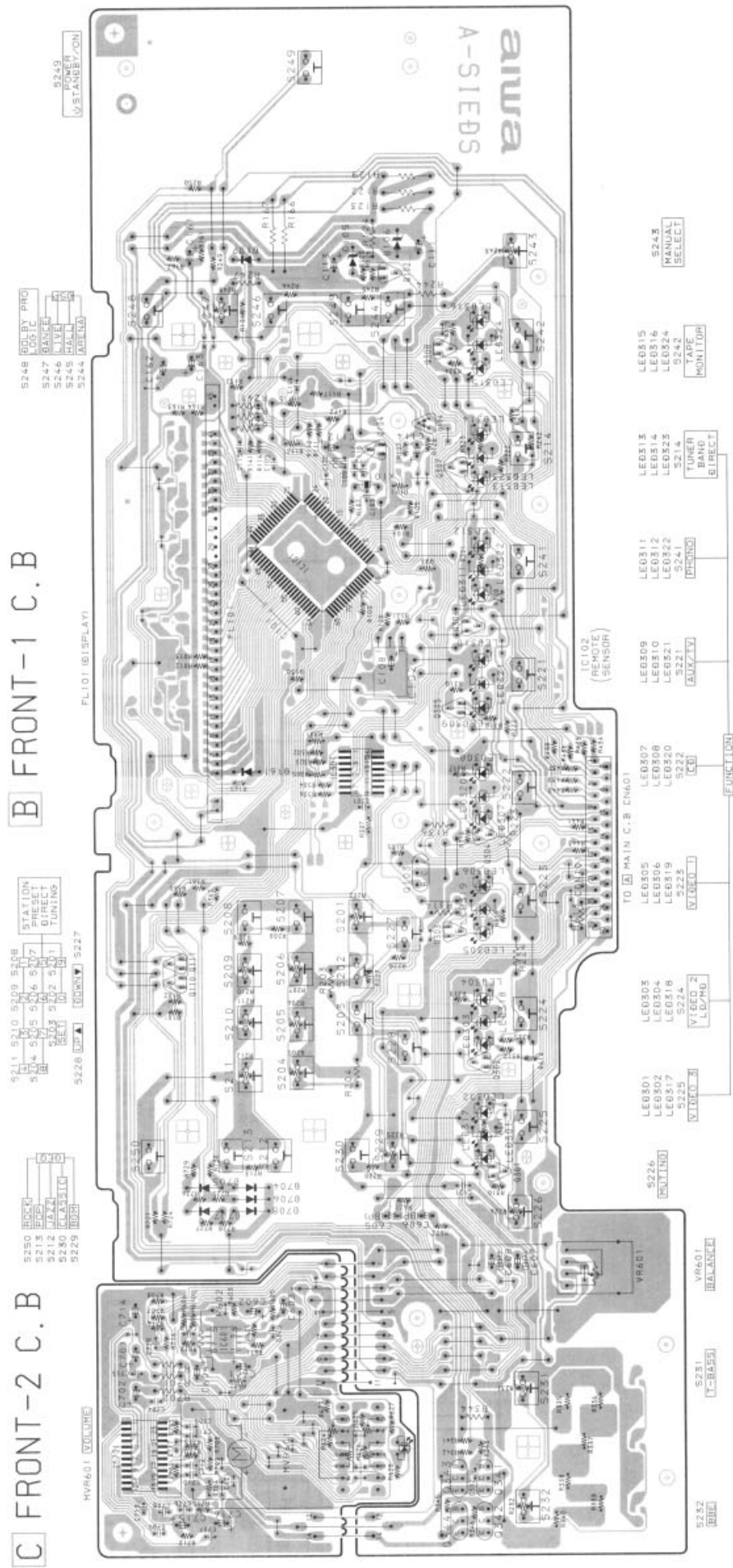
See the AV-X100/X200(S/M Cord No.09-967-142-10I)of the IC BLOCK DIAGRAM below.

| AV-X100/X200 |  | AV-X120 /X220 |  |
|--------------|--|---------------|--|
| LA1836       |  | LA1836        |  |
| BU4094BCF    |  | BU4094BCF     |  |
| LC72131      |  | LC72131       |  |
| BA3880S      |  | BA3880S       |  |
| BA3842F      |  | BA3842F       |  |

TO E PRO C.B  
CN001  
CN401





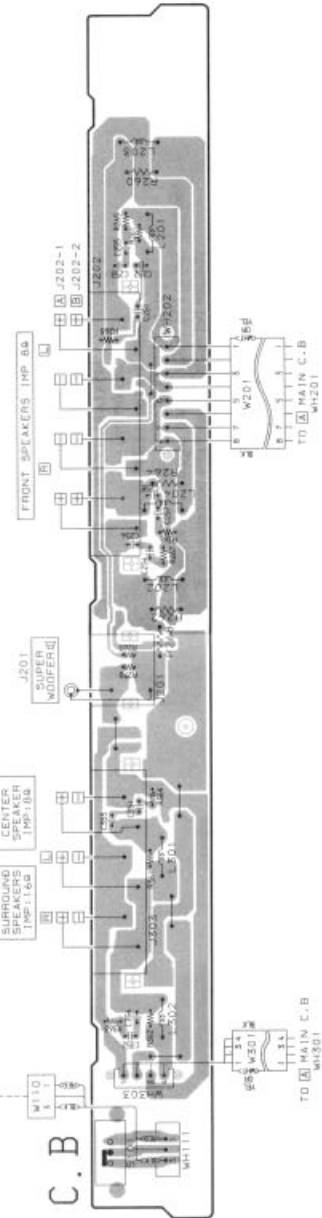
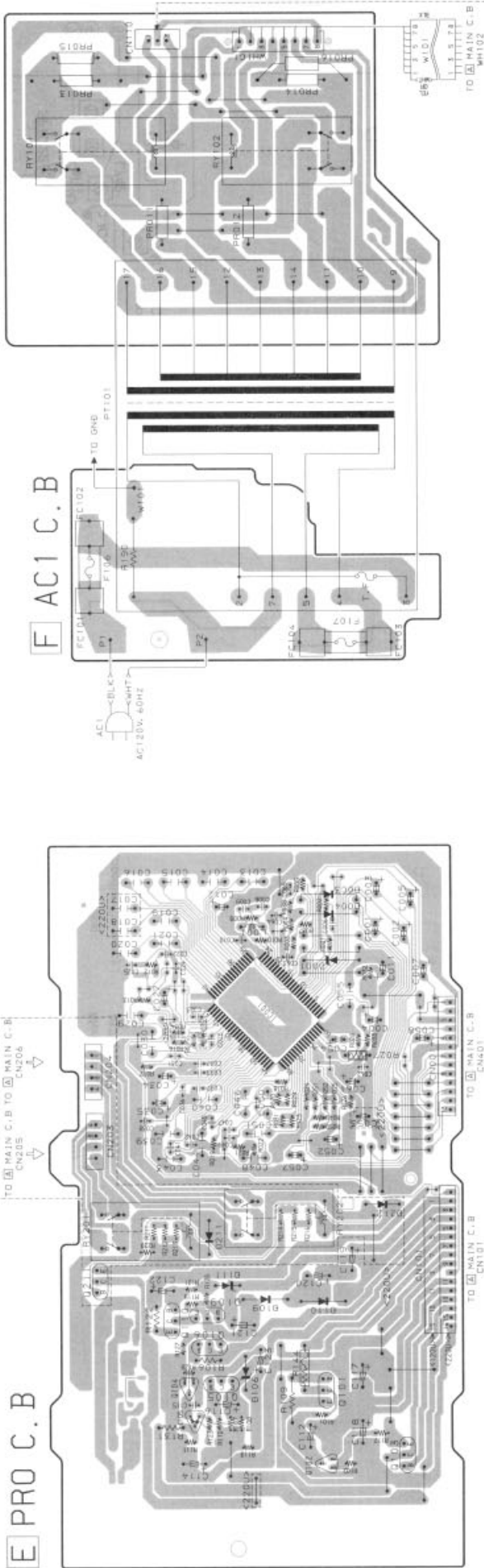




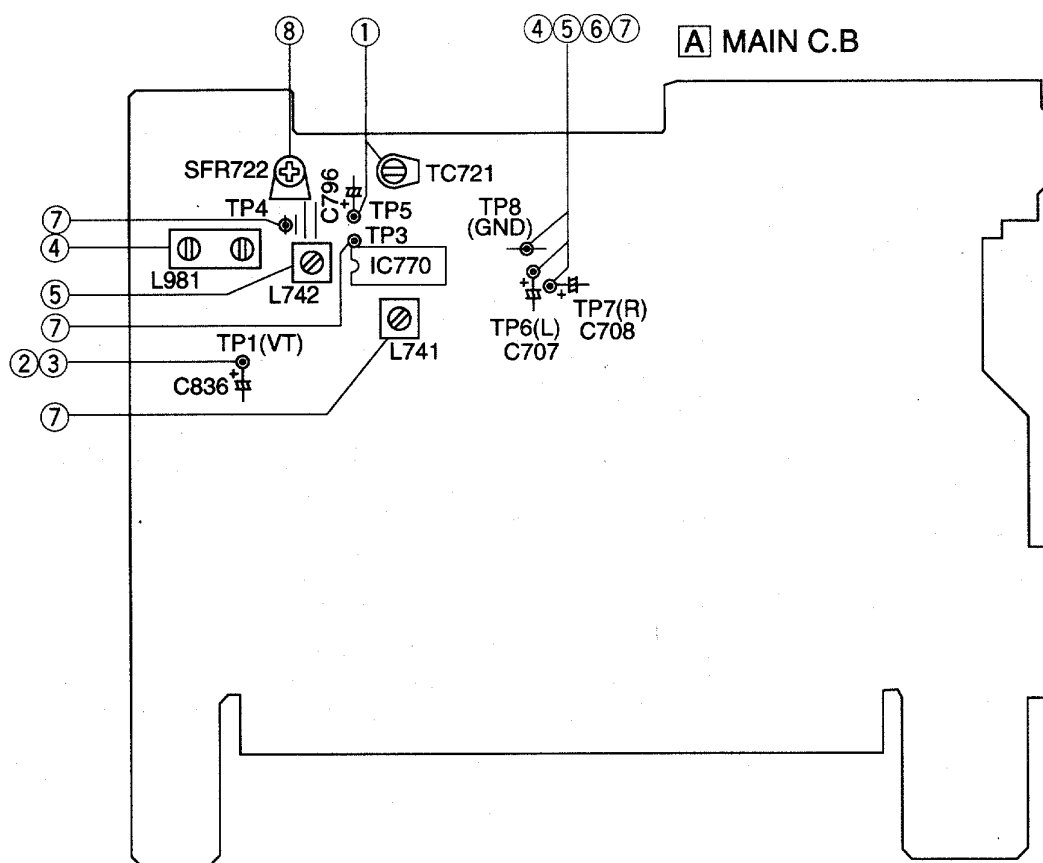
G AC2 C.B

F AC1 C.B

E PRO C.B



## ADJUSTMENT



### 1. Clock Frequency Adjustment

Settings: · Test point : TP5(CLK IC770 pin 30)

· Adjustment location : TC721

Method: Set to AM 1710kHz and adjust TC721 so that the test point becomes  $2160\text{kHz} \pm 0.01\text{kHz}$ .

### 2. AM VT Check

Settings: · Test point : TP1(VT)

Method: Set to AM 530kHz and check the test point is  $1.1 \pm 0.20\text{V}$ .

### 3. FM VT Check

Setting: · Test point : TP1(VT)

Method: Set to FM 108.0MHz and check that the test point is  $7.5 \pm 1.0\text{V}$ . Then set to FM 87.5MHz and check that the test point is  $2.9 \pm 1.0\text{V}$ .

### 4. AM Tracking Adjustment

Settings: · Test point : TP6(Lch), TP7(Rch), TP8(GND)  
· Adjustment location : L981

Method: Set to AM 1000kHz and adjust L981 that the test point becomes maximum.

### 5. AM IF Adjustment

Setting: · Test point : TP6(Lch), TP7(Rch), TP8(GND)  
L742 ..... 450kHz

### 6. FM Tracking Check

Setting: · Test point : TP6(Lch), TP7(Rch), TP8(GND)

Method: Set to FM 87.5MHz and 108.0MHz, and check that the test point is  $4 \pm 4\text{dB}$  and  $6 \pm 4\text{dB}$ .

### 7. DC Balance/MONO Distortion Adjustment

Settings: · Test point : TP3, TP4 (DC Balance)  
TP6(Lch), TP7(Rch), TP8(GND) (Distortion)

· Adjustment location : L741

· Input level : 60dB

Method: Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes  $0\text{V} \pm 0.01\text{V}$ .

Next check that the distortion is less than 1.3%

### 8. Auto Stop Level Adjustment

Settings: · Adjustment location : SFR722

· Input level : 20dB

Method: Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) out by 2dB down.

## PRACTICAL SERVICE FIGURE

### TUNER SECTION

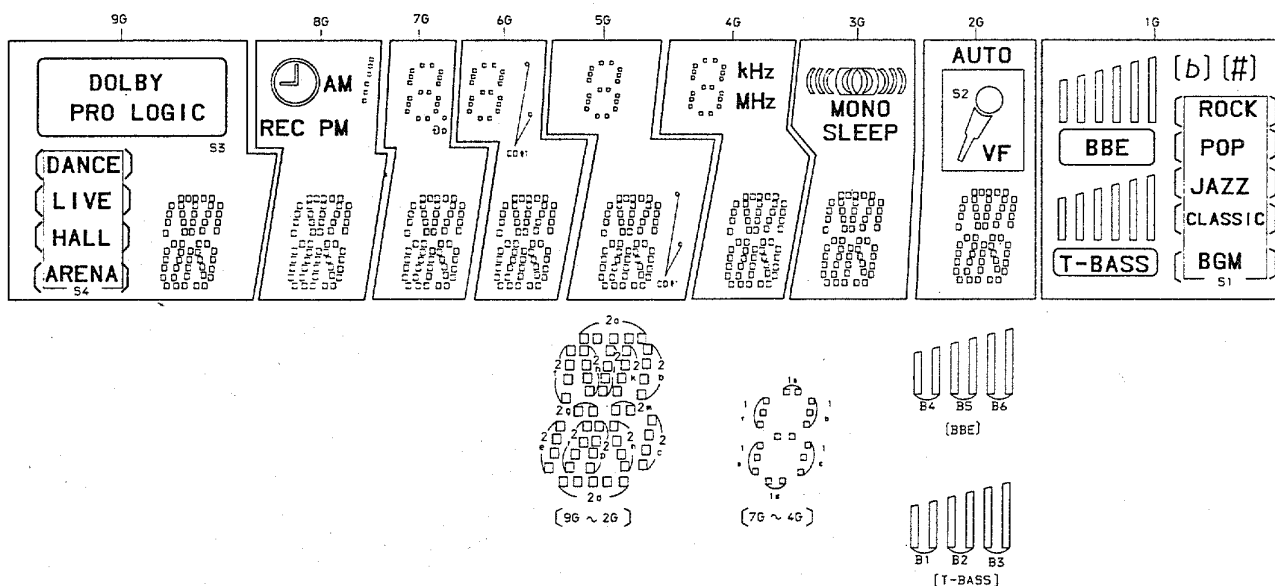
#### <FM SECTION>

IHF Sensitivity : 6dB  $\pm$  6dB  
(THD 3%) (87.5MHz/98.0MHz)  
8dB  $\pm$  6dB(108.0MHz)  
S/N 50dB Quieting Sensitivity: 31dB  $\pm$  5dB  
(87.5/98.0/108.0MHz)  
Signal to noise ratio : More than 64dB(98.0MHz)  
Distortion : Less than 1.3%(98.0MHz)  
Stereo separation : More than 25dB(98.0MHz)  
Intermediate frequency : 10.7MHz

#### <AM SECTION>

Sensitivity : 57dB  $\pm$  6dB(600kHz)  
(S/N 20dB) 53dB  $\pm$  6dB(1000/1400kHz)  
Distortion : Less than 1.5%(1000kHz)  
Auto stop level : 50dB  $\pm$  10dB(1000kHz)  
Intermediate frequency : 450kHz

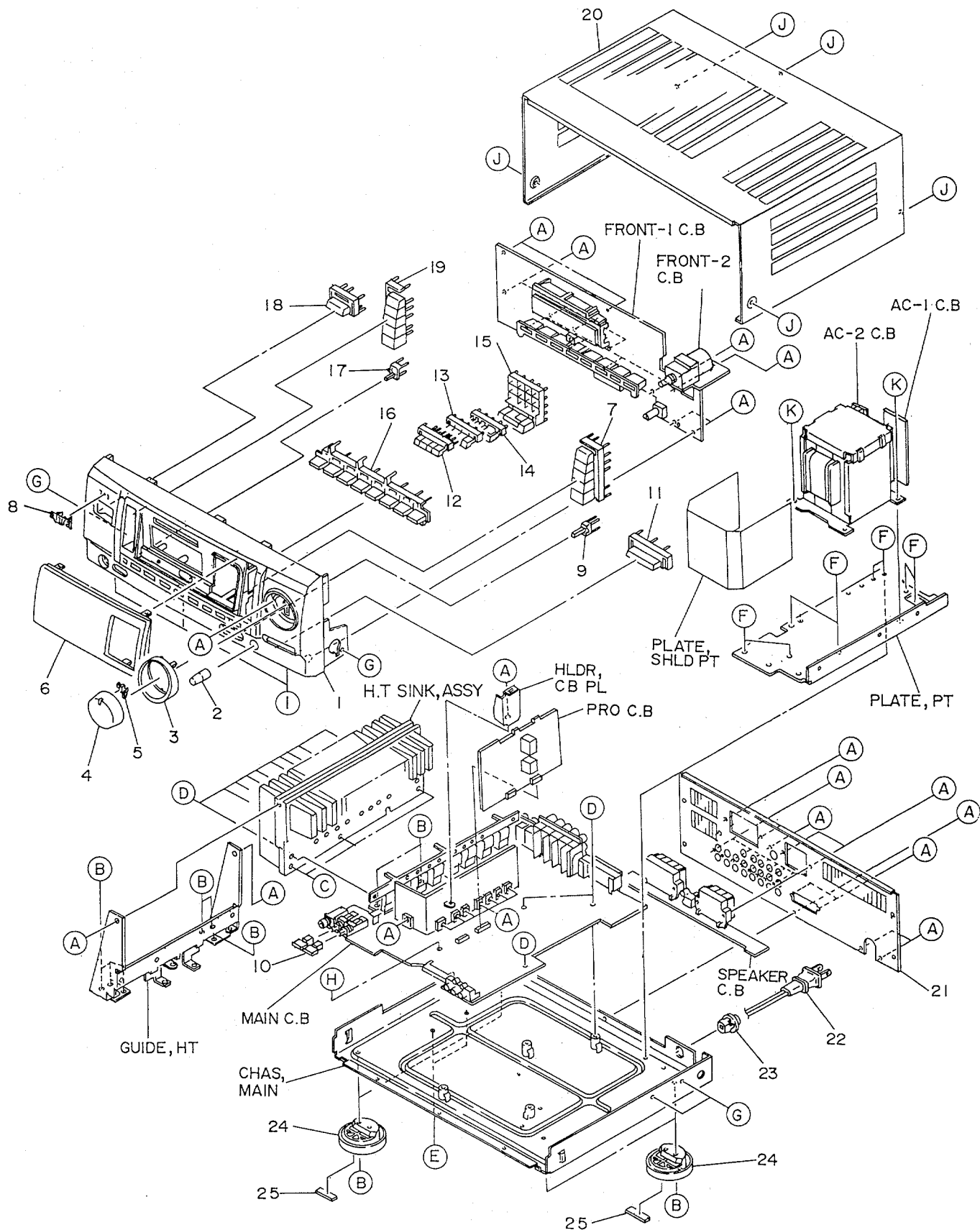
# FL DISPLAY



## ANODE CONNECTION

|     | 9G      | 8G  | 7G          | 6G   | 5G   | 4G  | 3G      | 2G   | 1G        |
|-----|---------|-----|-------------|------|------|-----|---------|------|-----------|
| P1  | 2d      | 2d  | 2d          | 2d   | 2d   | 2d  | 2d      | 2d   | T-BASS    |
| P2  | 2n      | 2n  | 2n          | 2n   | 2n   | 2n  | 2n      | 2n   | B3        |
| P3  | 2p      | 2p  | 2p          | 2p   | 2p   | 2p  | 2p      | 2p   | B2        |
| P4  | 2r      | 2r  | 2r          | 2r   | 2r   | 2r  | 2r      | 2r   | B1        |
| P5  | 2e      | 2e  | 2e          | 2e   | 2e   | 2e  | 2e      | 2e   | S1        |
| P6  | 2c      | 2c  | 2c          | 2c   | 2c   | 2c  | 2c      | 2c   | (BGM)     |
| P7  | 2g      | 2g  | 2g          | 2g   | 2g   | 2g  | 2g      | 2g   | (CLASSIC) |
| P8  | 2m      | 2m  | 2m          | 2m   | 2m   | 2m  | 2m      | 2m   | (JAZZ)    |
| P9  | 2f      | 2f  | 2f          | 2f   | 2f   | 2f  | 2f      | 2f   | (POP)     |
| P10 | 2b      | 2b  | 2b          | 2b   | 2b   | 2b  | 2b      | 2b   | (ROCK)    |
| P11 | 2k      | 2k  | 2k          | 2k   | 2k   | 2k  | 2k      | 2k   | (#)       |
| P12 | 2j      | 2j  | 2j          | 2j   | 2j   | 2j  | 2j      | 2j   | #         |
| P13 | 2h      | 2h  | 2h          | 2h   | 2h   | 2h  | 2h      | 2h   | ((b))     |
| P14 | 2a      | 2a  | 2a          | 2a   | 2a   | 2a  | 2a      | 2a   | b         |
| P15 | S4      | 1d  | 1d          | 1d   | 1d   | 1d  | SLEEP   | S2   | BBE       |
| P16 | (ARENA) | PM  | 1e          | 1e   | 1e   | 1e  | MONO    | AUTO | B6        |
| P17 | (HALL)  | AM  | 1c          | 1c   | 1c   | 1c  | ((000)) | —    | B5        |
| P18 | (LIVE)  | REC | 1g          | 1g   | 1g   | 1g  | —       | —    | B4        |
| P19 | (DANCE) | ⌚   | 1f          | 1f   | 1f   | 1f  | —       | —    | —         |
| P20 | S3      | —   | 1b          | 1b   | 1b   | 1b  | —       | —    | —         |
| P21 | —       | —   | 1a          | 1a   | 1a   | 1a  | —       | —    | —         |
| P22 | —       | —   | col1 (DOWN) | col2 | col1 | MHz | —       | —    | —         |
| P23 | —       | —   | col1 (UP)   | —    | —    | kHz | —       | —    | —         |

# MECHANICAL EXPLODED VIEW 1/1



## 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.       | KANRI NO. | DESCRIPTION             | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION                 |
|---------|----------------|-----------|-------------------------|---------|----------------|-----------|-----------------------------|
| 1       | 87-AR7-002-010 |           | CABI,FR U<X120>         | 20      | 86-AR5-002-010 |           | CABI,STEEL                  |
| 1       | 87-AR6-002-010 |           | CABI,FR U<X220U>        | 21      | 87-AR7-006-010 |           | PANEL,REAR U<X120>          |
| 2       | 86-AR5-034-010 |           | KNOB,RTRY MIC 2         | 21      | 87-AR6-007-010 |           | PANEL,REAR UBN<X220U>       |
| 3       | 86-AR5-018-010 |           | RING,VOL                | 22      | 87-050-053-010 |           | AC CORD ASSY,U-2            |
| 4       | 86-AR5-016-210 |           | KNOB,RTRY VOL           | 23      | 87-085-189-010 |           | BUSHING,AC CORD(U) CM-22C   |
| 5       | 86-AR5-017-010 |           | REFLECTOR,VOL           | 24      | 86-AR5-023-010 |           | FOOT,FR                     |
| 6       | 86-AR5-020-110 |           | WINDOW,DISPLAY          | 25      | 82-VW2-211-010 |           | FELT,20-7.5-2               |
| 7       | 86-AR5-005-010 |           | KEY,GBQ                 | A       | 87-067-703-010 |           | BVT2+3-10 W/O SLOT          |
| 8       | 82-NE8-032-010 |           | BADGE,AIWA 27.5 ABS GLD | B       | 87-067-688-010 |           | BVTT+3-6                    |
| 9       | 86-AR5-008-010 |           | KEY,MUTE                | C       | 87-067-758-010 |           | BVT2+3-12 W/O SLOT          |
| 10      | 86-AR5-009-010 |           | KEY,SELECT              | D       | 87-067-581-010 |           | BVT2+3-15 W/O SLOT          |
| 11      | 86-AR5-011-010 |           | KEY,BBE                 | E       | 87-067-585-010 |           | BVTT+4-6                    |
| 12      | 86-AR5-012-010 |           | KEY,10 A                | F       | 87-067-586-010 |           | BVTT+4-8                    |
| 13      | 86-AR5-013-010 |           | KEY,10 B                | G       | 87-591-095-410 |           | QIT+3-8                     |
| 14      | 86-AR5-014-010 |           | KEY,10 C                | H       | 87-067-632-010 |           | BVT2+3-15 W/O SLOT W/CONVEX |
| 15      | 86-AR5-015-010 |           | KEY,UP/DOWN             | I       | 87-067-716-010 |           | BVTT+3-6 BLK                |
| 16      | 86-AR5-006-010 |           | KEY,FUN                 | J       | 87-067-641-010 |           | UTT2+3-8 W/O SLOT BLK       |
| 17      | 86-AR5-007-010 |           | KEY,MODE                | K       | 87-067-975-010 |           | S-SCREW,IT+4-8 SWCH12A      |
| 18      | 86-AR5-003-010 |           | KEY,POWER               |         |                |           |                             |
| 19      | 86-AR5-004-010 |           | KEY,DSP                 |         |                |           |                             |

## 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-AR6-903-010 |           | IB<X220>               |
| 1       | 87-AR7-903-010 |           | IB<X120>               |
| 2       | 87-006-225-010 |           | ANT,LOOP ANT NC2       |
| 3       | 87-043-115-010 |           | FEEDER-ANT,FM          |
| 4       | 87-AR4-685-010 |           | RC UNIT,RC-AR01<X220>  |
| 5       | 87-AR7-650-010 |           | RC UNIT,RC-7AR02<X120> |

## 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      |
| HLD            | 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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