

ONKYO SERVICE MANUAL

STEREO CASSETTE TAPE DECK MODEL TA-207

Black and Silver model

| | |
|--------------|--------------------------|
| UND, UDC, UD | 120V AC, 60Hz |
| UP | 230V AC, 50Hz |
| UW | 120V or 220V AC, 50/60Hz |
| UQA | 240V AC, 50Hz |

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

SPECIFICATIONS

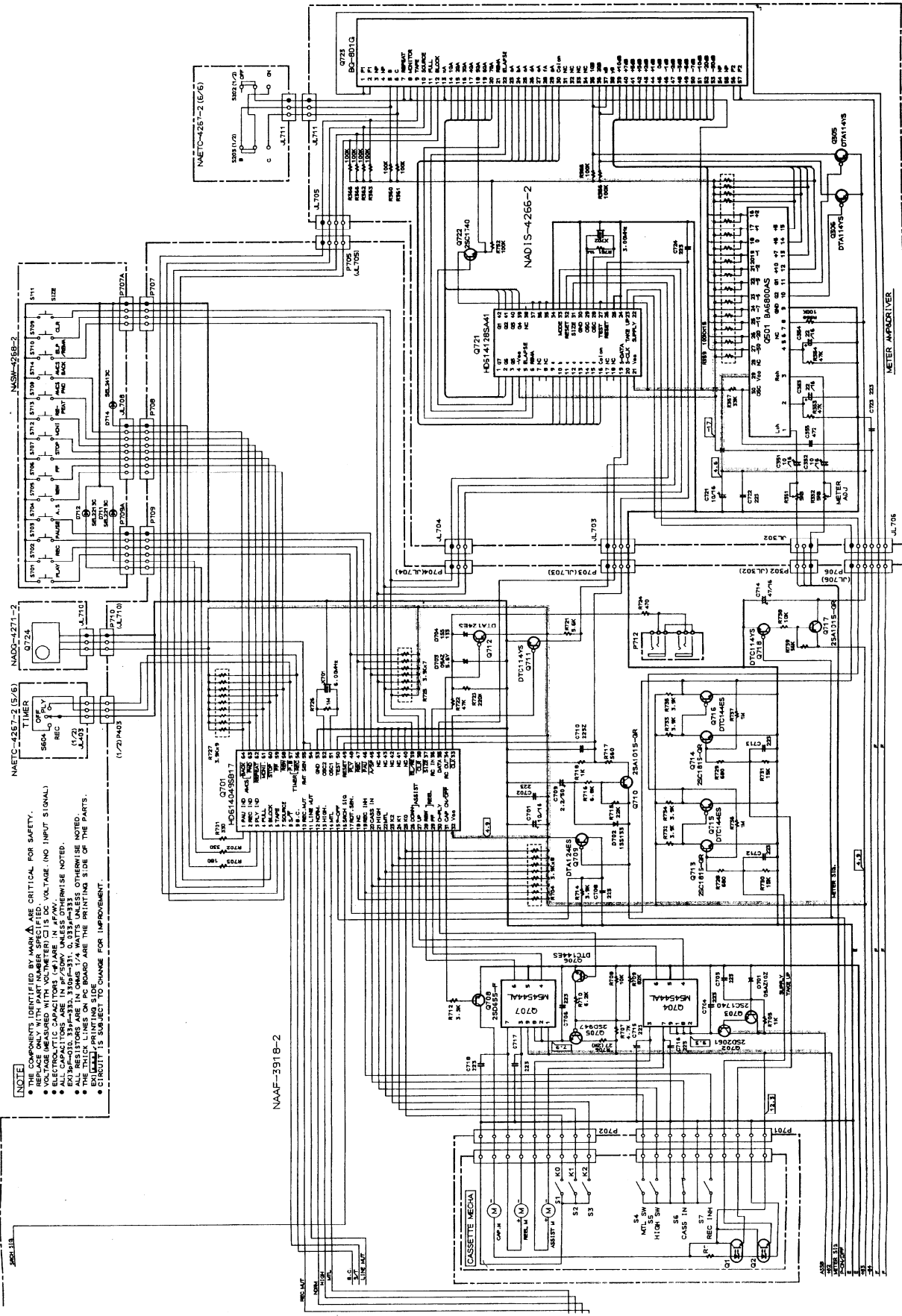
| | |
|---------------------|--|
| Track Format: | 4-tracks, 2-channels |
| Erasing System: | AC erase |
| Tape Speed: | 4.8 cm/sec. (1-7/8 i.p.s.) |
| Wow and Flutter: | 0.04% (WRMS) |
| Frequency Response: | 20 – 18,000Hz (Normal) (30 – 17,000Hz \pm 3dB) 20 – 19,000Hz (High) (30 – 18,000Hz \pm 3dB) 20 – 20,000Hz (Metal) (30 – 19,000Hz \pm 3dB) |

| | |
|-----------------------|---|
| S/N Ratio: | 60dB (metal tape, Dolby NR off) A noise reduction of 10dB above 5kHz and 5dB at 1kHz is possible with Dolby B NR. A noise reduction of 20dB at 5kHz is possible with Dolby C NR. |
| Input Jacks: | LINE IN: 2 Input sensitivity: 80mV Input impedance: 50kohms |
| Outputs: | LINE OUT: 2 Standard output level: 500mV (0dB) Optimum load impedance: over 50 kohms Headphone jack: 1 Optimum load impedance: 8 to 200 ohms |
| Motors: | DC servo motor: 1 DC motor: 2 |
| Heads: | REC/PB: Special Hard Permalloy x 2 Erase head: Ferrite x 1 |
| Power Supply Rating: | U.K. and Australian models: AC 240V, 50Hz U.S.A. and Canadian models: AC 120V, 60Hz Worldwide models: AC 120V and 220V switchable, 50/60Hz |
| Power Consumption: | 25 watts |
| Dimensions: | 455(W) x 131(H) x 368(D)mm (17-15/16" x 5-3/16" x 14-1/2") |
| Weight: | 6.8 kg. (15 lbs.) |
| Supplied Accessories: | Connecting cable x 2 RC-214K remote control transmitter UM-4/R03/AAA battery x 2 |

Specifications and external appearance are subject to change without notice because of product improvements.



SCHEMATIC DIAGRAM (2/2)



NOTE

- THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY.
- RESISTORS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY.
- VOLTAGE MEASURED WITH VOLTMETER \square IS DC VOLTAGE (NO INPUT SIGNAL).
- ELECTROLYTIC CAPACITORS \square ARE IN μ F/WV (UNLESS NOTED).
- EX/3P=010, 33P=33, 330P=331, 0.033P=333.
- THE RESISTORS ARE IN OHMS, UNLESS OTHERWISE NOTED.
- THE CAPACITORS ARE IN PICO FARADS, UNLESS OTHERWISE NOTED.
- EXAMINE PRINTING SIDE AND REVERSE SIDE OF THE PARTS.
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

NAAF-3918-2

NAETC-4257-2 (S/6)

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NAETC-4257-2 (E/6)

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SCHEMATIC DIAGRAM (1/2)

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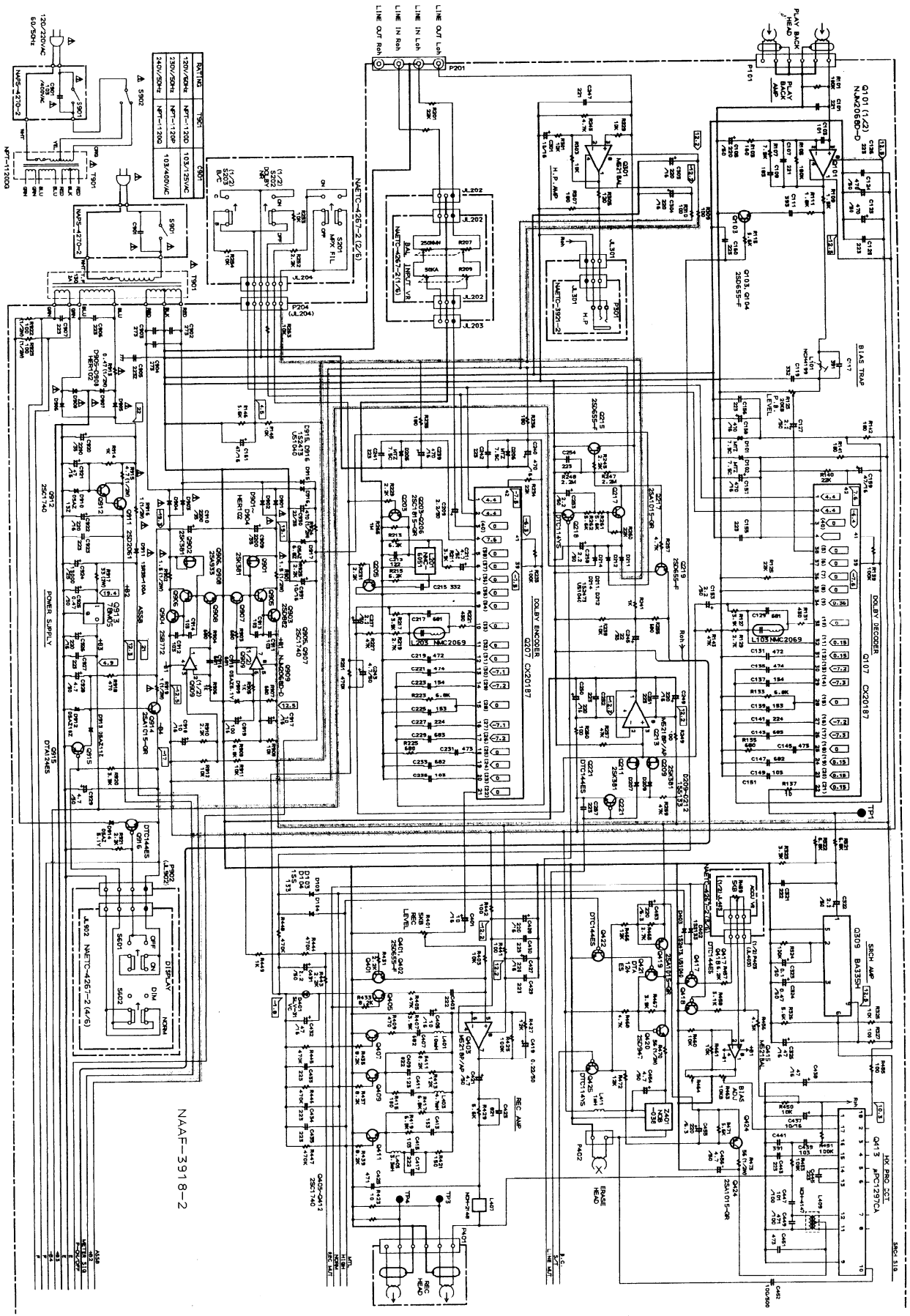
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NAAF-3918-2

ONKYO CORPORATION

5

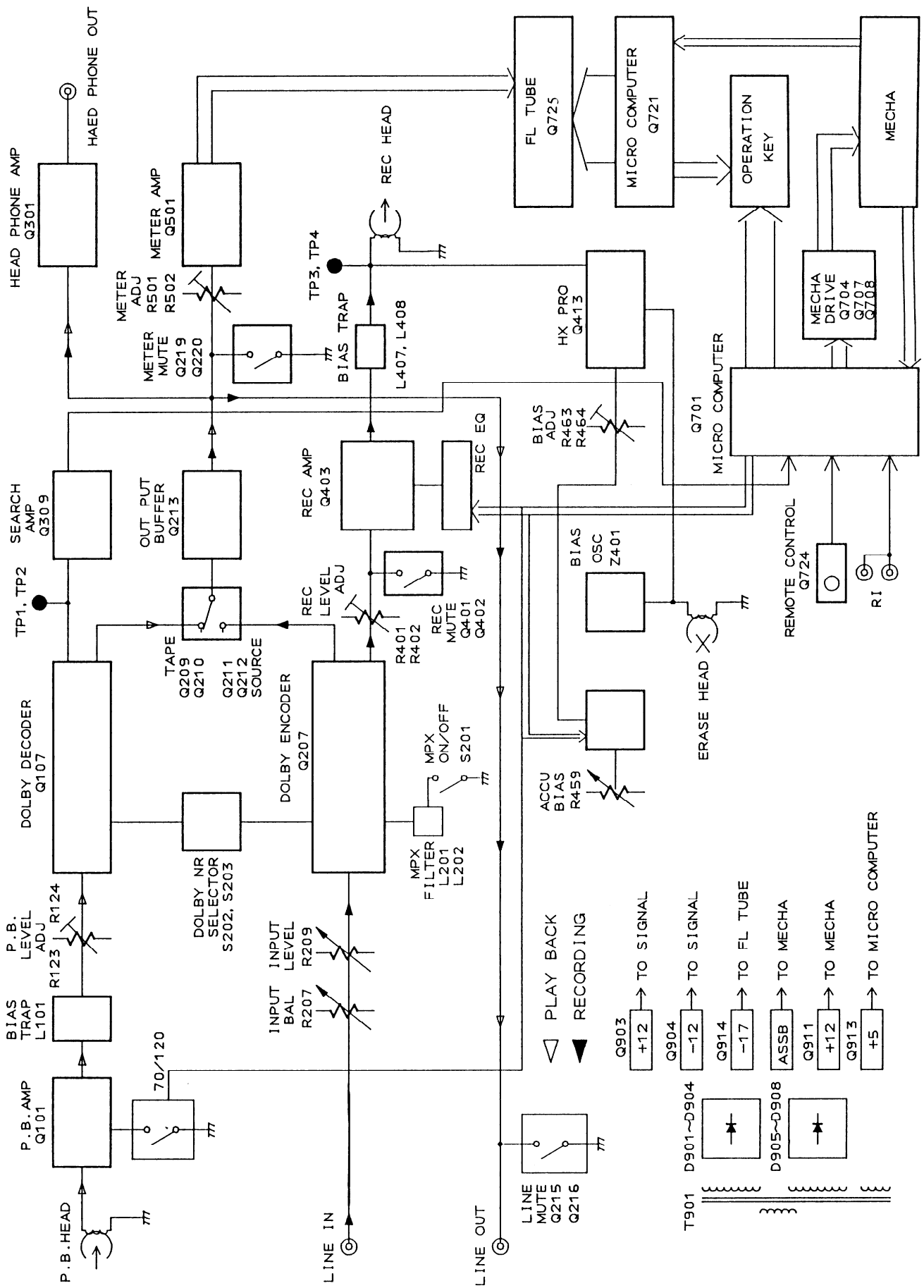
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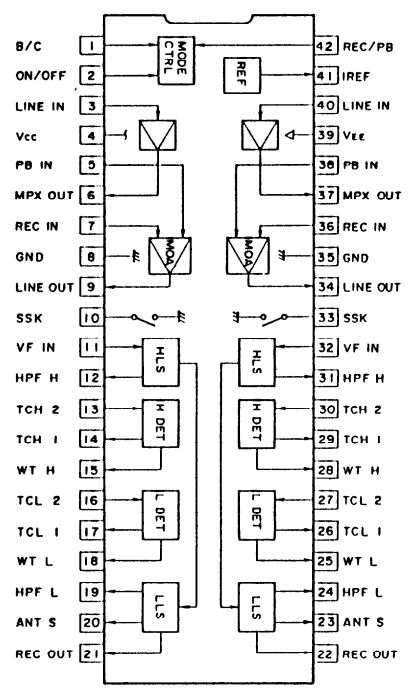
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BLOCK DIAGRAM

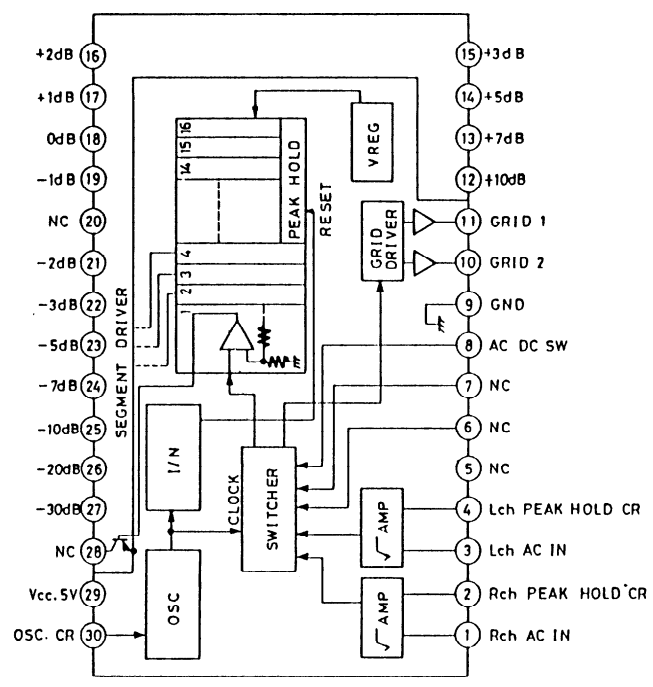


IC BLOCK DIAGRAM

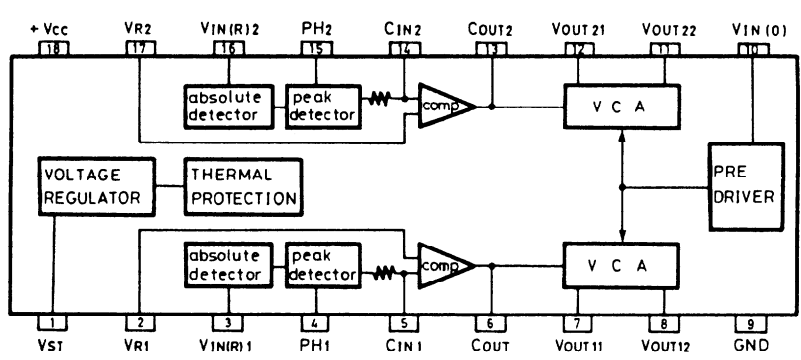
CX20187 (DOLBY NR)



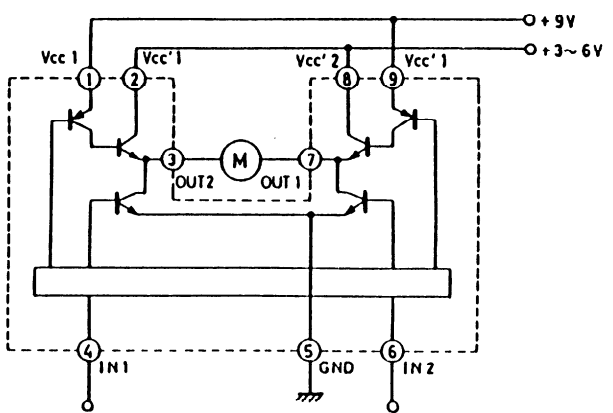
BA6800AS (METER DRIVE)



μPC1297CA (HX PRO)



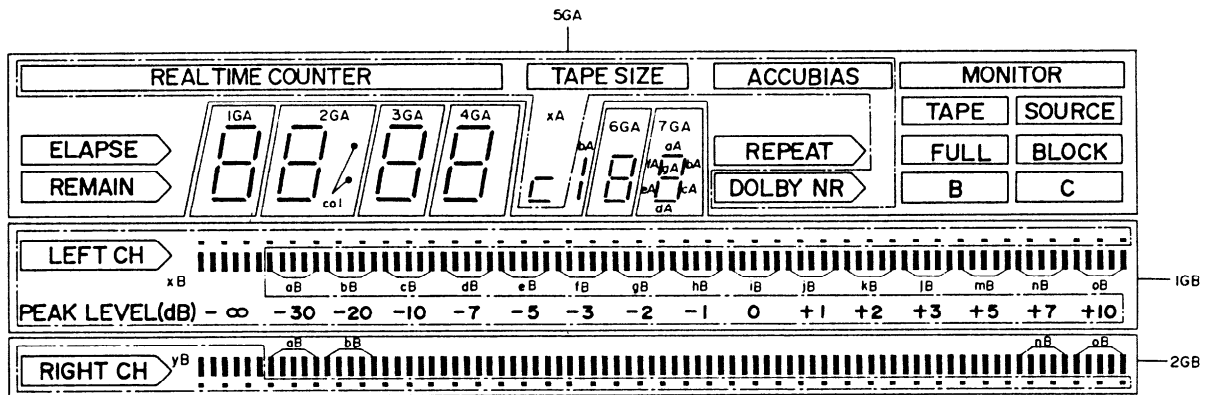
M54544AL (MOTOR DRIVE)



| INPUT | | OUTPUT | | Remark |
|-------|-----|--------|-----|--------|
| # 4 | # 6 | # 3 | # 7 | |
| L | L | OFF | OFF | — |
| H | L | H | L | FWD |
| L | H | L | H | REV |
| H | H | L | L | Brake |

BG-801G (DISPLAY TUBE)

GRID ASSIGNMENT



PIN CONNECTION

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|----|----|----|----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| PIN NO. | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| CONNECTION | nB | oB | yB | xB | 2GB | 1GB | N | N | N | N | hA | gA | fA | eA | dA | cA | bA | aA | jA | iA | 7GA | 6GA | 5GA | 4GA | 3GA | 2GA | 1GA | x | p | o | n | m | ℓ | k | r | q | N | N | F | F |

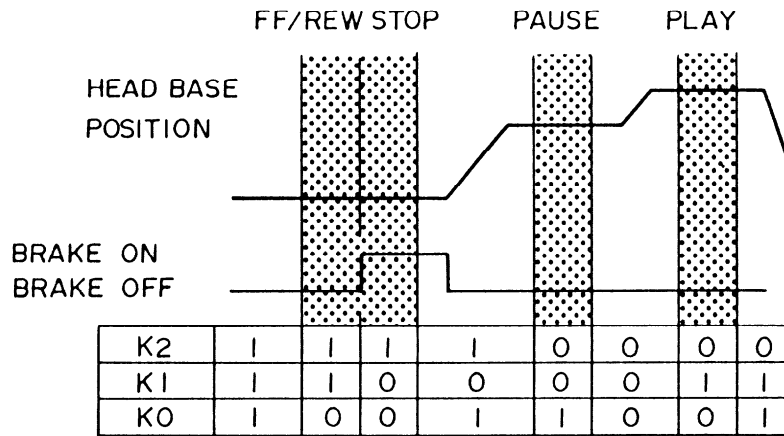
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|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| PIN NO. | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 |
| CONNECTION | F2 | F2 | NP | NP | aB | bB | cB | dB | eB | fB | gB | hB | iB | jB | kB | ℓB | mB |

- Note 1.)NP.....No pin.
 2.)NC.....No connection
 3.)F1,F2.....Filament
 4.)1GA~7GA.....Grid
 5.)1GB~2GB.....Grid

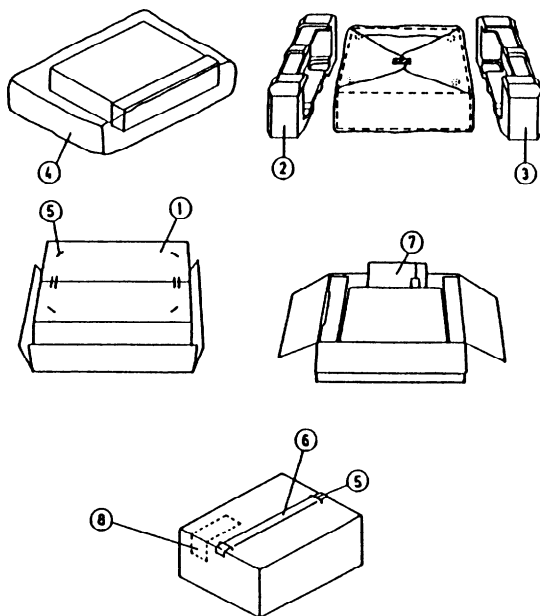
ANODE CONNECTION

| | 1GA | 2GA | 3GA | 4GA | 5GA | 6GA | 7GA | | 1GB | 2GB |
|----|-----|-----|-----|-----|-------------------|-----|-----|-----------------------|-----|-----|
| aA | aA | aA | aA | aA | - | aA | aA | aB | | |
| bA | bA | bA | bA | bA | / | bA | bA | bB | | |
| cA | cA | cA | cA | cA | - | cA | cA | cB | | |
| dA | dA | dA | dA | dA | - | dA | dA | dB | | |
| eA | eA | eA | eA | eA | - | eA | eA | eB | | |
| fA | fA | fA | fA | fA | - | fA | fA | fB | | |
| gA | gA | gA | gA | gA | - | gA | gA | gB | | |
| hA | - | col | - | - | - | - | - | hB | | |
| iA | - | - | - | - | REMAIN | - | - | iB | | |
| jA | - | - | - | - | ELAPSE | - | - | jB | | |
| kA | - | - | - | - | REPEAT | - | - | kB | | |
| ℓA | - | - | - | - | MONITOR | - | - | ℓB | | |
| mA | - | - | - | - | TAPE | - | - | mB | | |
| nA | - | - | - | - | SOURCE | - | - | nB | | |
| oA | - | - | - | - | FULL | - | - | oB | | |
| pA | - | - | - | - | BLOCK | - | - | xB | | - |
| qA | - | - | - | - | B | - | - | PEAK LEVEL (dB) ~ +10 | | |
| rA | - | - | - | - | C | - | - | yB | - | |
| xA | - | - | - | - | REAL TIME COUNTER | - | - | LEFT CH | | |
| | | | | | TAPE SIZE | | | | | |
| | | | | | ACCUBIAS | | | | | |
| | | | | | DOLBY NR | | | | | |
| | | | | | | | | | | |

MECHANICAL POSITION CORD



PACKING VIEW



PARTS LIST

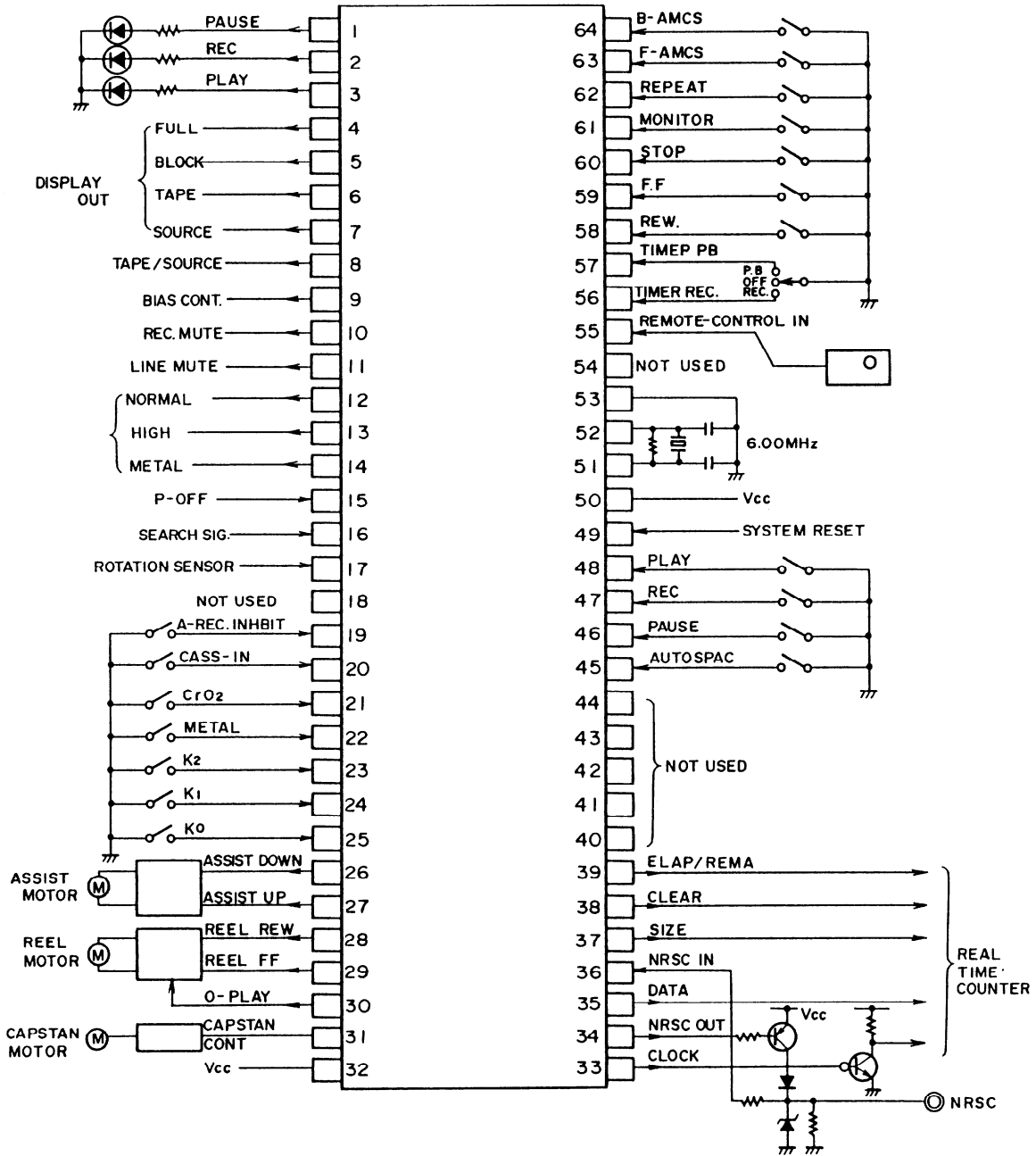
| REF. NO. | PART NO. | DESCRIPTION |
|----------------------------|------------|--|
| 1 | 29052290 | Master carton box (Black model) |
| | 29052290-3 | Master carton box (Silver model) |
| 2 | 29091518A | Pad (L) |
| 3 | 29091519A | Pad (R) |
| 4 | 29095012-1 | Protection sheet |
| | 29100105 | 620×550× Poly bag |
| | 29095608 | 200×40×2t, Protection sheet (Cassette lid) |
| 5 | 282301 | Sealing hook |
| 6 | 2911007-1 | Damplon tape |
| ACCESSORY BAG ASS'Y | | |
| 7 | 29341668 | Instruction manual |
| | 2010098A | Connection cable |
| | 29100006A | 350×250 Poly bag |
| | 24140214 | RC-214K, remocon unit |
| | 3010124 | UM-4, batteries |
| | 29365024A | Warranty card (F) |
| | 25055040 | CV plug CV-K-2 (W) |

NOTE [W]: Only Worldwide model
 [F]: Only France model

PRINTED CIRCUIT BOARD PARTS LIST

| CIRCUIT NO. | PART NO. | DESCRIPTION | CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|---------------------|---------------------------------|-------------|----------|----------------|
| C301, C302 | 391941007 | 10 μ F16V, ELECT. | P710 | 25050267 | NSCT-3P95 |
| C303, C304 | 391942217 | 220 μ F16V, ELECT. | P712 | 25045172 | HSJ1003-01-020 |
| C322 | 391980227 | 2.2 μ F50V, ELECT. | P902 | 25050268 | NSCT-4P96 |
| C323 | 391981097 | 0.1 μ F50V, ELECT. | | | |
| C324 | 391984797 | 0.47 μ F50V, ELECT. | | | |
| C325 | 391944707 | 47 μ F16V, ELECT. | | | |
| C401, C402 | 391941007 | 47 μ F16V, ELECT. | | | |
| C405, C406 | 391941007 | 10 μ F16V, ELECT. | | | |
| C419, C420 | 391982297 | 0.22 μ F50V, ELECT. | | | |
| C421, C422 | 391980477 | 4.7 μ F50V, ELECT. | | | |
| C427, C428 | 391942217 | 220 μ F16V, ELECT. | | | |
| C431 | 391980227 | 2.2 μ F50V, ELECT. | | | |
| C432 | 391944707 | 47 μ F16V, ELECT. | | | |
| C437 | 391941007 | 10 μ F16V, ELECT. | | | |
| C438 | 391944707 | 47 μ F16V, ELECT. | | | |
| C453, C455 | 391922217 | 220 μ F6.3V, ELECT. | | | |
| C454, C456 | 391980477 | 4.7 μ F50V, ELECT. | | | |
| C701 | 391941007 | 10 μ F16V, ELECT. | | | |
| C709 | 391980227 | 2.2 μ F50V, ELECT. | | | |
| C714 | 391944707 | 47 μ F16V, ELECT. | | | |
| C909, C910 | 391962227 | 2200 μ F35V, ELECT. | | | |
| C917, C918 | 391941007 | 10 μ F16V, ELECT. | | | |
| C919 | 391941017 | 100 μ F16V, ELECT. | | | |
| C920 | 391962227 | 2200 μ F35V, ELECT. | | | |
| C921 | 391944707 | 47 μ F16V, ELECT. | | | |
| C922 | 391942217 | 220 μ F16V, ELECT. | | | |
| C924 | 3504251 | 13000 μ F25V, ELECT. | | | |
| C925 | 391984797 | 0.47 μ F50V, ELECT. | | | |
| C926 | 391942217 | 220 μ F16V, ELECT. | | | |
| C928, C929 | 391980477 | 4.7 μ F50V, ELECT. | | | |
| C930 | 393062207 | 22 μ F35V, ELECT. | | | |
| C931 | 391941007 | 10 μ F16V, ELECT. | | | |
| | Resistors | | | | |
| R123, R124 | 5210218 | N06HR20KBD | | | |
| R401, R402 | 5210216 | N06HR5KBD | | | |
| R463, R464 | 5210217 | N06HR10KBD | | | |
| R470 | 442525604F | RS1/2WBJ 56 Ω | | | |
| R473 | 442525604F | RS1/2WBJ 56 Ω | | | |
| R704 | 49163392408 | 3.9K Ω \times 8, 1/10W | | | |
| R706 | 441722704F | RS2WBJ27 Ω | | | |
| R725 | 49163392407 | 3.9K Ω \times 7, 1/10W | | | |
| R727 | 49163392409 | 3.9K Ω \times 9, 1/10W | | | |
| R901, R902 | 442520154F | RS1/2WBJ 1.5 Ω | | | |
| R913 | 442524794F | RS1/2WBJ 0.47 Ω | | | |
| R915, R916 | 442520104F | RS1/2WBJ 1 Ω | | | |
| R917 | 441723304F | RS2WBJ 33 Ω | | | |
| R919 | 442520104F | RS1/2WBJ 1 Ω | | | |
| R922, R923 | 442521014F | RS1/2WBJ 100 Ω | | | |
| R924 | 442524714F | RS1/2WBJ 470 Ω | | | |
| | Plug, Socket | | | | |
| P101 | 25055136 | NPLG-6P120 | | | |
| P201 | 25045165 | 4PDBL-59 | | | |
| P202, P203 | 25050267 | NSCT-3P951 | | | |
| P204 | 25050270 | NSCT-6P98 | | | |
| P302 | 25050267 | NSCT-3P95 | | | |
| P401 | 25055136 | NPLG-6P120 | | | |
| P402 | 25055132 | NPLG-2P116 | | | |
| P403 | 25050270 | NSCT-6P98 | | | |
| P501 | 25050267 | NSCT-3P95 | | | |
| P701 | 25055139 | NPLG-9P123 | | | |
| P702 | 25055140 | NPLG-10P124 | | | |
| P703 | 25050266 | NSCT-4P96 | | | |
| P704 | 25050267 | NSCT-3P95 | | | |
| P705 | 25050268 | NSCT-4P96 | | | |
| P706 | 25050270 | NSCT-6P98 | | | |
| P707 | 25055134 | NPLG-4P118 | | | |
| P708 | 25050272 | NSCT-8P100 | | | |
| P709 | 25050528 | NSCT-6P351 | | | |

MICRO COMPUTER (HD614049SB17)



MICRO COMPUTER TERMINAL DESCRIPTION (HD614049SB17)

| Port No. | Name | Function |
|----------|------------------------|---|
| 1 | PAUSE LED | Pause indicator output |
| 2 | REC. LED | Record indicator output |
| 3 | PLAY LED | Play indicator output |
| 4 | FULL | Full repeat indicator output |
| 5 | BLOCK | Block repeat indicator output |
| 6 | TAPE | Tape monitor indicator output |
| 7 | SOURCE | Source monitor indicator output |
| 8 | TAPE/SOURCE | Monitor (tape/source) select output |
| 9 | BIAS CONTROL | Bias oscillator control output |
| 10 | REC. MUTE | Record muting output |
| 11 | LINE MUTE | Line muting output |
| 12 | NORMAL | Normal tape end detection output |
| 13 | HIGH | High tape end detection output |
| 14 | METAL | Metal tape end detection output |
| 15 | P-OFF | Power off detection input |
| 16 | SEARCH SIG. | Search signal input |
| 17 | ROTATION SENSOR | Reel rotation signal sensor input |
| 18 | NOT USED | |
| 19 | SIDE-A REC. INHIBITING | Side-A record inhibit pin sensor |
| 20 | CASSETTE IN | Cassette tape sensor switch input |
| 21 | CrO2 | Tape type sensor switch input |
| 22 | METAL SWITCH | Tape type sensor switch input |
| 23~25 | MECHA. POSITION K2~K0 | Mecha position sensor switch input |
| 24 | ASSIST DOWN | Assist motor drive output |
| 27 | ASSIST UP | Assist motor drive output |
| 28 | REEL REW | Reel motor REW rotation control output |
| 29 | REEL FF | Reel motor FF rotation control output |
| 30 | O-PLAY | Reel motor rotation torque control output |
| 31 | CAPSTAN CONTROL | capstan motor control output |
| 32 | V _{cc} | +5V |
| 33 | CLOCK | Master-slave communication clock output |
| 34 | NRSC OUT | serial code reciprocal control signal out |
| 35 | DATA OUT | Master-slave communication data output |
| 36 | NRSC IN | Serial code reciprocal control signal input |
| 37 | COUNTER SIZE | Tape size select output |
| 38 | COUNTER CLEAR | Tape counter clear output |
| 39 | COUNTER ELAP/REMA | Tape elapse/remain select output |
| 40~44 | NOT USED | |
| 45 | AUTO SPACE KEY | Auto space key input |
| 46 | PAUSE KEY | Pause key input |
| 47 | REC KEY | Record key input |
| 48 | PLAY KEY | Play key input |
| 49 | SYSTEM RESET | Computer system reset |
| 50 | TEST | |
| 51, 52 | OSC1, OSC2 | System clock oscillator terminal |
| 53 | GND | |
| 54 | NOT USED | |
| 55 | REMOTE-CONTROL IN | Remote control signal input |
| 56 | TIMER REC. | Timer record input |
| 57 | TIMER PB. | Timer play input |
| 58 | REW KEY | REW key input |
| 59 | FF KEY | FF key input |
| 60 | STOP KEY | Stop key input |
| 61 | MONITOR KEY | Monitor select key input |
| 62 | REPEAT KEY | Repeat key input |
| 63 | F-AMCS KEY | FWD play search signal input |
| 64 | B-AMCS KEY | REV play search signal input |

ADJUSTMENT PROCEDURES

PRECAUTIONS

- Before adjustment, clean the following parts with an alcohol moistend swab.
 - * record/playback head
 - * pinch roller
 - * erase head
 - * capstan
- Do not use magnetized screwdriver for adjustments.
- Demagnetize record/playback head with a head demagnetizer.

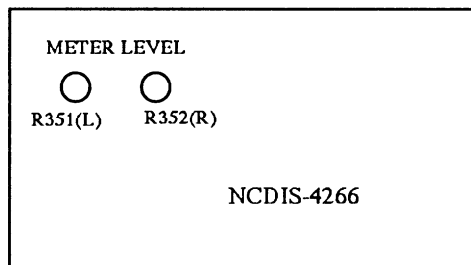
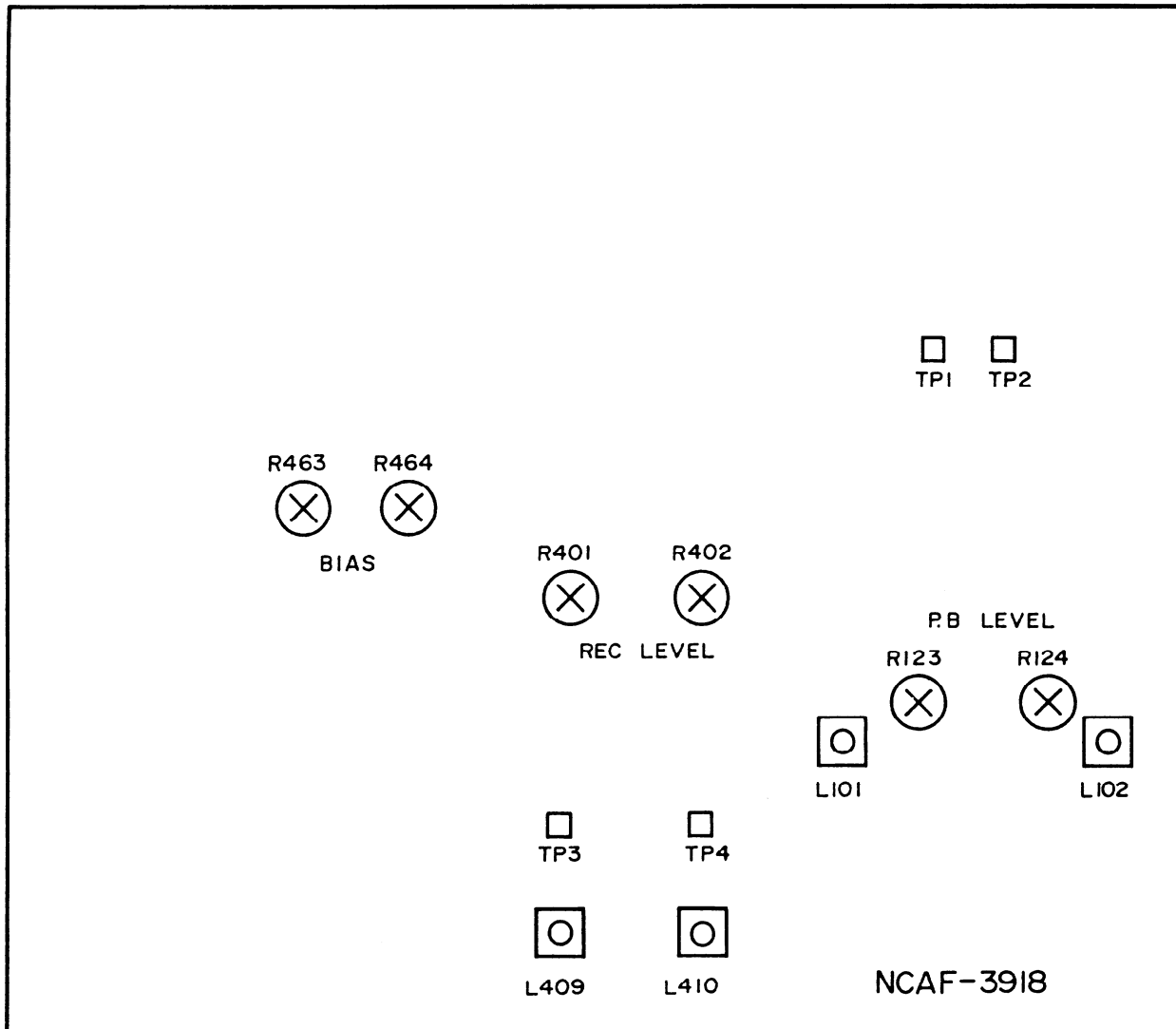
TEST EQUIPMENT/TOOLS REQUIRED:

Audio oscillator
 Digital frequency counter
 Oscilloscope
 Attenuator
 AC voltmeter
 Non-magnetic screw driver
 Test tapes
 TCC-153 : 10 KHz, -10dB
 MTT-111 : 3 kHz, -10dB
 MTT-150 : Dolby level calibration
 400Hz, tone 200nWb/m

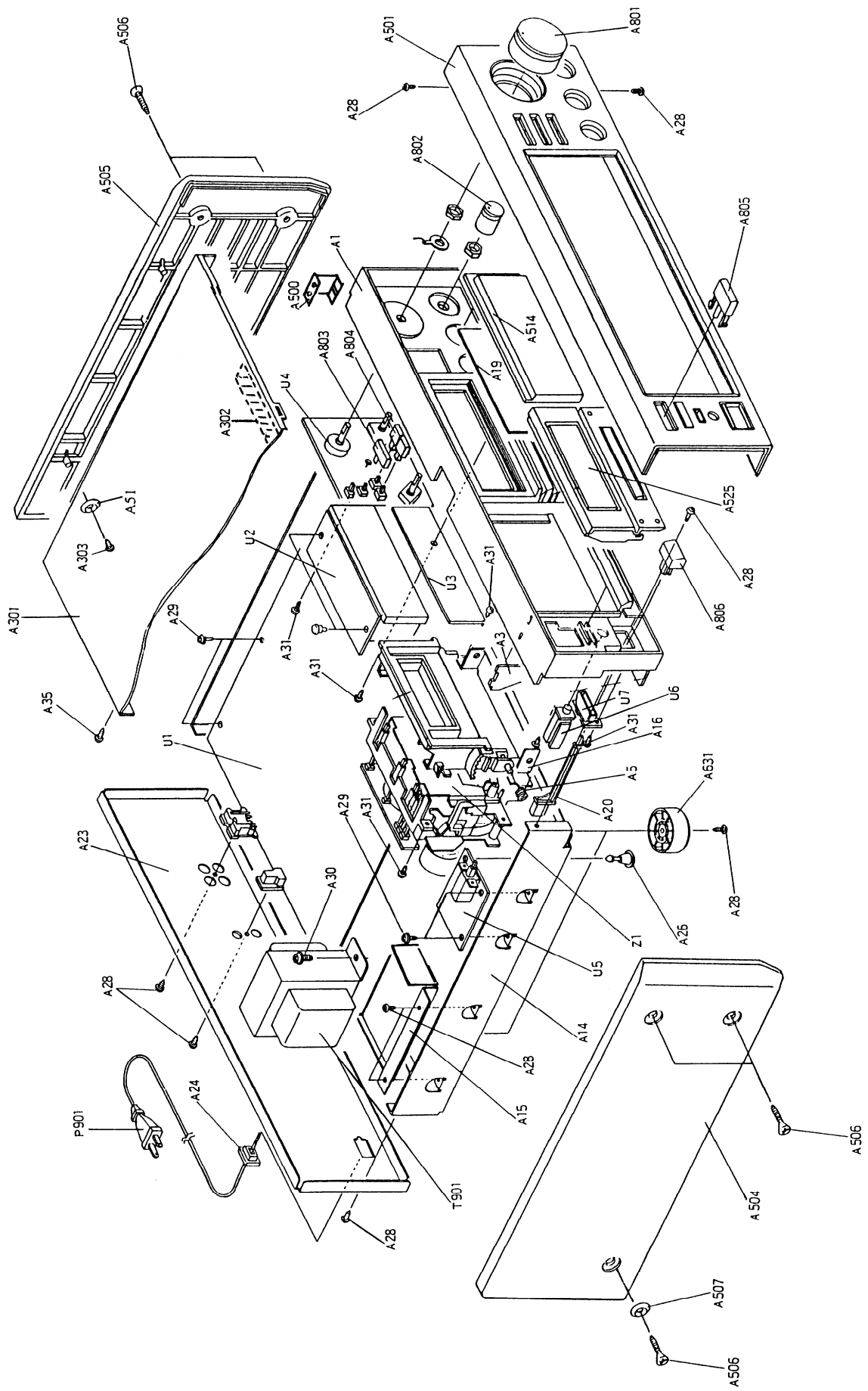
| Item | Connection of instrument | Line input | Test tape | Mode | Output indicator | Adjustment point | Adjust | Remarks |
|------|--------------------------|------------------------------|-------------|--------|-------------------|--------------------------------|--|-----------------------|
| 1 | Tape speed | | MTT-111 | PB | Frequency counter | Semi-fixed on the moter | 3,005 to 3,010Hz | |
| 2 | Head azimuth | | TCC-153 | PB | AC voltmeter | Head azimuth screw | Maximum and same phase at channels L and R | |
| 3 | Playback level | | MTT-150 | PB | AC voltmeter | R-123 (Ch. L) R-124 (Ch. R) | 245mV | |
| 4 | Meter | | MTT-150 | PB | Level meter | R-351 (Ch. L) R-352 (Ch. R) | 0db | NADIS4266-2 |
| 5 | HX-PRO | | METAL TAPE | REC | AC voltmeter | L-409 (Ch.L) L-410 (Ch.R) | Maximum | R-463 R-464 MAX |
| 6 | Bias current | 1kHz, -20dB and 12kHz, -20dB | NEW XL-II90 | REC/PB | AC voltmeter | R463 (Ch.L) R464 (Ch.R) | Same level at REC/PB | Input VR maximum. |
| 7 | Record level | 1kHz | | REC | AC voltmeter | Attenuator or AF OSC output | 350mV | Input VR maximum |
| | | | | REC/PB | AC voltmeter | R401 (Ch.L) R402 (Ch.R) | Same level at REC/PB | |
| 8 | Bias trap | | METAL TAPE | REC | AC voltmeter | L-101 (Ch. L) L-102 (Ch. R) | Min bias leakage | |

Blank tape
 NORMAL ... NEW UD-1 C-90
 HIGH ... XL-II C-90
 METAL ... XS- C60
 PLAY torque ... 35~60g/cm
 FF. REW torque ... 70~180g/cm
 Back tention ... 2~7g/cm

ADJUSTMENT POINT



CHASSIS-EXPLODED VIEW



CHASSIS-EXPLODED VIEW PARTS LIST

| REF.NO. | PARTS NO. | DESCRIPTION | REF.NO. | PARTS NO. | DESCRIPTION |
|---------|------------|----------------------------|---------|------------|-------------------------|
| A1 | 27110662A | FRONT BRACKET AS (B) | A803 | 28324477 | KNOB (MPX) (B) |
| A3 | 27110663A | FRONT BRACKET AS (S) | A804 | 28324478 | KNOB (MPX) (S) |
| A4 | 27273143 | JOINT (EJ) | A805 | 28324479 | KNOB (PUSH) (B) |
| A14 | 27100247 | CHASSIS | A805 | 28324480 | KNOB (PUSH) (S) |
| A15 | 27130608E | BRACKET (PT) | A805 | 28323985 | KNOB (EJ) (B) |
| A16 | 27130662 | BRACKET (MECHANISM) | A805 | 28324337 | KNOB (EJ) (S) |
| A19 | 28133268 | BACK PLATE | A806 | 28324397 | KNOB AS (POW) (B) |
| A20 | 27273069A | JOINT (POW) | A806 | 28324398 | KNOB AS (POW) (S) |
| A23 | 27121500-1 | BACK PANEL (D) | P901 | 253168 | AC CORD, AS-UC-6#18 (D) |
| A24 | 27121500-3 | BACK PANEL (P) | S902 | 253149 | AC CORD, AS-CEE (P/W) |
| A26 | 27300750 | BACK PANEL (W) | T901 | 25065123 | NSS-1258P (W) |
| A28 | 27190480 | BUSHING (CORD) | U1 | 2300724A | NPT-1120D (D) |
| A29 | 834430088 | HOLDER (LED) | U2 | 2300725A | NPT-1120P (P) |
| A30 | 831130088 | TAP-TIGHT SCREW 3TTS+8BBC | U3 | 2300726A | NPT-1120DG (W) |
| A31 | 830440089 | TAP-TIGHT SCREW 4TTC+8CBC | U4 | IN119518-2 | NAAF-3918-2 |
| A32 | 870065 | PT WASHER | U5 | IN119568-2 | NADIS-4266-2 |
| A33 | 833430080 | TAP-TIGHT SCREW 3TTP+8PBC | U6 | IN119567-2 | NASW-4266-2 |
| A35 | 801230 | TAPPING SCREW 3STS+8BQBC | U7 | IN119571-2 | NAETC-4267-2 |
| A51 | 87644012 | WASHER W4x12F BC | Z1 | 244160 | NAPS-4270-2 |
| A301 | 28184490A | TOP COVER | | | NAETC-3921-2 |
| A302 | 28140837 | CUSHION 250x10x9t | | | NADG-4271-2 |
| A303 | 834440088 | TAP-TIGHT SCREW 4TTS+8BBC | | | NDM-151, DECK MECHANISM |
| A500 | 27141493 | BRACKET (S) | | | |
| A501 | IN119121 | FRONT PANEL AS (B) | | | |
| A504 | IN120121 | FRONT PANEL AS (S) | | | |
| A505 | 28185371 | SIDE BOARD (L) | | | |
| A506 | 28185372 | SIDE BOARD (R) | | | |
| A507 | 837440169 | TAP-TIGHT SCREW 4TTT+16CBC | | | |
| A514 | 87314008 | TOOTH LOCK WASHER M-4B | | | |
| A525 | 28191606 | CLEAR PLATE | | | |
| -a | 28400728 | CASSETTE LID AS (B) | | | |
| -b | 28400716A | CASSETTE LID (B) | | | |
| -c | 28400730 | CASSETTE LID (BODY) (B) | | | |
| A525 | 28400722 | WINDOW (B) | | | |
| -a | 28194349 | COSMETIC PLATE (WINDOW)(B) | | | |
| -b | 28400729 | CASSETTE LID AS (S) | | | |
| -c | 28400731 | CASSETTE LID (S) | | | |
| -d | 28400722 | CASSETTE LID (BODY) (S) | | | |
| A631 | 28194349 | WINDOW (S) | | | |
| A801 | 27175254 | COSMETIC PLATE (WINDOW)(S) | | | |
| A802 | 28324475 | LEG AS | | | |
| | 28324476 | KNOB (INP) (B) | | | |
| | 28324476 | KNOB (INP) (S) | | | |
| | 28324150-1 | KNOB (LEV) (B) | | | |
| | 28324151 | KNOB (LEV) (S) | | | |

NOTE [P]: 230V Model
 [W]: Worldwide model
 [D]: 120V Model
 [S]: Silver model
 [B]: Black model

NOTE: THE COMPONENTS IDENTIFIED BY MARK **▲** ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

TAPE MECHANISM PART LIST

| REF.NO. | ADDRESS | PARTS NO. | DESCRIPTION | REF.NO. | ADDRESS | PARTS NO. | DESCRIPTION |
|---------|---------|-----------|-------------------------------|---------|---------|-----------|---------------------------|
| 1 | G1 | 24606441 | LEAD WIRE AS | 98 | D4 | 24601261 | REEL MOTOR AS |
| 2 | G1 | 24606442 | LEAD WIRE AS | 98-1 | D4 | 24601169 | REEL MOTOR |
| 3 | G2 | 24606443 | LEAD WIRE AS | 98-2 | D4 | 24611048 | SPRING STAND |
| 7 | F2 | 24611481 | PLATE (HEAD) | 98-3 | D4 | 24610374 | WASHER |
| 8 | F2 | 24610943 | STEEL BALL 3 | 98-4 | D4 | 24605467 | SPRING |
| 11 | F2 | 24600084 | E HEAD | 98-5 | D4 | 24602471 | IDLER AS |
| 12 | F2 | 24611060 | SPACER 0.06t | 98-6 | D4 | 24610970 | FELT |
| 13 | F2 | 24611061 | SPACER 0.03t | 98-7 | D4 | 24602237A | GEAR (MOTOR) |
| 14 | F2 | 24611062 | SPACER 0.1t | 101 | B1 | 24606445 | LEAD WIRE AS |
| 15 | F2 | 24610653 | BRACKET B (H HEAD) | 107 | C3 | 24611043 | BRALE PLATE AS |
| 16 | F2 | 24600082 | R/P HEAD | 107-1 | C3 | 24610999 | BRALE RUBBER |
| 18 | F2 | 24610495 | ADJUSTING NUT | 107-2 | C3 | 24611053A | BRALE PLATE |
| 19 | F3 | 801251 | SCREW M2×4 | 107-3 | C3 | 24605472 | SPRING |
| 20 | F2 | 24610652 | SHAFT | 108 | C3 | 24606446 | P.C.B. AS (SENSOR) |
| 21 | F2 | 24605502 | SPRING | 109 | C3 | 24611482 | BRACKET AS |
| 22 | F3 | 24611046 | HEAD BLOCK | 110 | B3 | 24601266 | PAD MOTOR AS |
| 23 | F3 | 24611064 | HEAD BASE AS | 111 | C4 | 24602532 | CAM GEAR |
| 31 | G3 | 24603284 | LEVER (READER) | 112 | B4 | 24606104 | LEAF SWITCH |
| 32 | G3 | 24605506 | SPRING | 113 | B4 | 24606119 | LEAF SWITCH |
| 33 | G3 | 24605507 | SPRING (CASSETTE) | 114 | C4 | 24611075 | CONNECTING PLATE |
| 34 | F3 | 24602270 | PINCH ROLLER AS | 115 | C4 | 24604064 | COLLAR |
| 35 | G4 | 24605244 | SPRING | 201 | F1 | 833130047 | TAP-TIGHT SCREW M3×4 |
| 36 | F4 | 24605709 | SPRING | | | | |
| 37 | G4 | 24610659A | PROTECTOR | 202 | F1 | 82512012 | BIND SCREW M2×12 |
| 39 | F5 | 24605188 | SPRING (CASSETTE) | 203 | F2 | 801250 | PAN-HEAD SCREW M2+4SW |
| 40 | F4 | 24610351 | STEEL BALL (CHASSIS 22) φ2 | 204 | G3 | 8930251 | E WASHER |
| 45 | F3 | 24603205 | LEVER (REC) | 205 | E3 | 8930201 | E WASHER |
| 46 | F3 | 24602271 | BELT | 206 | B1 C2 | 833125069 | SCREW |
| 47 | F3 | 24601167 | PULLEY AS | 207 | F5 | 801292 | TAP-TIGHR SCREW M2×3.2 |
| 48 | F3 | 24611003 | WASHER 1.8×3.8×0.5 | | | | |
| 49 | F4 | 24611047 | WASHER 2.1×4.5×0.1 | 208 | F5 | 893030 | E WASHER 3 |
| 50 | E4 | 24605707 | SPRING | 209 | F3 | 801263 | SCREW M2×3 |
| 51 | E4 | 24602478 | PINCH ROLLER AS | 210 | E3 | 24609014 | SCREW M2.5×8 |
| 52 | E3 | 24611065 | LEVER (ADJUSTING) | 211 | C4 | 801325 | PAN HEAD SCREW M2+5SW |
| 53 | E3 | 24605510 | SPRING | | | | |
| 54 | E3 | 24604065 | COLLAR | 215 | E3 | 82512603 | BIND SCREW |
| 55 | E3 | 24603286 | LEVER (SELECTOR) | 216 | C2 | 863720 | NUT N-2BSNI |
| 56 | E4 | 24605710 | SPRING | 217 | C3 | 83312604 | TAP-TIGH SCREW M2.6× |
| 57 | E4 | 24604052 | COLLAR | | | | |
| 58 | E4 | 24611066 | LOCK PLATE | 218 | C4 | 801259 | SCREW M2+3 |
| 60 | D4 | 24611141 | WASHER 1.7×6×0.25 | 219 | B4 | 833125059 | TAP-TIHH SCREW M2.5+5 |
| 61 | D4 | 24602531 | GEAR | | | | |
| 62 | D3 | 24610969 | WASHER | 220 | B4 | 833125209 | TAP-TIHH M2.5+20 |
| 65 | D5 | 24606447 | LEAD WIRE AS | 221 | C4 | 833125209 | TAP-TIHH 2.6TTP+12S |
| 66 | E5 | 24622057 | WASHER | 222 | C4 | 863126 | NUT N-2.6F |
| 67 | E5 | 24606205 | LEAF SWITCH | 224 | B3 | 24610515 | WASHER |
| 68 | E5 | 24604063 | COLLAT | 301 | B5 | 24611372 | STAND AS (CAPTAN) |
| 69 | F5 | 24611142 | WASHER 2.7×0.5 | 302 | B5 | 24611373 | STAND AS (CAPTAN) |
| 70 | E5 | 24611068 | BRACKET (SW) | 303 | A2 | 24602472 | FLYWHEEL |
| 71 | E5 | 82112030 | PAN HEAD SCREW | 304 | B2 | 24602473 | FLYWHEEL |
| 72 | F5 | 24611370 | MECHANISM CHASSIS AS | 305 | B3 | 24605452 | SPRING (THRUST) |
| | | | | 306 | A5 | 24611485 | WASHER |
| 73 | E5 | 24606444 | LEAD WIRE | 307 | B5 | 24611486 | WASHER |
| 91 | D3 | 24610349 | WASHER 1.8×3.2×0.5 | 308 | B1 | 24611376 | BRACKET |
| 92 | D3 | 24602534 | REEL AS | 309 | A2 | 24602476 | BELT |
| 94 | D3 | 24611072 | SPRING STAND | 310 | B1 | 24610723 | CUSHION |
| 95 | D3 | 24605505 | SPRING | 311 | B2 | 24609015 | SCREW (MOTOR) |
| 96 | D3 | 24605501 | SPRING | 312 | B2 | 24611377 | THRUST WASHER |
| 97 | D3 | 24611371 | BRACKET AS (MOTOR) | 313 | C1 | 24601267 | CAPSTAN MOTOR AS |

FRAME (CASSETTE) EXPLODED VIEW PARTS LIST

| REF. NO. | PART NO. | DESCRIPTION |
|-----------------|-----------------|--------------------------------|
| 1 | 24611451B | PLATE AS (S) |
| 2 | 24605748 | SPRING (L) |
| 3 | 24605749 | SPRING (R) |
| 5 | 24611457 | CUSHION (A) |
| 6 | 24611450 | PLATE (A) |
| 7 | 24611455A | HOLDER (L) |
| 8 | 24611456A | HOLDER (R) |
| 9 | 24605750 | SPRING |
| 10 | 801437 | TAPPING SCREW |
| 11 | 24611459 | PLASTIC WASHER |
| 12 | 24611453B | SIDE BRACKET AS (L) |
| 13 | 24611454C | SIDE BRACKET (R) |
| 14 | 24611476B | BACK PLATE (CASSETTE) |
| 15 | 24611458 | CUSHION (B) |
| 16 | 24603285 | LEVER (CHANCEL) |
| 17 | 8761401005 | WASHER FW 4.2×10×0.5×0.5 |
| 18 | 833425059 | TAP-TIGHT SCREW 2.5TTP+5C (BC) |
| 19 | 893030 | E WASHER 3 |
| 20 | 833426037 | TAP-TIGHT SCREW 2.6TTP+3S (BC) |
| 21 | 24605753 | SPRING |
| 22 | 831126068 | TAPPING SCREW 2.6TTW+6B (BC) |
| 23 | 24611480 | COVER (FW) |
| 24 | 24605747 | SPRING (EJECT) |
| 25 | 24611380 | DUMPER UNIT |
| 26 | 891024 | STOP RING |

PRINTED CIRCUIT BOARD PARTS LIST

NAETC-3921-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|----------|-------------|
| P301 | 25045139 | HLJ0540-01 |

NADIS-4266-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|-----------------------|-----------------------------|
| | IC | |
| Q303 | 22240170 | BA6800AS |
| Q721 | 22240084 | HD614128SA41 |
| | Transistors | |
| Q305, Q306 | 2213090 | DTA114YS |
| Q722 | 2213284 or 2213285 | 2SC1740S-R or 2SC1740S-S |
| | Display | |
| Q723 | 212086 | BG-801G |
| | Ceramic osc | |
| X702 | 3010143 | CST3.00MGW |
| | Capacitors | |
| C351, C352 | 391941007 | 10 μ F16V, ELECT. |
| C353, C354 | 391942207 | 22 μ F16V, ELECT. |
| C721 | 391941007 | 10 μ F16V, ELECT. |
| | Resistors | |
| R351, R352 | 5215044 | N08HR5KBC |

NAETC-4267-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|------------------|------------------|
| | Resistors | |
| R271 | 5104296 | N14RGLC250KMN25Z |
| R273 | 5104260 | N16RGL50KA25Z |
| R459 | 5104271 | N14RLC5KB25Z |
| | Switch | |
| S201-S203 | 25035611 | NPS-122-L573 |
| S601, S602 | 25035611 | NPS-122-L573 |
| S604 | 25030351 | NRSF-113-25SR8 |

NASW-4268-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|-------------------------|---------------------------|
| | LED | |
| D711, D712 | 225141 | SEL2213C |
| D714 | 225137CG | SEL2413CG |
| | 225137DG or 225137DY | SEL2413DG or SEL2413DY |
| | Switch | |
| S701-S714 | 25035548 | NPS-111-S510 |
| | Socket | |
| P707A | 2005230415 | NSAS-4P0003 |
| | Holder | |
| | 27190764A | HOLDER(LED) |

NAPS-4270-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|----------|-------------------------------|
| C901 | 3500065A | 0.01 μ F, AC400V/125V, IS |
| S901 | 25035558 | NPS-111-L520P, POWER SWITCH |

NADG-4271-2

| CIRCUIT NO. | PART NO. | DESCRIPTION |
|-------------|----------|-------------|
| Q724 | 24130003 | GP1U50XS |

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