

# Service Information

Model Nakamichi CR-5/CR-5A/CR-5E  
(Discrete Head Cassette Deck)  
Serial No. from -  
Subject Troubleshooting



**Nakamichi**

No. OOD-SI-3086 (1/12)  
Date 7 November 1985

## 1. Note

- (1) Troubles indicated in this troubleshooting guide may not happen actually. This troubleshooting guide is written imagining possible troubles.
- (2) Check to insure that the outputs +19 V, +15 V, +12 V, +5.6 V, -12 V, -14.5 V and AC 3.5 V of Power Supply P.C.B. Ass'y are correct.
- (3) Check to insure that the outputs +9 V, +8.5 V and -9 V of Display P.C.B. Ass'y are correct.
- (4) Check that the fuse(s) on Power Supply P.C.B. Ass'y is (are) not blown.
- (5) Make sure that the tape transport mechanism is not dirty.
- (6) Defect (cut or short) of lead wire or printed wiring pattern includes defective soldering (cold soldering or bridging).

## 2. Troubleshooting

### 2.1. Does not play back:

- (1) Dirty Playback Head.
- (2) Defective Q108 (Q208) on Main P.C.B. Ass'y.
- (3) Defective IC306 on Main P.C.B. Ass'y.
- (4) Defective L104 (L204) on Main P.C.B. Ass'y.
- (5) Defective IC302 on Main P.C.B. Ass'y.
- (6) Defective IC104 (IC204) on Dolby NR P.C.B. Ass'y.
- (7) Defective IC103 (IC203) on Dolby NR P.C.B. Ass'y.
- (8) Defective Q115 (Q215) on Main P.C.B. Ass'y.
- (9) Defective IC308 on Main P.C.B. Ass'y.
- (10) Defective Q111 (Q211) on Main P.C.B. Ass'y.
- (11) Does not enter Tape mode by press of Monitor button.
- (12) Defective VR302 on Volume P.C.B. Ass'y.
- (13) Defective Line Output Jack(s).
- (14) Line Mute signal remains active.
- (15) Defective Playback Head.
- (16) Inaccurate contact of connectors CN-23, CN-1, CN-3, CN-12, CN-26, CN-27 and/or CN-25 on Main P.C.B. Ass'y.
- (17) Lead wire(s) is (are) cut or shorted.

### 2.2. Does not accept input signals:

- (1) Defective VR301 on Volume P.C.B. Ass'y.
- (2) Defective VR101 (VR201) on Volume P.C.B. Ass'y.
- (3) Defective Line Input Jack(s).
- (4) Does not enter Source mode by press of Monitor button.
- (5) Defective Q101 (Q201) on Main P.C.B. Ass'y.
- (6) Defective Q102 (Q202) on Main P.C.B. Ass'y.
- (7) Defective L102 (L202) on Main P.C.B. Ass'y.
- (8) Defective CDS301 on Main P.C.B. Ass'y.
- (9) Master Fader sticks to Down mode.
- (10) Defective IC102 (IC202) on Dolby NR P.C.B. Ass'y.
- (11) Defective IC101 (IC201) on Dolby NR P.C.B. Ass'y.
- (12) Defective Q114 (Q214) on Main P.C.B. Ass'y.
- (13) Inaccurate contact of connectors CN-29 on Volume P.C.B. Ass'y, CN-28, CN-2 and/or CN-3 on Main P.C.B. Ass'y.
- (14) Lead wire(s) is (are) cut or shorted.

**2.3. Monitor switch does not change over:**

- (1) Defective SW616 on Control Switch P.C.B. Ass'y.
- (2) Defective IC603 on Logic P.C.B. Ass'y.
- (3) Defective IC604 on Logic P.C.B. Ass'y.
- (4) Defective Q628 on Logic P.C.B. Ass'y.
- (5) Defective Q629 on Logic P.C.B. Ass'y.
- (6) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y and/or CN-12 on Main P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.4. Does not record though input signal is accepted:**

- (1) Bias does not oscillate.
- (2) Defective IC301 on Main P.C.B. Ass'y.
- (3) Defective Q106 (Q206) on Main P.C.B. Ass'y.
- (4) Defective IC305 on Main P.C.B. Ass'y.
- (5) Defective Q107 (Q207) on Main P.C.B. Ass'y.
- (6) Defective L101 (L201) on Power Supply P.C.B. Ass'y.
- (7) Dirty Record Head.
- (8) Does not enter Record mode.
- (9) Defective Record Head.
- (10) Defective RL301 on Power Supply P.C.B. Ass'y.
- (11) Defective RL302 on Power Supply P.C.B. Ass'y.
- (12) Defective Q302 on Power Supply P.C.B. Ass'y.
- (13) Defective Q303 on Power Supply P.C.B. Ass'y.
- (14) Defective Q304 on Power Supply P.C.B. Ass'y.
- (15) Defective Q305 on Power Supply P.C.B. Ass'y.
- (16) Inaccurate contact of connectors CN-2, CN-34 on Main P.C.B. Ass'y, CN-32 on Power Supply P.C.B. Ass'y and/or CN-11 on Logic P.C.B. Ass'y.
- (17) Lead wire(s) is (are) cut or shorted.

**2.5. Level Indicator(s) does (do) not work:**

- (1) Does not play back.
- (2) Does not accept input signals.
- (3) Defective IC304 on Main P.C.B. Ass'y.
- (4) Defective IC601 on Display P.C.B. Ass'y.
- (5) Line Mute signal remains active.
- (6) Defective FL Display Unit.
- (7) Defective Q608 on Display P.C.B. Ass'y.
- (8) Defective Q609 on Display P.C.B. Ass'y.
- (9) Defective Q610 on Display P.C.B. Ass'y.
- (10) Defective Q611 on Display P.C.B. Ass'y.
- (11) Defective Q612 on Display P.C.B. Ass'y.
- (12) Defective Q613 on Display P.C.B. Ass'y.
- (13) Defective Q614 on Display P.C.B. Ass'y.
- (14) Defective Q615 on Display P.C.B. Ass'y.
- (15) Defective Q617 on Display P.C.B. Ass'y.
- (16) Inaccurate contact of connectors CN-9 on Main P.C.B. Ass'y, CN-8, CN-10 and/or CN-16 on Logic P.C.B. Ass'y.
- (17) Lead wire(s) is (are) cut or shorted.

**2.6. Bias does not oscillate:**

- (1) Does not enter Record mode.
- (2) Bias signal remains at high level.
- (3) Defective Q301 on Power Supply P.C.B. Ass'y.
- (4) Defective T301 on Power Supply P.C.B. Ass'y.
- (5) Bias cut jumper is disconnected (in Power Supply P.C.B. Ass'y).
- (6) Erase Head is shorted.
- (7) Inaccurate contact of connector CN-11 on Logic P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.7. Does not erase:**

- (1) Dirty Erase Head.
- (2) Defective Erase Head.
- (3) Bias does not oscillate.
- (4) Misalignment of record head track height.
- (5) Incorrect adjustment of erase head.
- (6) Inaccurate contact of connector CN-33 on Power Supply P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.8. No sound from headphones:**

- (1) Does not play back.
- (2) Does not accept input signals.
- (3) Defective IC307 on Main P.C.B. Ass'y.
- (4) Defective Q109 (Q209) on Main P.C.B. Ass'y.
- (5) Defective Q110 (Q210) on Main P.C.B. Ass'y.
- (6) Defective Headphone Jack on Headphone Jack P.C.B. Ass'y.
- (7) Inaccurate contact of connector CN-30 on Main P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.9. Line Mute signal remains active:**

- (1) Defective Q624 on Logic P.C.B. Ass'y.
- (2) Defective Q623 on Logic P.C.B. Ass'y.
- (3) Defective IC601 on Logic P.C.B. Ass'y.
- (4) Inaccurate contact of connectors CN-9 on Main P.C.B. Ass'y and/or CN-8 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.10. Bias signal remains at high level:**

- (1) Power Off signal remains active.
- (2) Defective Q617 on Logic P.C.B. Ass'y.
- (3) Defective Q619 on Logic P.C.B. Ass'y.
- (4) Defective IC601 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.11. Does not enter Play mode:**

- (1) Defective SW602 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Control Motor does not rotate.
- (4) Defective Control Cam Switches.
- (5) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.12. Does not enter Record mode:**

- (1) Defective SW606 on Control Switch P.C.B. Ass'y.
- (2) Defective Record Protector.
- (3) Defective IC604 on Logic P.C.B. Ass'y.
- (4) Defective IC601 on Logic P.C.B. Ass'y.
- (5) Defective IC605 on Logic P.C.B. Ass'y.
- (6) Control Motor does not rotate.
- (7) Defective Control Cam Switches.
- (8) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (9) Lead wire(s) is (are) cut or shorted.

**2.13. Does not enter Pause mode:**

- (1) Defective SW604 on Control Switch P.C.B. Ass'y.
- (2) Defective Q603 on Logic P.C.B. Ass'y.
- (3) Defective IC601 on Logic P.C.B. Ass'y.
- (4) Control Motor does not rotate.
- (5) Defective Control Cam Switches.
- (6) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.14. Does not enter Fast-Forward mode:**

- (1) Defective SW603 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Control Motor does not rotate.
- (4) Defective Control Cam Switches.
- (5) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.15. Does not enter Rewind mode:**

- (1) Defective SW601 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Control Motor does not rotate.
- (4) Defective Control Cam Switches.
- (5) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.16. Does not enter Stop mode:**

- (1) Defective SW605 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Control Motor does not rotate.
- (4) Defective Control Cam Switches.
- (5) Inaccurate contact of connectors CN-22, CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.17. Control Motor does not rotate:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q655 on Logic P.C.B. Ass'y.
- (3) Defective Q650 on Logic P.C.B. Ass'y.
- (4) Defective Q651 on Logic P.C.B. Ass'y.
- (5) Defective Q648 on Logic P.C.B. Ass'y.
- (6) Defective Q649 on Logic P.C.B. Ass'y.
- (7) Defective Q652 on Logic P.C.B. Ass'y.
- (8) Defective Q653 on Logic P.C.B. Ass'y.
- (9) Defective R745 on Logic P.C.B. Ass'y.
- (10) Defective Control Motor.
- (11) Defective Control Cam Switches.
- (12) Inaccurate contact of connectors CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (13) Lead wire(s) is (are) cut or shorted.

**2.18. Reel Motor does not rotate:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q647 on Logic P.C.B. Ass'y.
- (3) Defective Q645 on Logic P.C.B. Ass'y.
- (4) Defective Q646 on Logic P.C.B. Ass'y.
- (5) Defective Q641 on Logic P.C.B. Ass'y.

- (6) Defective Q642 on Logic P.C.B. Ass'y.
- (7) Defective Q639 on Logic P.C.B. Ass'y.
- (8) Defective Q640 on Logic P.C.B. Ass'y.
- (9) Defective Q643 on Logic P.C.B. Ass'y.
- (10) Defective Q644 on Logic P.C.B. Ass'y.
- (11) Defective R722 on Logic P.C.B. Ass'y.
- (12) Defective Reel Motor.
- (13) Inaccurate contact of connectors CN-18 and/or CN-19 on Logic P.C.B. Ass'y.
- (14) Lead wire(s) is (are) cut or shorted.

**2.19. Capstan Motor does not rotate:**

- (1) Defective Take-up Flywheel Ass'y.
- (2) Defective Capstan Motor P.C.B. Ass'y.
- (3) Inaccurate contact of connector CN-18 on Logic P.C.B. Ass'y.
- (4) Lead wire(s) is (are) cut or shorted.

**2.20. Auto Shut-off is activated (other than at tape end):**

- (1) Defective Q602 on Shut-off P.C.B. Ass'y.
- (2) Defective Q601 on Shut-off P.C.B. Ass'y.
- (3) Defective IC604 on Logic P.C.B. Ass'y.
- (4) Defective IC601 on Logic P.C.B. Ass'y.
- (5) Defective IC602 on Logic P.C.B. Ass'y.
- (6) Dirty Reflective Plate of Take-up Reel Hub Ass'y.
- (7) Reel Motor does not rotate.
- (8) Defective Take-up Reel Hub Ass'y.
- (9) Slippage of Idler Pulley.
- (10) Inaccurate contact of connector CN-18 on Logic P.C.B. Ass'y.
- (11) Lead wire(s) is (are) cut or shorted.

**2.21. Does not auto-shut off at tape end:**

- (1) Defective Q602 on Shut-off P.C.B. Ass'y.
- (2) Defective Q601 on Shut-off P.C.B. Ass'y.
- (3) Defective IC604 on Logic P.C.B. Ass'y.
- (4) Defective IC601 on Logic P.C.B. Ass'y.
- (5) Defective IC602 on Logic P.C.B. Ass'y.
- (6) Slippage of Idler Pulley.
- (7) Inaccurate contact of connector CN-18 on Logic P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.22. Manual Tape Selector does not change over:**

- (1) Defective SW602 on Display P.C.B. Ass'y.
- (2) Defective SW610 on Control Switch P.C.B. Ass'y.
- (3) Defective SW611 on Control Switch P.C.B. Ass'y.
- (4) Defective SW612 on Control Switch P.C.B. Ass'y.
- (5) Defective Q635 on Logic P.C.B. Ass'y.
- (6) Defective Q636 on Logic P.C.B. Ass'y.
- (7) Defective Q637 on Logic P.C.B. Ass'y.
- (8) Inaccurate contact of connectors CN-8 and/or CN-7 on Logic P.C.B. Ass'y.
- (9) Lead wire(s) is (are) cut or shorted.

**2.23. Auto Tape Selector does not change over:**

- (1) Defective SW602 on Display P.C.B. Ass'y.
- (2) Defective Tape Selector (SX) on Mechanism Ass'y.
- (3) Defective Tape Selector (ZX) on Mechanism Ass'y.
- (4) Defective Q633 on Logic P.C.B. Ass'y.
- (5) Defective Q634 on Logic P.C.B. Ass'y.
- (6) Defective Q637 on Logic P.C.B. Ass'y.
- (7) Inaccurate contact of connectors CN-8 and/or CN-19 on Logic P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.24. Tape Selector does not work (either Manual or Auto):**

- (1) Defective IC603 on Logic P.C.B. Ass'y.
- (2) Defective IC606 on Logic P.C.B. Ass'y.
- (3) Defective Q626 on Logic P.C.B. Ass'y.
- (4) Defective Q627 on Logic P.C.B. Ass'y.
- (5) Defective Q302 on Power Supply P.C.B. Ass'y.
- (6) Defective Q303 on Power Supply P.C.B. Ass'y.
- (7) Defective Q304 on Power Supply P.C.B. Ass'y.
- (8) Defective Q305 on Power Supply P.C.B. Ass'y.
- (9) Defective RL301 on Power Supply P.C.B. Ass'y.
- (10) Bias signal remains at high level.
- (11) Inaccurate contact of connector CN-11 on Logic P.C.B. Ass'y.
- (12) Lead wire(s) is (are) cut or shorted.

**2.25. Eq. Switch does not change over:**

- (1) Defective SW615 on Control Switch P.C.B. Ass'y.
- (2) Defective IC603 on Logic P.C.B. Ass'y.
- (3) Defective IC606 on Logic P.C.B. Ass'y.
- (4) Defective Q625 on Logic P.C.B. Ass'y.
- (5) Defective Q107 (Q207) on Dolby NR P.C.B. Ass'y.
- (6) Defective Q105 (Q205) on Main P.C.B. Ass'y.
- (7) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y, CN-9 and/or CN-3 on Main P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.26. Dolby NR does not change over:**

- (1) Defective SW614 on Control Switch P.C.B. Ass'y.
- (2) Defective IC603 on Logic P.C.B. Ass'y.
- (3) Defective Q631 on Logic P.C.B. Ass'y.
- (4) Defective Q632 on Logic P.C.B. Ass'y.
- (5) Defective Q108 (Q208) on Dolby NR P.C.B. Ass'y.
- (6) Defective Q109 (Q209) on Dolby NR P.C.B. Ass'y.
- (7) Defective Q110 (Q210) on Dolby NR P.C.B. Ass'y.
- (8) Defective Q111 (Q211) on Dolby NR P.C.B. Ass'y.
- (9) Defective Q103 (Q203) on Dolby NR P.C.B. Ass'y.
- (10) Defective Q104 (Q204) on Dolby NR P.C.B. Ass'y.
- (11) Defective Q105 (Q205) on Dolby NR P.C.B. Ass'y.
- (12) Defective Q106 (Q206) on Dolby NR P.C.B. Ass'y.
- (13) Defective IC101 (IC201) on Dolby NR P.C.B. Ass'y.
- (14) Defective IC102 (IC202) on Dolby NR P.C.B. Ass'y.
- (15) Defective IC104 (IC204) on Dolby NR P.C.B. Ass'y.
- (16) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y, CN-12 and/or CN-3 on Main P.C.B. Ass'y.
- (17) Lead wire(s) is (are) cut or shorted.

**2.27. MPX Switch does not work:**

- (1) Defective SW601 on Display P.C.B. Ass'y.
- (2) Defective Q622 on Logic P.C.B. Ass'y.
- (3) Defective Q103 (Q203) on Main P.C.B. Ass'y.
- (4) Defective Q104 (Q204) on Main P.C.B. Ass'y.
- (5) Defective L102 (L202) on Main P.C.B. Ass'y.
- (6) Inaccurate contact of connectors CN-8 on Logic P.C.B. Ass'y, CN-12 and/or CN-2 on Main P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.28. Bias Tune Control does not work:**

- (1) CR-5/5A/5E is not set in Record mode.
- (2) Defective VR301 on Bias Volume P.C.B. Ass'y.
- (3) Inaccurate contact of connector CN-31 on Power Supply P.C.B. Ass'y.
- (4) Lead wire(s) is (are) cut or shorted.

**2.29. Tape Counter does not work:**

- (1) Shut-off signal is absent.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Defective IC602 on Logic P.C.B. Ass'y.
- (4) Defective Q601 on Display P.C.B. Ass'y.
- (5) Defective Q602 on Display P.C.B. Ass'y.
- (6) Defective Q603 on Display P.C.B. Ass'y.
- (7) Defective Q604 on Display P.C.B. Ass'y.
- (8) Defective Q605 on Display P.C.B. Ass'y.
- (9) Defective Q606 on Display P.C.B. Ass'y.
- (10) Defective Q607 on Display P.C.B. Ass'y.
- (11) Defective IC603 on Display P.C.B. Ass'y.
- (12) Defective Display Unit.
- (13) Inaccurate contact of connector CN-14 on Logic P.C.B. Ass'y.
- (14) Lead wire(s) is (are) cut or shorted.

**2.30. Memory Stop function is inoperative:**

- (1) Defective SW617 on Control Switch P.C.B. Ass'y.
- (2) Defective IC602 on Logic P.C.B. Ass'y.
- (3) Defective IC601 on Logic P.C.B. Ass'y.
- (4) Inaccurate contact of connector CN-5 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.31. Does not auto-repeat:**

- (1) Defective SW617 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Defective IC602 on Logic P.C.B. Ass'y.
- (4) Inaccurate contact of connector CN-5 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.32. Does not enter Timer Play mode:**

- (1) Defective SW602 on Timer Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Reset signal remains at low level.
- (4) Inaccurate contact of connector CN-6 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.33. Does not enter Timer Record mode:**

- (1) Defective SW602 on Timer Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Reset signal remains at low level.
- (4) Inaccurate contact of connector CN-6 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.34. Tape Counter is not reset:**

- (1) Defective SW613 on Control Switch P.C.B. Ass'y.
- (2) Defective IC602 on Logic P.C.B. Ass'y.
- (3) Inaccurate contact of connectors CN-5 and/or CN-14 on Logic P.C.B. Ass'y.
- (4) Lead wire(s) is (are) cut or shorted.

**2.35. Master Fader does not work:**

- (1) Defective SW608 on Control Switch P.C.B. Ass'y.
- (2) Defective SW609 on Control Switch P.C.B. Ass'y.
- (3) Defective IC303 on Main P.C.B. Ass'y.
- (4) Defective Q301 on Main P.C.B. Ass'y.
- (5) Defective Q302 on Main P.C.B. Ass'y.
- (6) Defective CDS301 on Main P.C.B. Ass'y.
- (7) Inaccurate contact of connectors CN-20 on Logic P.C.B. Ass'y and/or CN-12 on Main P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.36. Record Mute Switch is not activated:**

- (1) Defective SW607 on Control Switch P.C.B. Ass'y.
- (2) Defective IC601 on Logic P.C.B. Ass'y.
- (3) Defective Q621 on Logic P.C.B. Ass'y.
- (4) Defective Q620 on Logic P.C.B. Ass'y.
- (5) Defective Q106 (Q206) on Main P.C.B. Ass'y.
- (6) Inaccurate contact of connectors CN-20 on Logic P.C.B. Ass'y and/or CN-9 on Main P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.37. Initial Reset is not applied to MPU (Micro-processing Unit):**

- (1) Defective Q615 on Logic P.C.B. Ass'y.
- (2) Defective Q614 on Logic P.C.B. Ass'y.
- (3) Defective Q601 on Logic P.C.B. Ass'y.
- (4) Defective IC601 on Logic P.C.B. Ass'y.
- (5) Defective IC602 on Logic P.C.B. Ass'y.
- (6) Defective Q608 on Logic P.C.B. Ass'y.
- (7) Defective IC603 on Logic P.C.B. Ass'y.
- (8) Inaccurate contact of connector CN-16 on Logic P.C.B. Ass'y.
- (9) Lead wire(s) is (are) cut or shorted.

**2.38. Tape-looseness-elimination function does not work when Cassette Compartment is closed or when power switch is turned ON:**

- (1) Defective Eject Sensor.
- (2) Power Off signal is not output.
- (3) Defective IC601 on Logic P.C.B. Ass'y.
- (4) Defective IC604 on Logic P.C.B. Ass'y.
- (5) Defective Q602 on Logic P.C.B. Ass'y.
- (6) Inaccurate contact of connector CN-19 on Logic P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.39. Electric Brake does not work:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective IC605 on Logic P.C.B. Ass'y.
- (3) Lead wire(s) is (are) cut or shorted.

**2.40. Monitor Indicator does not light:**

- (1) Defective IC603 on Logic P.C.B. Ass'y.
- (2) Defective IC604 on Display P.C.B. Ass'y.
- (3) Defective IC606 on Logic P.C.B. Ass'y.
- (4) Defective Q630 on Logic P.C.B. Ass'y.
- (5) Defective FL Display Unit.
- (6) Inaccurate contact of connector CN-13 on Logic P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.



**2.41. Dolby NR Indicator does not light:**

- (1) Defective IC603 on Logic P.C.B. Ass'y.
- (2) Defective IC604 on Display P.C.B. Ass'y.
- (3) Defective FL Display Unit.
- (4) Inaccurate contact of connector CN-13 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.42. Eq. Indicator does not light:**

- (1) Defective IC603 on Logic P.C.B. Ass'y.
- (2) Defective IC606 on Logic P.C.B. Ass'y.
- (3) Defective IC604 on Display P.C.B. Ass'y.
- (4) Defective FL Display Unit.
- (5) Inaccurate contact of connector CN-13 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.43. Tape Indicator does not light:**

- (1) Defective IC603 on Logic P.C.B. Ass'y.
- (2) Defective IC606 on Logic P.C.B. Ass'y.
- (3) Defective IC604 on Display P.C.B. Ass'y.
- (4) Defective Q616 on Display P.C.B. Ass'y.
- (5) Defective FL Display Unit.
- (6) Inaccurate contact of connector CN-13 on Logic P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.44. MPX Filter Indicator does not light:**

- (1) Defective SW601 on Display P.C.B. Ass'y.
- (2) Defective FL Display Unit.
- (3) Lead wire(s) is (are) cut or shorted.

**2.45. Stop Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q605 on Logic P.C.B. Ass'y.
- (3) Defective Q612 on Logic P.C.B. Ass'y.
- (4) Defective LED605 on Control Switch P.C.B. Ass'y.
- (5) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.46. Play Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective IC605 on Logic P.C.B. Ass'y.
- (3) Defective Q608 on Logic P.C.B. Ass'y.
- (4) Defective LED602 on Control Switch P.C.B. Ass'y.
- (5) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.47. Pause Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q609 on Logic P.C.B. Ass'y.
- (3) Defective LED604 on Control Switch P.C.B. Ass'y.
- (4) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.48. Record Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q607 on Logic P.C.B. Ass'y.
- (3) Defective LED606 on Control Switch P.C.B. Ass'y.
- (4) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (5) Lead wire(s) is (are) cut or shorted.

**2.49. Rewind Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective IC605 on Logic P.C.B. Ass'y.
- (3) Defective Q611 on Logic P.C.B. Ass'y.
- (4) Defective LED601 on Control Switch P.C.B. Ass'y.
- (5) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.50. Fast Forward Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective IC605 on Logic P.C.B. Ass'y.
- (3) Defective Q610 on Logic P.C.B. Ass'y.
- (4) Defective LED603 on Control Switch P.C.B. Ass'y.
- (5) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.51. Record Mute Indicator does not light:**

- (1) Defective IC601 on Logic P.C.B. Ass'y.
- (2) Defective Q606 on Logic P.C.B. Ass'y.
- (3) Defective Q621 on Logic P.C.B. Ass'y.
- (4) Defective LED607 on Control Switch P.C.B. Ass'y.
- (5) Inaccurate contact of connector CN-21 on Logic P.C.B. Ass'y.
- (6) Lead wire(s) is (are) cut or shorted.

**2.52. Master Fader Indicator does not light:**

- (1) Defective IC303 on Main P.C.B. Ass'y.
- (2) Defective Q301 on Main P.C.B. Ass'y.
- (3) Defective Q302 on Main P.C.B. Ass'y.
- (4) Defective LED608 on Control Switch P.C.B. Ass'y.
- (5) Defective LED609 on Control Switch P.C.B. Ass'y.
- (6) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y, CN-12, CN-3 and/or CN-2 on Main P.C.B. Ass'y.
- (7) Lead wire(s) is (are) cut or shorted.

**2.53. Manual Tape Indicator does not light:**

- (1) Defective SW602 on Display P.C.B. Ass'y.
- (2) Defective LED601 on Display P.C.B. Ass'y.
- (3) Lead wire(s) is (are) cut or shorted.

**2.54. Poor high-frequency response during playback:**

- (1) Dirty Playback Head.
- (2) Playback Head is magnetized.
- (3) Azimuth misalignment of Playback Head.
- (4) Incorrect Eq. position is selected.
- (5) Incorrect Dolby NR position is selected.
- (6) Defective Playback Head.
- (7) Defective IC103 (IC203) on Dolby NR P.C.B. Ass'y.
- (8) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y, CN-9, CN-12 and/or CN-3 on Main P.C.B. Ass'y.
- (9) Lead wire(s) is (are) cut or shorted.

**2.55. Poor high-frequency response during recording and playback:**

- (1) Dirty Record Head.
- (2) Azimuth misalignment of Record Head.
- (3) Incorrect bias adjustment.
- (4) Incorrect Eq. position is selected.
- (5) Incorrect Tape position is selected.
- (6) Defective Record Head.

- (7) Inaccurate contact of connectors CN-7 on Logic P.C.B. Ass'y, CN-12 and/or CN-9 on Main P.C.B. Ass'y.
- (8) Lead wire(s) is (are) cut or shorted.

**2.56. Frequency response waves greatly in Dolby NR ON mode:**

- (1) Incorrect record and playback level adjustment.
- (2) Encoder and decoder using Dolby NR IC are mismatched.
- (3) Great bias leakage.
- (4) Incorrect bias adjustment.
- (5) Lead wire(s) is (are) cut or shorted.

**2.57. Defective wow and flutter characteristics:**

- (1) Dirty Capstans.
- (2) Dirty Pressure Rollers.
- (3) Dirty Tape Guides.
- (4) Dirty Heads.
- (5) Defective Take-up Flywheel Ass'y.
- (6) Defective Supply Flywheel Ass'y.
- (7) Defective Take-up Pressure Roller Ass'y.
- (8) Defective Supply Pressure Roller Ass'y.
- (9) Defective Take-up Reel Hub Ass'y.
- (10) Defective Supply Reel Hub Ass'y.
- (11) Defective Capstan Belt.
- (12) Defective Reel Motor.
- (13) Slippage of Idler Pulley.
- (14) Abnormally strong take-up torque.
- (15) Abnormally strong back tension.

**2.58. Tape eating occurs:**

- (1) Dirty Capstans.
- (2) Dirty Pressure Rollers.
- (3) Dirty Tape Guides.
- (4) Tape-looseness-elimination function does not work.
- (5) Abnormally weak tape tension.
- (6) Excessive erase head stroke.
- (7) Excessive head tilt.
- (8) Excessive inclination of Capstans.
- (9) Excessive inclination of Pressure Rollers.
- (10) Cassette Tape itself is defective.

**2.59. No power transmission:**

- (1) Defective Power Cord.
- (2) Defective Power Switch on Power Switch P.C.B. Ass'y.
- (3) Defective Power Transformer.
- (4) Defective R423 on Power Supply P.C.B. Ass'y.
- (5) Defective R424 on Power Supply P.C.B. Ass'y.
- (6) Defective R425 on Power Supply P.C.B. Ass'y.
- (7) Defective R426 on Power Supply P.C.B. Ass'y.
- (8) Defective D407 on Power Supply P.C.B. Ass'y.
- (9) Defective D404 on Power Supply P.C.B. Ass'y.
- (10) Defective D401 on Power Supply P.C.B. Ass'y.
- (11) Defective IC401 on Power Supply P.C.B. Ass'y.
- (12) Defective Q402 on Power Supply P.C.B. Ass'y.
- (13) Defective Q403 on Power Supply P.C.B. Ass'y.
- (14) Defective Q404 on Power Supply P.C.B. Ass'y.
- (15) Defective Q405 on Power Supply P.C.B. Ass'y.
- (16) Defective Q406 on Power Supply P.C.B. Ass'y.
- (17) Defective Q407 on Power Supply P.C.B. Ass'y.

- (18) Defective Q408 on Power Supply P.C.B. Ass'y.
- (19) Defective Q409 on Power Supply P.C.B. Ass'y.
- (20) Defective Q410 on Power Supply P.C.B. Ass'y.
- (21) Defective Q411 on Power Supply P.C.B. Ass'y.
- (22) Defective Q412 on Power Supply P.C.B. Ass'y.
- (23) Defective Q413 on Power Supply P.C.B. Ass'y.
- (24) Inaccurate contact of connectors C-17, CN-16 on Logic P.C.B. Ass'y and/or CN-24 on Main P.C.B. Ass'y.
- (25) Lead wire(s) is (are) cut or shorted.

Notes:

1. Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.
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