CONVERSION OF CINEMATRONICS' DRAGON'S LAIR™ TO SPACE ACE™

The following procedure describes the conversion of Cinematronics' DRAGON'S LAIR™ to SPACE ACE™:

Tools Required: Box Head Screwdriver
1/8" Drill
Drill Motor or Hand Chuck

Parts Included:

<table>
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<tr>
<th>Qty</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>SPACE ACE™ Video Disc</td>
</tr>
<tr>
<td>2</td>
<td>Side Decals</td>
</tr>
<tr>
<td>1</td>
<td>Marquee Plexi</td>
</tr>
<tr>
<td>1</td>
<td>Control Panel</td>
</tr>
<tr>
<td>1</td>
<td>Annunciator Circuit Panel Assembly</td>
</tr>
<tr>
<td>1</td>
<td>Annunciator 16-Pin Ribbon Cable</td>
</tr>
<tr>
<td>1</td>
<td>Adapter Harness</td>
</tr>
<tr>
<td>1</td>
<td>Control Panel, Adapter Harness</td>
</tr>
<tr>
<td>1 set of 5</td>
<td>SPACE ACE™ ROM Set</td>
</tr>
<tr>
<td>2</td>
<td>#8 Screws</td>
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<tr>
<td>1</td>
<td>Manual</td>
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</table>

Procedure

1. Replace marquee.

   a. Remove the screws holding the top marquee retainer (fig 1-A).

   b. Remove the top marquee retainer (fig 1-B).

   c. Loosen the screws holding the bottom marquee retainer (fig 1-C).

   d. Remove the old marquee plexi (fig 1-D).

   e. Insert the bottom edge of the new marquee plexi into the bottom retainer.

   f. Replace the top marquee retainer and screws (figs 1-A & 1-B).

   g. Tighten the screws holding the bottom marquee retainer taking care to align the new marquee plexi properly (fig 1-C).
2. Install side art.

Note: A piece of side art has been included for each side of the cabinet. These decals are identical. There is no left or right. The new artwork is larger than the DRAGON'S LAIR™ side art and can be applied over the existing decals. For best results, we recommend removal of existing decal before application of new decal.

3. Remove control panel.
   a. Remove four control panel retaining bolts by removing wing nuts inside the cabinet (fig 1-E).
   b. Remove the control panel and disconnect the wiring harness.

4. Install ROMS.
   a. Open back door and set aside.
   b. Disconnect harness and ribbon cables from main circuit panel assembly being sure to note proper orientation (fig 2-A).
   c. Remove the main circuit panel retaining screw (fig 2-B).
   d. Remove the main circuit panel.
   e. Remove old ROMS (fig 2-C).
   f. Insert new ROMS in appropriate sockets using caution to ensure the notch or Pin 1 on each ROM faces the capacitor (fig 3).
   g. Adjust dip switch settings as required (table 1).
   h. Reinstall the circuit panel assembly.
   i. Insert the circuit panel retaining screw taking care to reattach the ground wire (fig 2-B).

NOTE: Do not reconnect the harnessing at this time.

5. Install video disc.
   a. Power up the game and depress the COVER OPEN switch on the disc player. The cover should open as soon as the disc player is in the reject position.
   b. Install the new SPACE ACE™ disc in the player ensuring that the data side (mirrored side) is oriented correctly. The correct orientation is:

   For PR 7280 (Brown Player): Data Side - UP
   For LD-V1000 (Black Player): Data Side - DOWN
6. Install annunciator board.
   a. Place the annunciator board assembly (fig 2-D) above the circuit plate assembly as shown in figure 2.
   b. Mark the mounting holes (fig 2-E). Drill shallow pilot holes for the mounting screws utilizing a 1/8" drill.
   c. Mount the annunciator board using the two #8 wood screws provided.

7. Install harnessing.
   a. Install short 16-pin ribbon cable from the main logic PCBA to the annunciator PCBA (fig 2-F).
   b. Reconnect the 24-pin dip ribbon cable connector to the main logic oriented as it was previously.
   c. Connect the 16-pin ribbon cable previously connected to the main logic PCBA at J3 to the annunciator PCBA at J2 (fig 2-G).
   d. Connect the 36-pin plug of the adapter harness (fig 4) to the main logic at J4.
   e. Connect the 36-pin receptacle of the adapter harness (fig 4) to the existing harness.
   f. Connect the 3-pin plug of the adapter harness to J4 of the annunciator PCBA.
   g. Route the 9-wire control panel adapter harness from J3 of the annunciator PCBA to the front of the game. Try to follow the main harness routing.

8. Install SPACE ACE™ control panel.
   a. Position the new control panel in the front of the game. Connect the old control panel and control panel adapter harnesses. (These connectors are keyed to prevent mis-installation.)
   b. Reinstall bolts and wing nuts (fig 1-E).

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These are the standard settings. For special options, please see appendix "C" of the Space Ace Manual.

For games with the LD-V1000 (Black) players all switches should be off except for BO of switch SW1.

For Games with PR7820 (Tan) players all switches should be off.