

**Technical Bulletin**  
**No: 203 – Capstan Motor Start Problems**

**Model:** RS-2001/2002/2003/2004      **No:** 203  
**Subject:** Capstan Motor Starting      **Date:** 10-24-95

**Symptom:** The capstan shaft does not turn when:  
a) The cart machine power switch is moved to the ON position.  
b) A cart is inserted into the machine and the logic board is jumpered for motor run on cart insertion only.

**Solution:** Upgrade the servo board to Radio Systems current specifications or replace the servo board with one upgraded by Radio Systems. (Contact Radio Systems for board availability.)

**Procedure:**

1. Remove the bottom panel of the cart machine and locate the servo board.
2. Remove the four screws holding the servo board in place, slide it out of the machine and disconnect the cables attached to it.
3. If you have obtained an upgraded servo board from Radio Systems, skip to step 8.
4. Locate and remove transistors Q5, Q7 and Q9. Install new ZTX692B transistors (Radio Systems P/N 9685).
5. Locate and remove resistors R40, R41 and R42. Install new 1000 Ohm, 1/4 Watt, 5% resistors (Radio Systems P/N 1032).
6. Locate and remove resistor R43. Install a new 43 Ohm, 1/2 Watt, 5% resistor (Radio Systems P/N 9686).
7. Locate and remove resistors R44, R45 and R46. Install new 1000 Ohm, 3 Watt, 5% resistors (Radio Systems P/N 9687).
8. Reconnect the cables to the upgraded servo board, slide it back into the machine and reinstall the four mounting screws.
9. Replace the bottom panel, power up the machine and test it for proper operation.



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