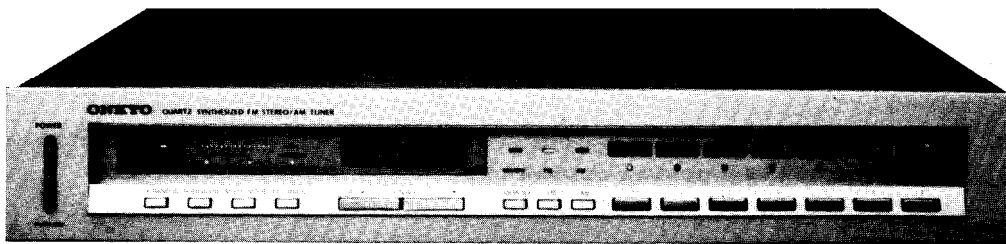


ONKYO® SERVICE MANUAL**QUARTZ SYNTHESIZED
FM STEREO/AM TUNER
MODEL T-35****TABLE OF CONTENTS**

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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

| | |
|------------------------------------|---|
| FM: | |
| Tuning Range: | 87.9 – 107.9 MHz (200 kHz steps) |
| Usable Sensitivity: | Mono: 9.8 dBf, 1.7 μ V Stereo: 17.2 dBf, 4.0 μ V |
| 50 dB Quieting Sensitivity: | |
| | Mono: 14.7 dBf, 3.0 μ V Stereo: 36.1 dBf, 35 μ V |
| Capture Ratio: | 1.0 dB |
| Image Rejection Ratio: | 85 dB |
| IF Rejection Ratio: | 100 dB |
| Signal-to-Noise Ratio: | Mono: 80 dB (IHF) Stereo: 72 dB (IHF) |
| Alternate Channel Att.: | 80 dB (\pm 400 kHz, IF: Normal) |
| AM Suppression Ratio: | 55 dB |
| Total Harmonic Distortion: | |
| | Mono: 0.08% (IF: width) Stereo: 0.15% (IF: width) |
| Frequency Response: | 30 – 15,000 Hz +0.5 dB, –1.5 dB |
| Stereo Separation: | 40 dB at 1 kHz (IF: width) 33 dB at 70 – 10,000 Hz |
| Output Voltage: | 0 – 1.5 V |
| Muting Level: | 17.2 dBf, 4.0 μ V |

| | |
|-----------------------------------|-------------------------------|
| AM: | |
| Tuning Range: | 530 – 1620 kHz (10 kHz steps) |
| Usable Sensitivity: | 20 μ V |
| Image Rejection Ratio: | 45 dB |
| IF Rejection Ratio: | 30 dB |
| Signal-to-Noise Ratio: | 40 dB |
| Total Harmonic Distortion: | |
| | 0.7% |
| Output Voltage: | 0 – 0.5 V |

| | |
|-------------------------|---|
| General | |
| Power supply: | AC 120 V, 60 Hz |
| Antennas: | FM: 300 ohms balanced and 75 ohms unbalanced AM: built-in loop antenna and external terminal |
| Semiconductors: | 3 FETs, 54 transistors, 16 ICs, 60 diodes, 22 LEDs |
| Dimensions (W x H x D): | 418 x 72 x 275 mm (16-1/2" x 2-7/8" x 10-13/16") |
| Weight: | 3.8 kg, 8.4 lbs. |

Specifications and features are subject to change without notice.

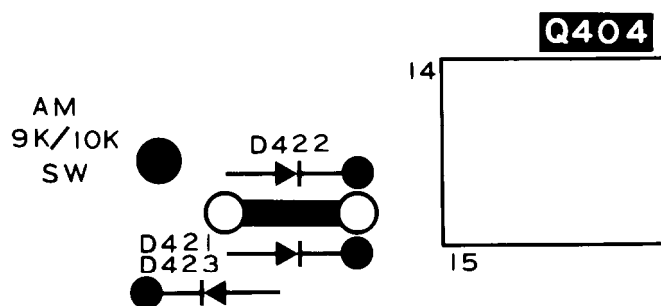
PRECAUTIONS

1. Change of AM band

When change the scan step of the AM band from 10 kHz to 9 kHz, add the silicon diode of D422 (1S1555) and jumper wire between pin nos. 16 and 25 of Q404 micro computer.

2. Handling precautions of CMOS IC

- All MOS devices should be stored or transported in materials that are somewhat conductive. MOS devices must not be inserted into conventional plastic "snow" or plastic trays.
- All MOS devices should be placed on a grounded bench surface and operators should ground themselves prior to handling devices, since a worker can be statically charged with respect to the bench surface.
- Nylon clothing should not be worn while handling MOS circuits.
- When lead straightening or hand soldering is necessary, provide ground straps for the apparatus used.
- Double check test equipment setup for proper polarity of voltage before conducting parametric or functional testing.
- All unused device inputs should be connected to V_{DD} or V_{SS} .



ALIGNMENT PROCEDURES

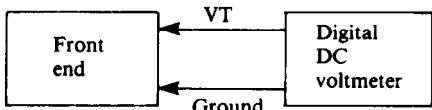
INSTRUMENTS REQUIRED

1. Stereo Modulator
2. FM Signal Generator with Frequency Counter
3. Frequency Counter
4. Digital DC Voltmeter
5. DC Voltmeter
6. Distortion Analyzer
7. AC Voltmeter
8. Oscilloscope

GENERAL ALIGNMENT CONDITION

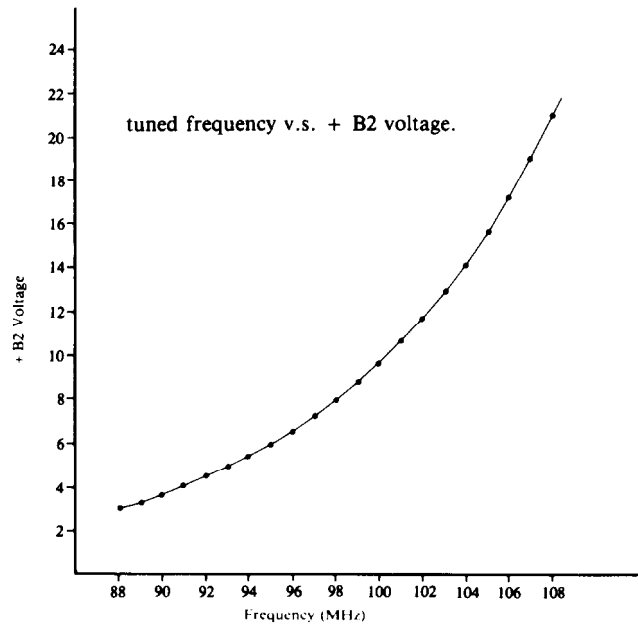
1. Standard modulation is 1 kHz 100% (FM MONO), pilot 9% sub and main 91%. (FM STEREO)
2. The switches and control should be set as follows unless otherwise specified.
 - IF band Wide
 - Auto Hi-blend Off
 - FM muting/Mode On/Stereo
 - De-emphasis Normal
 - Output level Maximum

1. Front end adjustment



| Step | Set to dial | Adjust | Output indicator | Adjust for |
|----------------------|-----------------------------------|-------------|----------------------|------------|
| FM adjustment | | | | |
| 1 | 88.1 MHz | L008 (LO) | Digital DC voltmeter | 3.03V |
| 2 | 107.9MHz | TC004 (TCO) | | 20.8V |
| 3 | Repeat steps 1 and 2 as necessary | | | |
| AM adjustment | | | | |
| 1 | 600 kHz | L302 | Digital DC voltmeter | 2.5V |
| 2 | 1400 kHz | C306 | | 15.5V |
| 3 | Repeat steps 1 and 2 as necessary | | | |

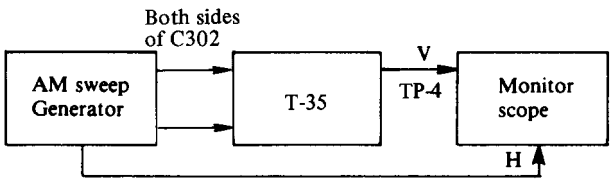
3.01
20.7



Remark : Usually not necessary to adjust.

2. AM IF adjustment

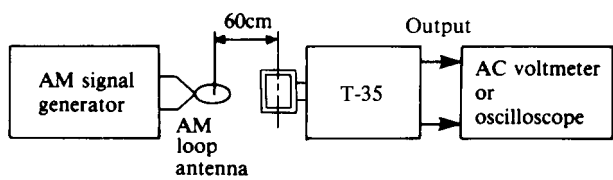
1. Set the dial to quiet point.



| Set signal | Adjust | Adjust for |
|------------|--------|--|
| 450. kHz | L303 | The output of monitor scope becomes maximum symmetrical response |

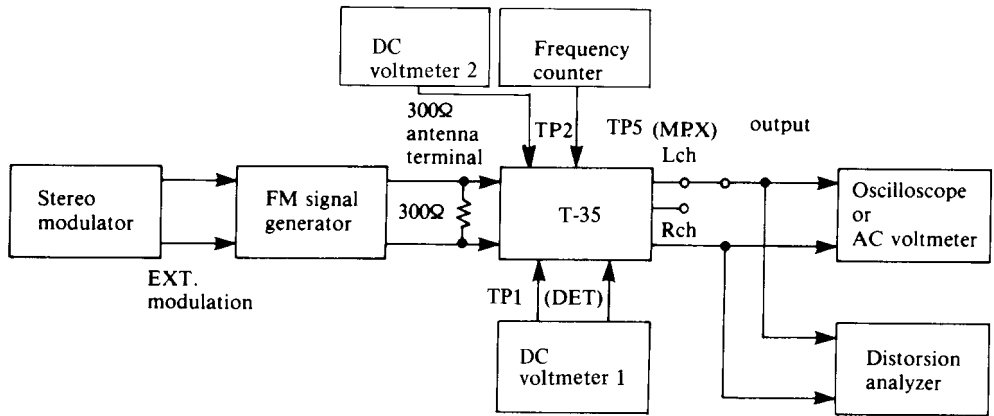
Remark : Usually not necessary to adjust.

3. AM RF adjustment

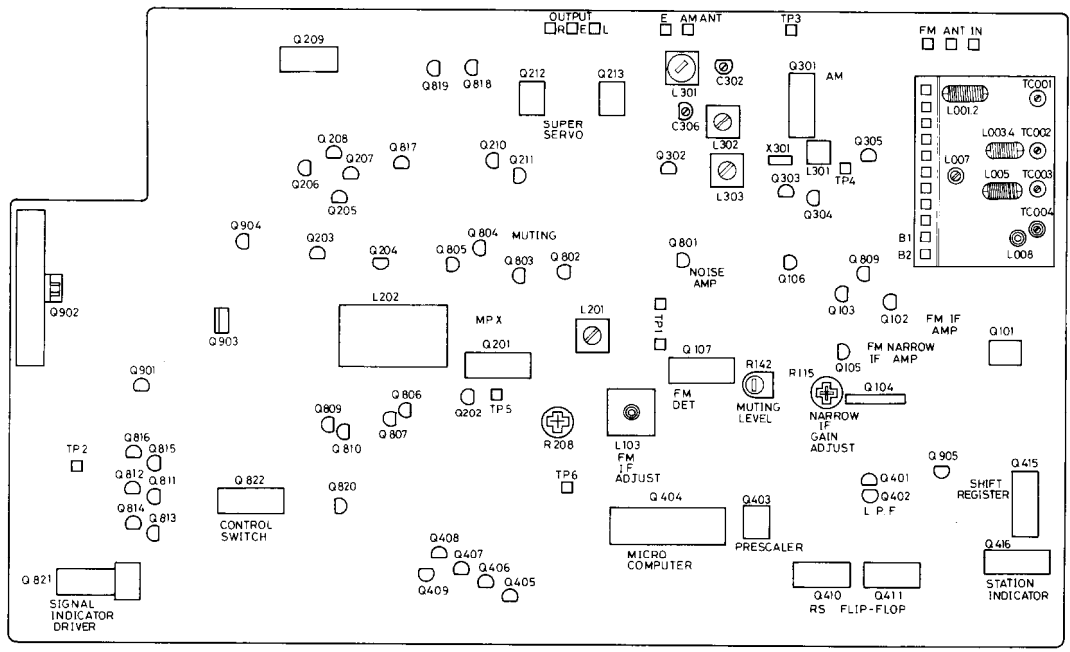


| | AM Signal generator | Dial to set | Adjust | Adjust for |
|----|-----------------------------------|-------------|--------|------------|
| 1 | 600kHz 400Hz, 30% mod. | 600kHz | L301 | Maximum |
| 2 | 1400kHz 400Hz, 30% mod. | 1400kHz | C302 | Maximum |
| 3. | Repeat steps 1 and 2 as necessary | | | |

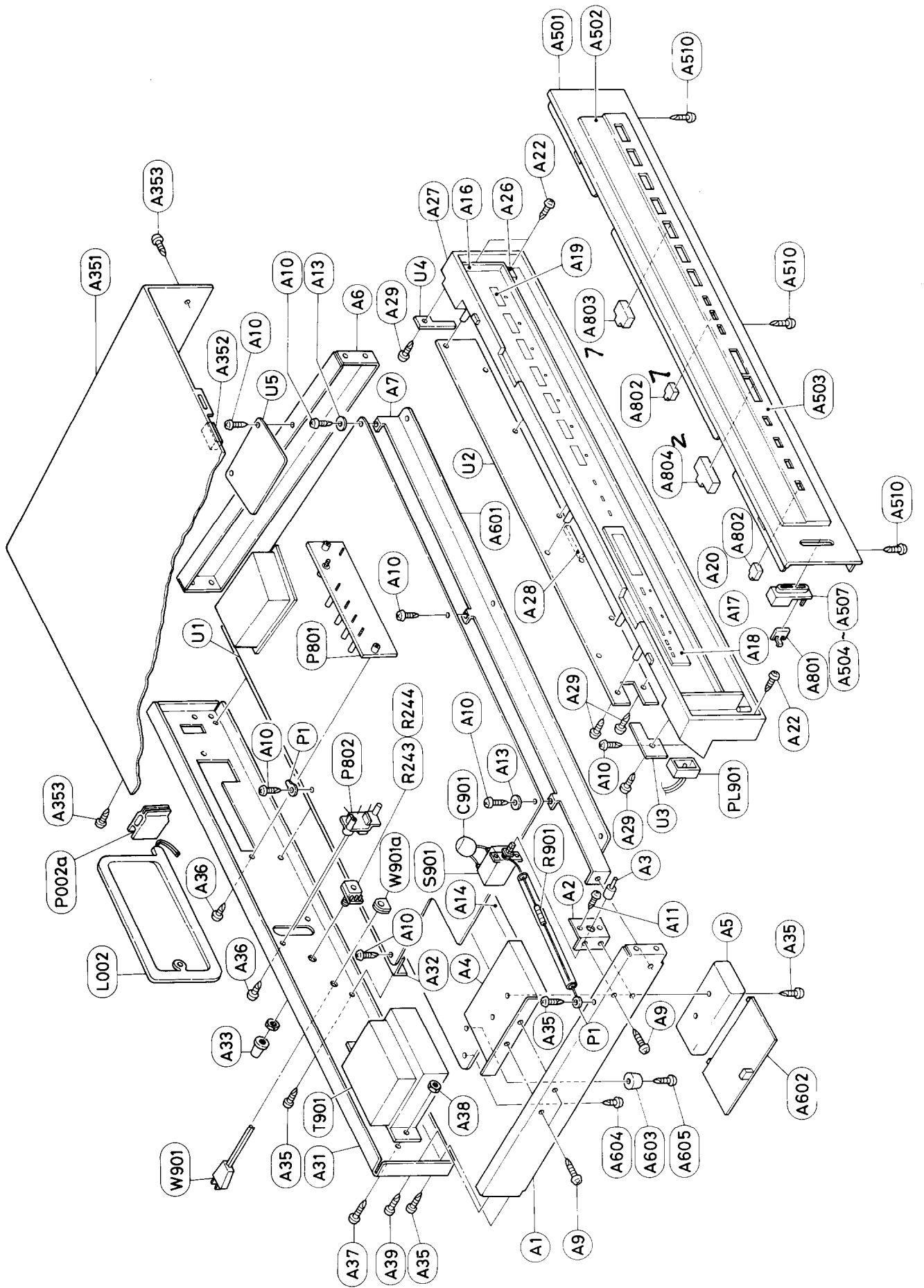
4. FM adjustment



| Item | FM signal generator | Stereo modulator | Dial to set | Adjust | Output indicator | Adjust for | Remarks |
|-------------------|--------------------------------------|-----------------------------------|-----------------|-----------------|---------------------|--|-----------------------------------|
| FM | 1 | _____ | No input signal | L103 Bottom | DC voltmeter | 0V | Repeat steps 1 and 2 as necessary |
| | 2 | 98.1MHz, 65dBf, 1kHz, 75kHz devi. | 98.1MHz | L103 upper L007 | Distorsion analyzer | Minimum | |
| V.C.O | 98.1MHz 65dBf | _____ | 98.1MHz | R208 | Frequency counter | 19kHz | Turn off the modulation |
| Stereo Separation | 98.1MHz 65dBf Ext. modulation | Rch | 98.1MHz | R256 | AC voltmeter (Lch) | Minimum | Maximum and same separation |
| | | Lch | | | AC voltmeter (Rch) | Minimum | |
| Muting level | 98.1MHz, 17dBf 1kHz, 75kHz devi. | _____ | 98.1MHz | R142 | Oscilloscope | Signal | |
| | 98.1MHz, 16dBf 1kHz, 75kHz devi. | _____ | | | | No signal | |
| IF Narrow level | 98.1 MHz, 35 dBf 1 kHz, 75 kHz devi. | _____ | 98.1MHz | R115 | DC Voltmeter 2 | The levels of narrow and wide positions become same. | |

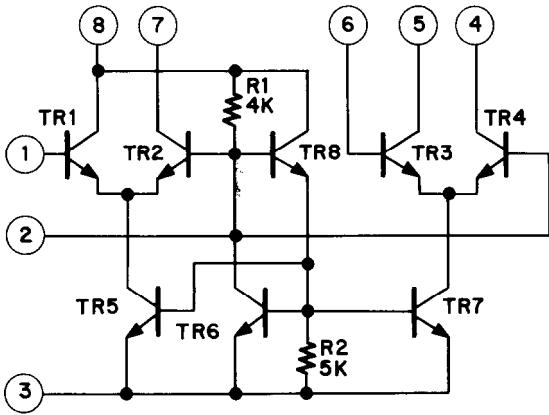


EXPLODED VIEW

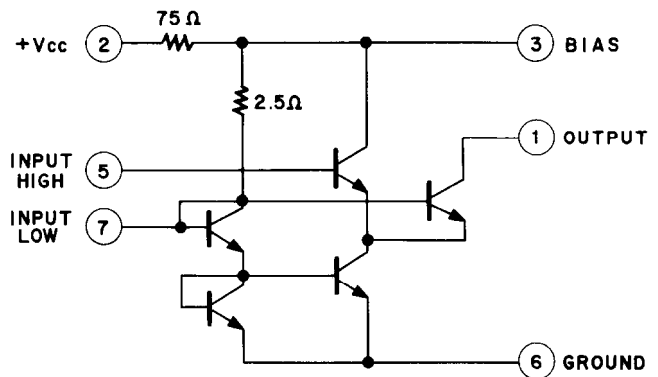


BLOCK DIAGRAM OF IC

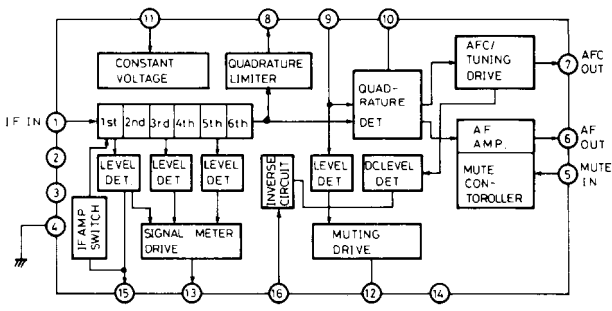
LA1222 (IF ampli.)



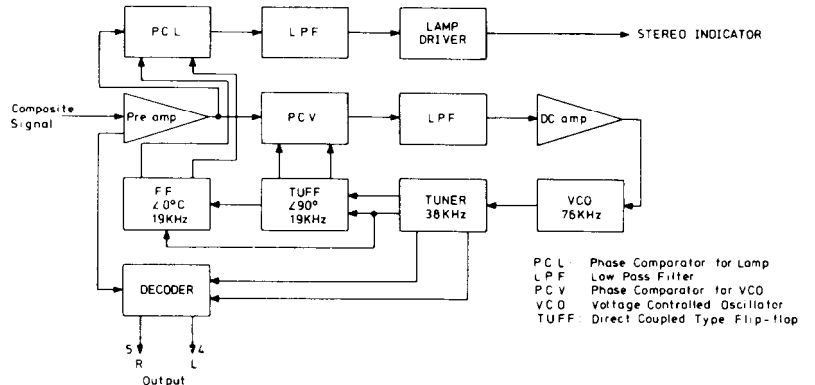
μPC555H (IF ampli.)



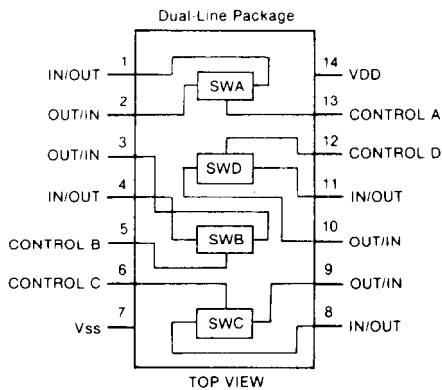
HA11225 (FM IF system)



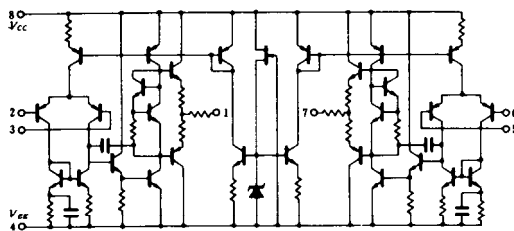
HA1156W (Stereo decoder)



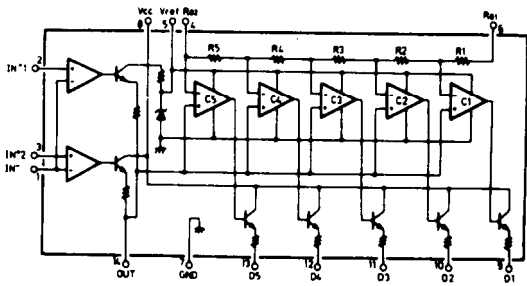
TC4066B (Quad bilateral switch)



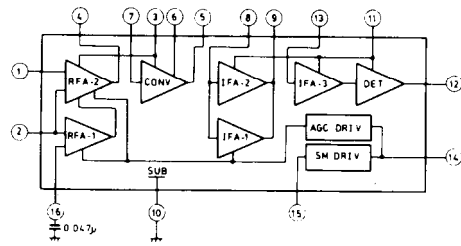
NDM4558DX (Super servo ampli.)



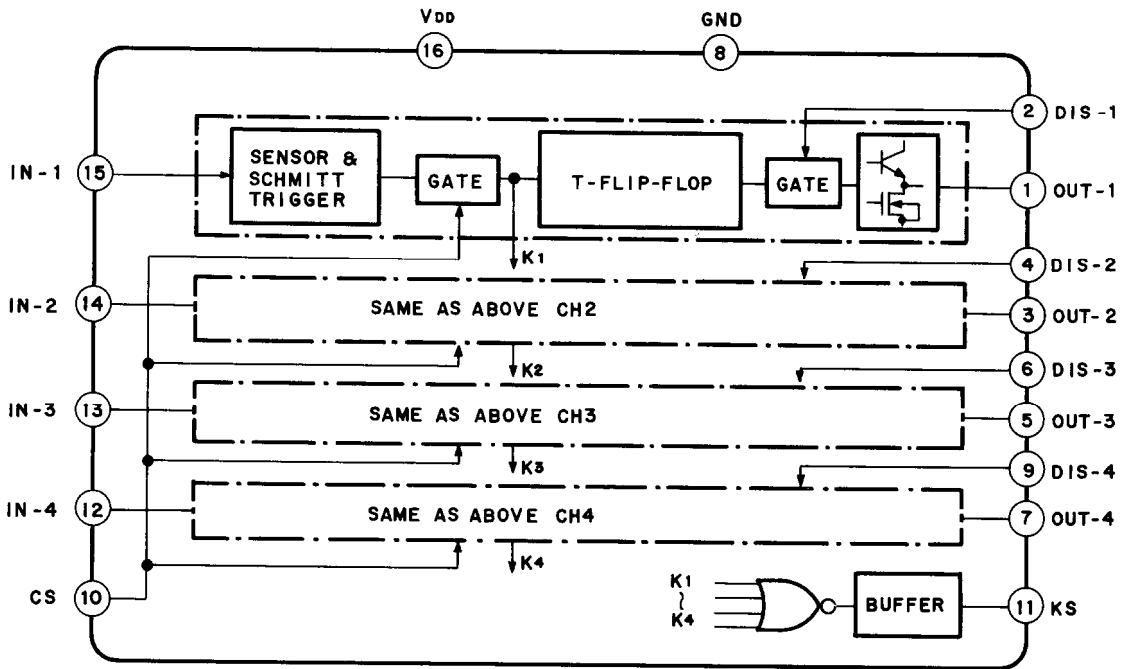
LB1426 (Signal indicator drive)



LA1240 (AM radio system)

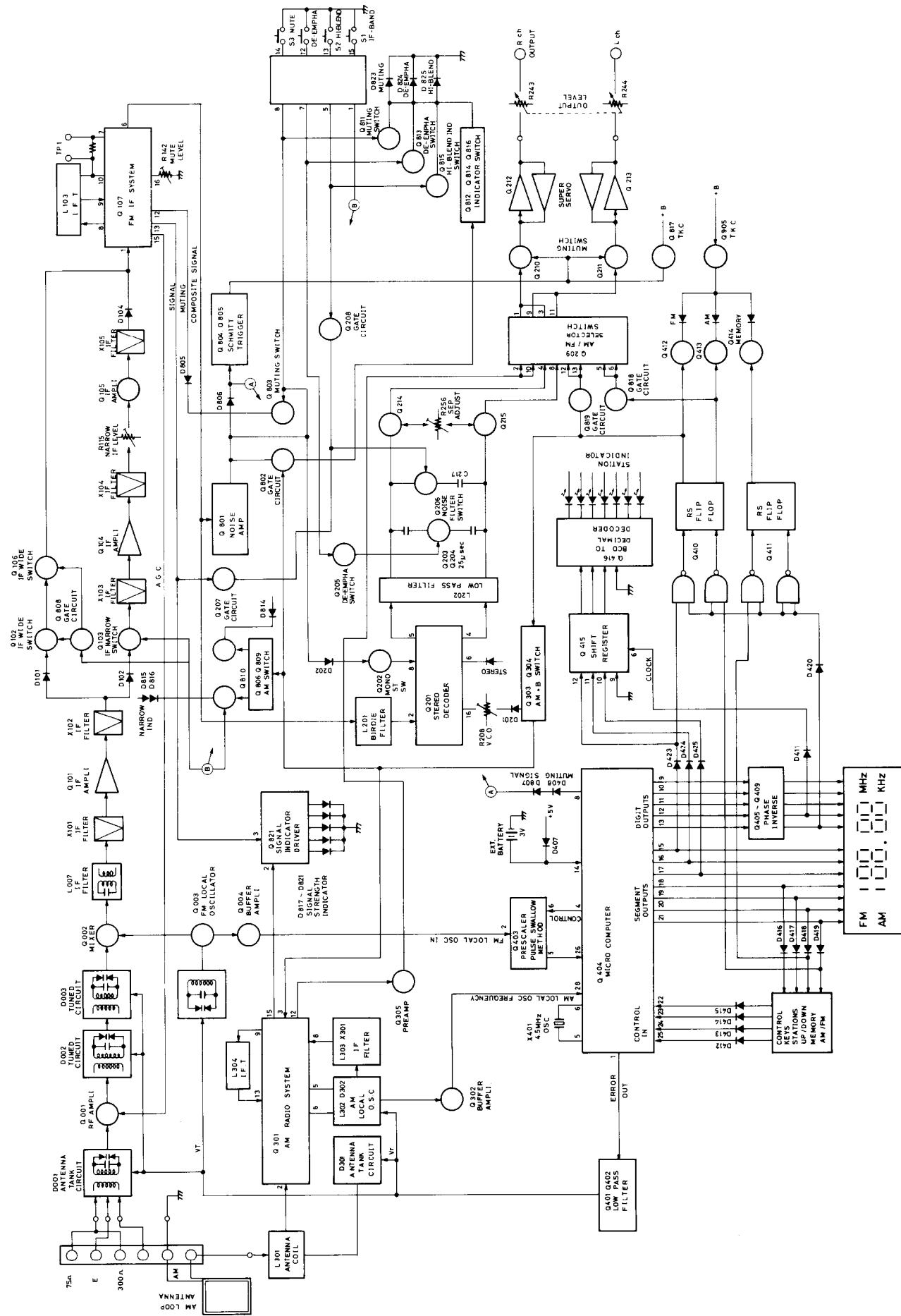


TC9130P

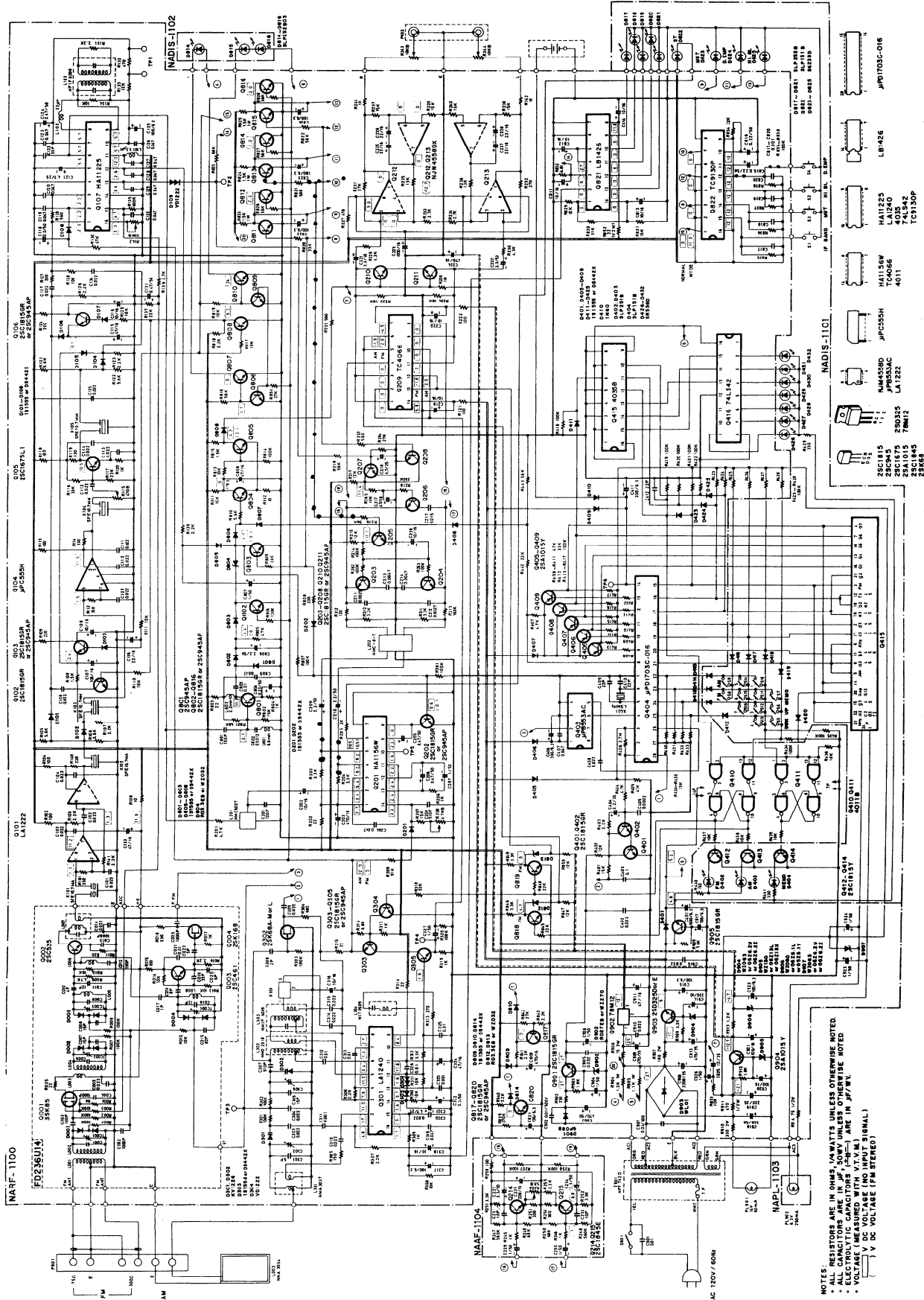


| Pin nos. | Mark | Terminal | Descriptions |
|---------------|--------------------|------------------|---|
| 15 12 | IN-1 IN4 | Input signal | When the supply voltage of this terminal changes from the high level to low level, the output terminal does the inversion. |
| 1, 3 5, 7 | OUT-1 OUT4 | Output | |
| 2, 4 6, 9 | DIS-1 DIS4 | Output forbidden | When this terminal does the low level, the output becomes the low level. |
| 10 | CS | Input forbidden | When this terminal does the low level, the acceptions of input terminals are forbidden. And the flip-flop of inner holds the before condition. |
| 11 | KS | Input detector | When the input terminal becomes the low level, this terminal becomes the low level. |
| 16 | V _{DD} | Power supply | |
| 8 | GND | Ground | |

BLOCK DIAGRAM

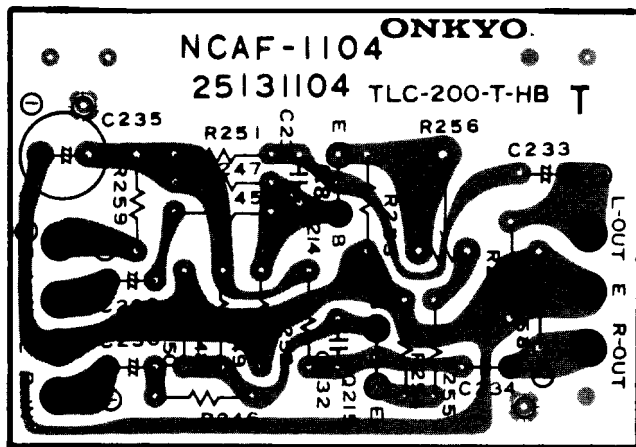


SCHEMATIC DIAGRAM



- NOTES:
- RESISTORS ARE IN OHMS, VAWATTS UNLESS OTHERWISE NOTED.
 - ALL CAPACITORS ARE IN μF UNLESS OTHERWISE NOTED.
 - VOLTAGE IS IN VOLTS UNLESS OTHERWISE NOTED.
 - V DC VOLTAGE (NO INPUT SIGNAL)
 - V AC VOLTAGE (PM WERED)

| | | | |
|---------|---------|---------|---------|
| 2SC1815 | 2SC1815 | 2SC1815 | 2SC1815 |
| 2SC945 | 2SC945 | 2SC945 | 2SC945 |
| 2SA1015 | 2SA1015 | 2SA1015 | 2SA1015 |
| 2SC1845 | 2SC1845 | 2SC1845 | 2SC1845 |
| 25M65 | 25M65 | 25M65 | 25M65 |
| LA124 | LA124 | LA124 | LA124 |
| LA240 | LA240 | LA240 | LA240 |
| LA1223 | LA1223 | LA1223 | LA1223 |
| LA1242 | LA1242 | LA1242 | LA1242 |
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| LA1298 | LA1298 | LA1298 | LA1298 |
| LA1299 | LA1299 | LA1299 | LA1299 |
| LA1300 | LA1300 | LA1300 | LA1300 |



PRINTED CIRCUIT BOARD – PARTS LIST

FM/AM TUNER PC BOARD (NARF-1100) – PARTS LIST

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|-------------|---------------------------------|--------------------------------------|
| | Front end | |
| | 240043 | FD236U14 |
| | ICs | |
| Q101 | 222577 | LA1222, FM IF ampli. |
| Q104 | 222591 | μPC555H, FM IF ampli. |
| Q107 | 222540 | HA11225, FM detector |
| Q201 | 222419 | HA1156W, Stereo decoder |
| Q209 | 222575 | TC4066BP, Analog switch |
| Q212, Q213 | 222502 | NJM-4558DX, Super servo ampli. |
| Q301 | 222497 | LA1240, AM radio system |
| Q403 | 222619 | μPB553AC, Prescler |
| Q404 | 222618 | μPD1703C-016, Micro computer |
| Q410, Q411 | 222840111 or 222513 | 4011B or TC4011BP, 2 input NAND gate |
| Q415 | 222840351 | 4035B, Shift register |
| Q416 | 222740421 | 74LS42, BCD to decimal decoder |
| Q821 | 222541 | LB1426, Signal meter driver |
| Q822 | 222625 | TC9130P, Control switch |
| Q902 | 222780122 | 78M12, Voltage regulator |
| | Transistors | |
| Q102 | 2211255 | 2SC1815 (GR) |
| Q103 | 2211255 or 2210746 | 2SC1815 (GR) or 2SC945A (P) |
| Q105 | 2210823 | 2SC1675 (L-1) |
| Q106 | 2211255 or 2210746 | 2SC1815 (GR) or 2SC945A (P) |
| Q202-Q208 | 2211255 or 2210746 | 2SC1815 (GR) or 2SC945A (P) |
| Q210, Q211 | 2211302 or 2211303 | 2SK68A (L) or 2SK68A (M) |
| Q303-Q305 | 2211255 or 2210746 | 2SC1815 (GR) or 2SC945A (P) |
| Q401, Q402 | 2211255 | 2SC1815 (GR) |
| Q405-Q409 | 2211454 | 2SA1015 (Y) |
| Q801 | 2210746 | 2SC945A (P) |
| Q802-Q820 | 2211255 or 2210746 | 2SC1815 (GR) or 2SC945A (P) |
| Q901 | 2211255 | 2SC1815 (GR) |
| Q903 | 2201034 or 2201035 | 2SD325 (D) or 2SD325 (E) |
| Q904 | 2211454 | 2SA1015 (Y) |
| Q905 | 2211255 | 2SC1815 (GR) |
| | Diodes | |
| D101-D108 | 223105 or 223133 | 1S1555 or DS442X |
| D201, D202 | 4000068 | VD1222 |
| D109 | 4000068 | VD1222 |
| D301, D302 | 223136 | KV1226 |
| | Coils & Transformers | |
| L101 | 233105 or 233024 | NCH1005 or NCCH1501 |
| L102 | 233144 | NCH-1020 |
| L103 | 233143A | NFIF-6008 |
| L201 | 233236 | NMC-6027 |
| L202 | 233032A | NMC-8-7 |
| L301 | 232089 | NMA3037 |
| L302 | 232084 | NMO-2018 |
| L303 | 232077 | NMIF-6009 |
| L304 | 232041 | NIT-0509 |
| L801 | 233122 | NCH-3013 |
| L802 | 233031 | NMC-9-1 |
| | Ceramic filters | |
| X101, X102 | 3010006 | SFE10.7MA |
| X103-X105 | 3010043 | SFE10.7MM |
| X301 | 3010049 | CFM2-450BL |
| | X'tal | |
| X401 | 3010052 | XTL-4.5M |
| | Capacitors | |
| C107 | 352741019 | 100μF, 16V, Elect. |
| C108 | 352741009 | 10μF, 16V, Elect. |
| C115 | 352744709 | 47μF, 16V, Elect. |
| C116 | 352741009 | 10μF, 16V, Elect. |
| C118 | 352780229 | 2.2μF, 50V, Elect. |
| C121 | 352750479 | 4.7μF, 25V, Elect. |
| C124 | 352784799 | 0.47μF, 50V, Elect. |
| C125 | 352721019 | 100μF, 6.3V, Elect. |
| C131 | 352784799 | 0.47μF, 50V, Elect. |
| C133 | 352744709 | 47μF, 16V, Elect. |
| C136 | 352742209 | 22μF, 16V, Elect. |
| C202 | 352741009 | 10μF, 16V, Elect. |
| C203 | 352744719 | 470μF, 16V, Elect. |
| C205, C206 | 352784799 | 0.47μF, 50V, Elect. |
| C207 | 352780109 | 1μF, 50V, Elect. |
| C208 | 372525114 | 510pF ± 5%, 50V, ST |
| C209, C210 | 352780229 | 2.2μF, 50V, Elect. |
| C218 | 352750479 | 4.7μF, 25V, Elect. |
| C219, C220 | 352741009 | 10μF, 16V, Elect. |
| C221, C222 | 352780339 | 3.3μF, 50V, Elect. |
| C223 | 352741029 | 1,000μF, 16V, Elect. |
| C224 | 352744719 | 470μF, 16V, Elect. |
| C225-C228 | 352742209 | 22μF, 16V, Elect. |
| C236 | 352741009 | 10μF, 16V, Elect. |
| C237 | 352744709 | 47μF, 16V, Elect. |
| C302, C306 | 3060010 | NTC-20P-09, Trimmer |
| C307 | 372525114 | 510pF ± 5%, 50V, ST |
| C316 | 352741009 | 10μF, 16V, Elect. |
| C317 | 352721019 | 100μF, 6.3V, Elect. |
| C318 | 352741009 | 10μF, 16V, Elect. |
| C321 | 352750479 | 4.7μF, 25V, Elect. |

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|------------------|-----------|---|
| C322 | 352780339 | 3.3 μ F, 50V, Elect. |
| C324 | 352744709 | 47 μ F, 16V, Elect. |
| C327 | 352780109 | 1 μ F, 50V, Elect. |
| C401 | 352721029 | 1,000 μ F, 6.3V, Elect. |
| C404 | 395160227 | 2.2 μ F, 35V, Tantalum |
| C406 | 352723319 | 330 μ F, 6.3V, Elect. |
| C411 | 352723319 | 330 μ F, 6.3V, Elect. |
| C804 | 352783399 | 0.33 μ F, 50V, Elect. |
| C806 | 352780229 | 2.2 μ F, 50V, Elect. |
| C807 | 352780109 | 1 μ F, 50V, Elect. |
| C808 | 352744709 | 47 μ F, 16V, Elect. |
| C809 | 352744719 | 470 μ F, 16V, Elect. |
| C811–C814 | 352741009 | 10 μ F, 16V, Elect. |
| C815, C816 | 352782299 | 0.22 μ F, 50V, Elect. |
| C821–C824 | 352721019 | 100 μ F, 6.3V, Elect. |
| C825 | 352751009 | 10 μ F, 25V, Elect. |
| C826 | 352780109 | 1 μ F, 50V, Elect. |
| C903 | 352784719 | 470 μ V, 50V, Elect. |
| C904, C906 | 352780109 | 1 μ F, 50V, Elect. |
| C908 | 352762229 | 2,200 μ F, 35V, Elect. |
| C909 | 352764719 | 470 μ F, 35V, Elect. |
| C911 | 352744709 | 47 μ F, 16V, Elect. |
| C913 | 352764719 | 470 μ F, 35V, Elect. |
| C914 | 352733319 | 330 μ F, 10V, Elect. |
| C915, C917 | 352721019 | 100 μ F, 6.3V, Elect. |
| C918 | 352783319 | 330 μ F, 50V, Elect. |
| C919 | 352762219 | 220 μ F, 35V, Elect. |
| C920, C921 | 352741019 | 100 μ F, 16V, Elect. |
| C922 | 352721019 | 100 μ F, 6.3V, Elect. |
| C923, C924 | 352780109 | 1 μ F, 50V, Elect. |
| Resistors | | |
| R115 | 5225026 | N10HR470BD, Semi-fixed, narrow IF level |
| R142 | 5215003 | N08HR20KBC, Semi-fixed, Muting level |
| R208 | 5225019 | N10HR4.7KBD, Semi-fixed, V.C.O. |
| R823–R825 | 441621524 | 1.5k Ω , 1W, Metal oxide film |
| R852 | 431522205 | 22 Ω , 1/2W, Solid |
| R904 | 441621224 | 1.2k Ω , 1W, Metal oxide film |
| R905 | 441621124 | 1.1k Ω , 1W, Metal oxide film |
| R906 | 441721504 | 15 Ω , 2W, Metal oxide film |
| R907 | 441721814 | 180 Ω , 2W, Metal oxide film |
| R910 | 441723314 | 330 Ω , 2W, Metal oxide film |
| R911 | 441524714 | 470 Ω , 1/2W, Metal oxide film |
| R914 | 441527504 | 75 Ω , 1/2W, Metal oxide film |
| Lamp | | |
| PL901 | 210083 | PL14V0.06AW-3 |

INDICATOR PC BOARD (NADIS-1101) – PARTS LIST

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|-------------------------|------------------|------------------|
| Transistors | | |
| Q412–Q414 | 2211254 | 2SC1815 (Y) |
| Fluorescent tube | | |
| Q415 | 212010 | 7-BT-05A2 |
| Diodes | | |
| D412–D420 | 223105 or 223133 | 1S1555 or DS442X |
| L.E.Ds | | |
| D402, D403 | 225047 | SLP251B |
| D404 | 225046 | SLP151B |
| D426–D432 | 225057 | SR538D |
| D817–D821 | 225063 | SLP-252B |
| D822 | 225046 | SLP-151B |
| D823–D825 | 225062 | SG238D |
| Switches | | |
| S1–S16 | 25035156 | NPS-111-S120 |

IF BAND INDICATOR PC BOARD (NADIS-1102) – PARTS LIST

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|-------------|-----------|-------------|
| D814–D816 | 225083 | SLP-252B-03 |

LAMP PC BOARD (NAPL-1103) – PARTS LIST

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|-------------|-----------|---------------------|
| PL902 | 210054B | PL6.3V, 250mA, Lamp |

AF AMPLIFIER PC BOARD (NAAF-1104) – PARTS LIST

| CIRCUIT NO. | PARTS NO. | DESCRIPTION |
|--------------------|-----------|--------------------------|
| Transistors | | |
| Q214, Q215 | 2211733 | 2SC1845 (E) |
| Capacitors | | |
| C229, C230 | 352780109 | 1 μ F, 50V, Elect. |
| C233, C234 | 352780339 | 3.3 μ F, 50V, Elect. |
| C235 | 352742219 | 220 μ F, 16V, Elect. |
| Resistor | | |
| R256 | 5215045 | N08HR10KBC, Semi-fixed |

PARTS LIST

| SYMBOL NO. | PARTS NO. | DESCRIPTION | SYMBOL NO. | PARTS NO. | DESCRIPTION |
|------------|-----------|--------------------------------------|------------|-----------|---|
| A1 | 27115087 | Side bracket, left side | A504 | 27267087 | Guide, power |
| A2 | 27140448 | Switch bracket | A505 | 28198541A | Facet |
| A3 | 27260046 | Shaft | A506 | 27300354 | Filter |
| A4 | 27140461 | Bracket, battery | A507 | 28199019A | Film |
| A5 | 27300360 | Case, battery | A510 | 833130100 | 3TTW+10P, Tap screw |
| A6 | 27115045E | Side bracket, right side | A601 | 27170103 | Bottom board |
| A7 | 27140499 | Bracket, pc board, front side | A602 | 27300359 | Lid |
| A8 | 28140356 | Cushion | A603 | 27175018 | Leg |
| A9 | 838130068 | 3TTP+6B, Tap screw | A604 | 831130088 | 3TTW+8B, Tap screw |
| A10 | 831130088 | 3TTW+8B, Tap screw | A605 | 834130128 | 3TTS+12B, Tap screw |
| A11 | 82113006 | 3P+6FN, Pan head screw | A801 | 28320485 | Knob, power |
| A13 | 870072 | Washer | A802 | 28320501 | Knob, push |
| A14 | 28140188 | Cushion | A803 | 28320502 | Knob, station |
| A16 | 28133047 | Back plate | A804 | 28320503 | Knob, up/down |
| A17 | 27267108 | Guide, L.E.D. | C901 | 3500060 | 0.01 μ F, 125V, CS capacitor |
| A18 | 28130111 | Dial plate | L002 | 232085 | NMA-3034, AM loop antenna |
| A19 | 28191083 | Clear plate | P1 | 223004 | Terminal |
| A20 | 28191082 | Clear plate | P801 | 25060045 | NTM4PRMN14, Antenna terminal |
| A22 | 834130088 | 3TTS+8B, Tap screw | P002a | 27190105 | Holder, am loop antenna |
| A26 | 28140333 | Cushion | P802 | 25045026 | NPJ-2PR-BL04, Output terminal |
| A27 | 27110133 | Front bracket | R901 | 431523355 | 3.3M Ω , 1/4W, Solid resistor |
| A28 | 28140300 | Cushion | R243, R244 | 5147012 | N16RG10KB15, Output control variable resistor |
| A29 | 833130080 | 3TTP+8P, Tap screw | S901 | 25035135 | NPS-111-L100P, Power switch |
| A31 | 27120299 | Back panel | T901 | 230493 | NPT-742D, Power transformer |
| A32 | 27140500 | Bracket, pc board, back side | U1 | 13409500 | NARF-1100, FM/AM tuner and digital circuit pc board ass'y |
| A33 | 28320540 | Knob, output level control | U2 | 13409501 | NADIS-1101, Indicator pc board ass'y |
| A35 | 834130068 | 3TTS+6B, Tap screw | U3 | 13409502 | NADIS-1102, Indicator pc board ass'y |
| A36 | 834130108 | 3TTS+10B, Tap screw | U4 | 13409503 | NAPL-1103, Lamp pc board ass'y |
| A37 | 82114008 | 4P+8FN, Pan head screw | U5 | 13409504 | NAAF-1104, AF amplifier pc board ass'y |
| A38 | 86414010 | FWN4 \times 10FN, Nut | W901 | 253099A | AS-UC-3, Power supply cable |
| A39 | 834230108 | 3TTS+10B (ni), Tap screw | W901a | 270025 | SR-3P-4, Strainrelief |
| A351 | 28184104 | Top cover | | | |
| A352 | 28140020 | 4 \times 10 \times 40mm, Cushion | | | |
| A353 | 834430068 | 3TTS+6B (BC), Tap screw | | | |
| A501 | 13409121 | Front panel ass'y | | | |
| A502 | 28191084 | Clear plate | | | |
| A503 | 27262095 | Plate | | | |

DISASSEMBLING PROCEDURES

1. Removal of front panel

1. Remove the four screws (A353) holding the side bracket and the top cover.
2. Remove a screw (A353) holding the top cover and back panel.
3. Remove the three screws (A510) holding the front panel and front bracket from bottom side.
4. Insert the driver between the front panel and front bracket as shown in the fig. 1, and remove the front panel from the projection of the front bracket.

2. Removal of the digital pc board

1. Remove the top cover and the front panel.
2. Remove the three screws (A22) holding the front bracket and digital pc board from the front side.
3. Remove the nine screws (A29) holding the digital pc board and the front bracket.

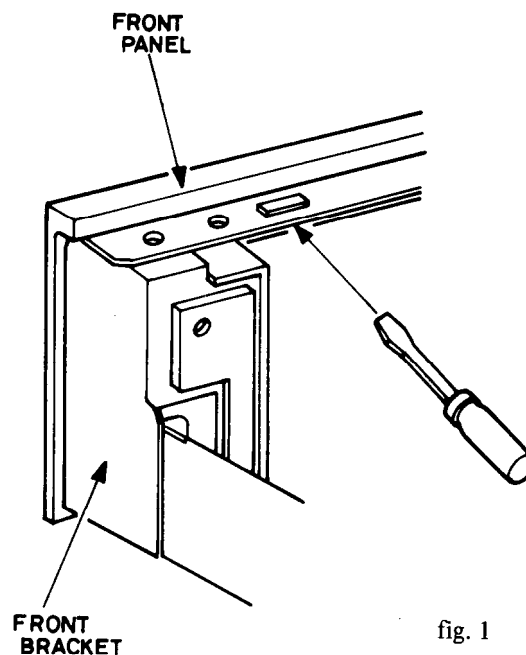
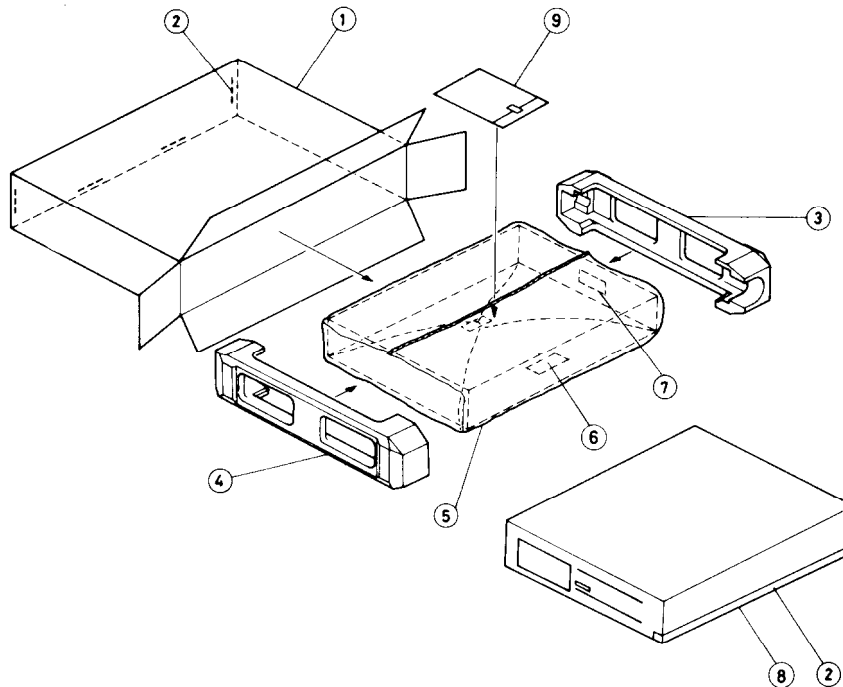


fig. 1

PACKING PROCEDURES



| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--------------------------------|
| 1 | 29050448 | Master carton box |
| 2 | 282301 | Sealing hook |
| 3 | 29090533B | Pad (R) |
| 4 | 29090532A | Pad (L) |
| 5 | 29100051 | 420x750mm, Poly bag |
| 6 | 29360363 | Caution label (C)* |
| 7 | 29360378 | Label* |
| 8 | 260012 | Damplon tape |
| 9 | | Accessory bag ass'y |
| | 29340505 | Instruction manual |
| | 28365006 | Warranty card* |
| | 29358002 | Service station list* |
| | 292064A | 5059-01, FM antenna |
| | 29100006 | 250x350mm, Poly bag |
| | 3010054 | Battery |
| | 29100002A | 80x150mm, Poly bag for battery |
| | 253074 | Connection cable |

* : Only U.S.A. model.

ONKYO CORPORATION

International Division: No. 24 Mori Bldg., 23-5, 3-chome, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
 Telex: 2423551 ONKYO J. Phone: 03-432-6981

ONKYO U.S.A. CORPORATION

Eastern Office

42-07 20th Avenue, Long Island City, New York 11105, U.S.A. Phone: (212) 728-4639

Midwest Office

935 Sivert Drive, Wooddale, Illinois 60191, U.S.A. Phone: (312) 595-2970

C/O Damark Industries, Inc.

20520 Nordhoff Chatsworth, Cal. 91311, U.S.A. Phone: (213) 998-6501

ONKYO DEUTSCHLAND GMBH, ELECTRONICS

8034 München-Germering, Industriestrasse 18, West Germany. Telex: 521726 Telefon: (089)-843071