Dolby NR-Equipped
Stereo Cassette Deck
RS-BX727

Area
Suffix for
Model No.
Area Colour
(EB) Great Britain. (K)
(EG) Germany and Italy. Europe.

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang and Olufsen. “DOLBY”, the double-D symbol and “HX PRO” are trademarks of Dolby Laboratories Licensing Corporation.

Please file and use this simplified manual together with the service manual for Model No. RS-BX707, Order No. AD9106170C2.
This service manual indicates the main differences between Original RS-BX707.

CHANGE IN REPLACEMENT PARTS LIST (on pages 32, 38〜40, 42.)

Notes: • Mentioned in this parts list is only those different from Model No. RS-BX707 (EG).
All other parts are the same as for RS-BX707 (EG).
• Important safety notice:
Components identified by △ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer’s specified parts shown in the parts list.

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Change of Part No.</th>
<th>Part Name &amp; Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q505〜507 KSB564ACYGTA</td>
<td>2SB621A-R</td>
<td>TRANSISTOR</td>
<td></td>
</tr>
<tr>
<td>Q510 KSB564ACYGTA</td>
<td>2SB621A-R</td>
<td>TRANSISTOR</td>
<td></td>
</tr>
<tr>
<td>Q606 KSB564ACYGTA</td>
<td>2SB621A-R</td>
<td>TRANSISTOR</td>
<td></td>
</tr>
<tr>
<td>Q903 KSB564ACYGTA</td>
<td>2SB621A-R</td>
<td>TRANSISTOR</td>
<td></td>
</tr>
<tr>
<td>SENSOR(S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z701</td>
<td>RCDHC-278</td>
<td>REMOTE SENSOR</td>
<td>Addition</td>
</tr>
</tbody>
</table>
DOLBY NR-Equipped Stereo Cassette Deck

*HX Pro headroom extension originated by Bang Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation.

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RS-TR555 MECHANISM SERIES (AR350)

SPECIFICATIONS

### CASSETTE DECK SECTION

- **Deck system**: Stereo cassette deck
- **Track system**: 4-track, 2-channel
- **Recording system**: AC bias
- **Bias frequency**: 80 kHz
- **Erasing system**: AC erase
- **Recording head [Permalloy (Combination)]**: ×1
- **Playback head [Permalloy (Combination)]**: ×1
- **Erasing head (Double-gap ferrite)**: ×1

### Motors

- Capstan drive (Quartz DD motor) ×1
- Reel table drive (DC motor) ×1
- Cassette holder open/close (DC motor) ×1

### Tape speed

- 4.8 cm/sec. (1½ ips)

### Wow and flutter

- 0.05% (WRMS)
- ±0.14% (DIN)

### Fast forward and rewind time

- Approx. 100 seconds with C-60 cassette tape

### Frequency response (Dolby NR off)

- **NORMAL**: 30 Hz ~ 17 kHz, ±3 dB
- 20 Hz ~ 18 kHz (DIN)

- **CrO₂**: 30 Hz ~ 18 kHz, ±3 dB
- 20 Hz ~ 19 kHz (DIN)

- **METAL**: 30 Hz ~ 19 kHz, ±3 dB
- 20 Hz ~ 20 kHz (DIN)

### S/N (signal level - max recording level, CrO₂ type tape)

- **NR off**: 57 dB (A weighted)
- **Dolby B NR on**: 66 dB (CCIR)
- **Dolby C NR on**: 74 dB (CCIR)

### Input sensitivity and impedance

- **LINE IN**: 60 mV/47 kΩ

### Output voltage and impedance

- **LINE OUT**: 400 mV/800Ω
- **HEADPHONES**: 125 mV/8Ω
  - (Load impedance 8Ω – 600Ω)

### GENERAL

- **Power consumption**: 20 W
- **Power supply**: AC 50 Hz/60 Hz, 230 V – 240 V
- **Dimensions (W×H×D)**: 430 × 135 × 300 mm
  - (16½" x 5½" x 11½")
- **Weight**: 5.0 kg (11 lb.)

**Note:** Specifications are subject to change without notice. Weight and dimensions are approximate.
**TROUBLESHOOTING OF DIRECT DRIVE CAPSTAN MOTOR**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The motor does not rotate.</td>
<td>1. No power supply. 2. The Hall element is not functioning. 3. The ceramic (or other) is broken</td>
</tr>
<tr>
<td>2. The motor does not rotate</td>
<td>1. The coil is broken. 2. The output of the Hall element is not functioning.</td>
</tr>
<tr>
<td>properly. (When pressed, it stops at certain angles. Sometimes it does not rotate even if power is ON.)</td>
<td></td>
</tr>
<tr>
<td>3. The motor is out of control.</td>
<td>1. The FG coil is broken.</td>
</tr>
<tr>
<td>4. Abnormal wow.</td>
<td>1. Same as those of the above problem</td>
</tr>
</tbody>
</table>

**Note:** Check the points marked with an asterisk (*) by connecting the FG coil to GND with a lead wire. (After the DD motor is turned off, do not touch the IC.)
**TROUBLESHOOTING OF DIRECT DRIVE MOTOR**

**OUTLINE OF THE DIRECT DRIVE MOTOR SYSTEM**

The capstan motor is actuated by the DD motor digital servo system. The FG pulse is generated after the detection of the zero crosspoint, and the reference signal generated from the quartz oscillator is compared with this FG pulse. From this comparison, the accelerated and reduced speed pulses are generated, causing the driving coil to function.

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**TROUBLESHOOTING OF DIRECT DRIVE MOTOR**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Check Points</th>
</tr>
</thead>
</table>
| 1. The motor does not rotate. | 1. No power supply (+12V). 2. The Hall element has failed (Current does not flow). 3. The ceramic (or crystal) does not oscillate. | • Check the voltage applied to the connector.  
  • Check the DC potential on IC201 pins $\mathbb{D} \sim \mathbb{D}$.  
  • Check the waveform of IC201 pin $\mathbb{D}$. |
| 2. The motor does not rotate properly. (When pressed, it stops at certain angles. Sometimes it does not rotate even if power is ON.) | 1. The coil is broken or not properly soldered. 2. Output of the Hall element is not proper. | • Check the conductance of the coil.  
  If normal, the resistances between IC201 pins $\mathbb{D} \sim \mathbb{D}$, $\mathbb{D} \sim \mathbb{E}$, $\mathbb{E} \sim \mathbb{E}$ will reach 20 ohms.  
  • Check the waveform of IC201 pins $\mathbb{D} \sim \mathbb{E}$. |
| 3. The motor is out of control. | 1. The FG coil is broken.                                                     | • Check the waveform of IC201 pin $\mathbb{D}$.  
  • Check if the FG coil is broken. |
| 4. Abnormal wow.              | 1. Same as those described for problem 2.                                     |                                                       |

**Note:** Check the points marked with an asterisk (*) by removing the DD motor control P.C.B. and then connecting IC201 pin $\mathbb{D}$ to GND with a lead wire. (After the DD motor control P.C.B. is removed, current will start flowing through the coil, heating the IC.)