

LaserCon "Merlin-8000"

Installation Instructions

Design and Control Firmware Version 3.x - by Shaun D. Wood

The Merlin board is a player conversion board and ROM replacement for Cinematronics' Dragon's Lair or Space Ace (1983-'84 versions only). Once installed, you will be able to use a newer Pioneer Laserdisc player and select any of 5 different control romsets at boot up.

Supported Pioneer Replacement Players:

Preferred: LD-V8000 LD-V4400 LD-V4300D LD-V4200

Acceptable: LD-V2200 CLD-2600 CLD-2400

Installed ROM sets are:

Dragon's Lair – F2 (This is the final factory version)

Dragon's Lair Enhancement 2.1

Dragon's Lair Enhancement 2.1 – With prototype animation
(Limited Edition disc required)

Space Ace – A3 (This is the final factory version)

Space Ace Enhancement 1.0

* "Dragon's Lair Enhancement" and "Space Ace Enhancement" are the intellectual property of "The Dragon's Lair Project" and are used with permission. You can find more information here: <http://www.dragons-lair-project.com/tech/enhancements/dle.asp>

Merlin will allow you to play either "Dragon's Lair" or "Space Ace" in the same game cabinet. Simply install a Dragon's Lair disc in your Space Ace machine, or install a Space Ace disc in your Dragon's Lair machine, and select an appropriate ROM set.

Parts List:

Merlin board, Player control cable, Dip-Switch sheets and these instructions.



Installation Instructions:

1. Configure your new player:

All players must be configured for proper serial communication as follows:

**Baud Rate: 4800, No Parity, 1 stop bit, Data Length: 8 bits,
TxD terminator: <CR>.**

LD-V8000:

Connect the player to a TV or monitor. Press and hold the "DISPLAY" button while powering-on the player. Press "SCAN FORWARD" to reach Page-5 "**RS-232 SWITCH P-5**". Verify: Baud Rate: 4800, No Parity, 1 stop bit, Data Length: 8 bits

To make changes, press "STEP FORWARD" to highlight an item, then press "STEP REVERSE" to change the setting. Press "SCAN FORWARD" to reach Page-6 "**RS-232 SWITCH P-6**". Verify: TxD terminator: <CR>.

* Press "DISPLAY" to save your settings and exit.

LD-V8000 - Optional Setting: "freeze the video during a search operation"

Page-7: Memory Control

For "Original" blackout searches: Video Memory Mode: CONTROL DISABLE, Auto Memory: OFF

For "Freeze frame" searches: Video Memory Mode: CONTROL ENABLE, Auto Memory: ON. *Press "DISPLAY" to save your settings and exit.

LD-V4400:

Connect the player to a TV or monitor.

Press and hold the "DISPLAY" button while powering-on the player.

Press "SCAN FORWARD" to reach Page-3 (or 4) "**RS-232 SWITCH**"

Verify: Baud Rate: 4800, TxD terminator: <CR>.

To make changes, press "STEP FORWARD" to highlight an item, then press "STEP REVERSE" to change the setting.

* Press "DISPLAY" to save your settings and exit.

LD-V4200:

Open the cover on the front of the player. Set all switches - OFF (up).

LD-V2200 & CLD-2400:

On the back of the player, set both dip-switches – OFF (up)

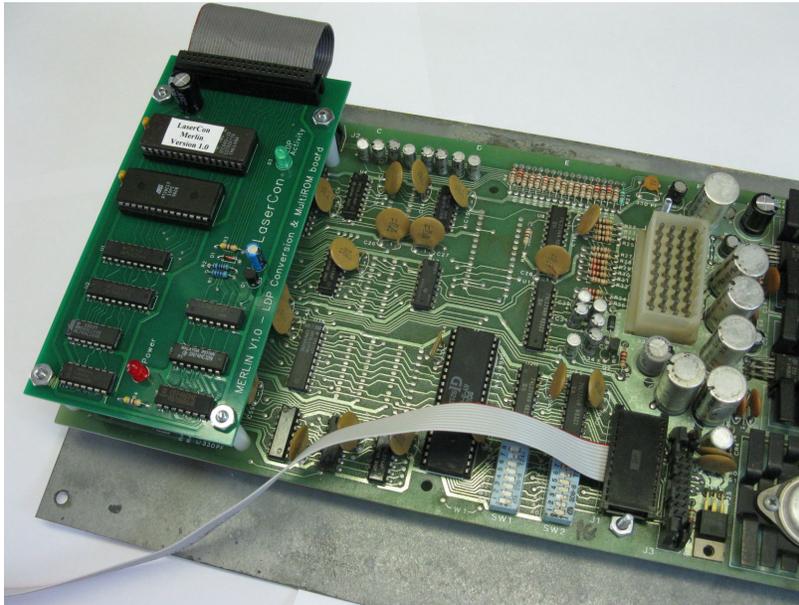
CLD-2600:

On the back of the player, set dip-switches 1 & 2 – OFF (up)

2. Install the new player into the cabinet:

I will leave the means of supplying AC power to your player up to you. You can adapt the original supply wire to your new player, or run the wire separately to outside power. If you need help with this, feel free to email me.

3. Remove the main board from the cabinet. Disconnect the 40-pin ribbon cable and remove the four nuts holding the original ROM board in place. Reverse the process to install the new Merlin board.



4. Set Dip-Switches on the main board:

Use the “Dip-Switch Set-Up Chart” and the included settings sheets to set your board's dip-switches. **The original settings charts from the manuals are no longer valid when using the Merlin board.** Keep the new dip-switch charts within the machine.

***Note:** The circuit board is printed with A0-A7 and B0-B7.
The switch banks are printed with 1-8.

Ignore the incorrect #s printed on the switch banks.

5. Install the replacement player control cable:

Remove the original player control cable and install the replacement cable. Please take notice of the orientation in the photo.



Re-install the board into the cabinet.

6. Connect the control, video and audio cables to the player.

In some cases, you may need a "BNC to RCA" adaptor to connect the video.

(Radio Shack #278-250, <http://www.radioshack.com/product/index.jsp?productId=2104079>)

Operation:

For the first start-up of your machine with the Merlin board, be sure to have dip-switch B7:ON to enable the ROM selection menu. It's OK to leave the selection menu active at all times.

The default game version (The last version played, or DL-F2 for shipping), will be displayed on-screen and in player-2's score. A ten second timer (displayed in the credits) will begin to tick down. At this time, you may press "sword" to begin the default game immediately, or wait for the ten seconds to elapse for the default game to start. Moving the joystick up or down will change the default game setting. After changing the game setting, press "sword" to start the game.

For a "Fixed" ROM set: With the selection menu turned ON, select and *start* the desired game. Then power off the machine and set B7:OFF.

The selected game version will always start at power-up without the menu.

Anytime the attract sequence is playing: (firmware 3.1 or later)

You may change the game version by holding LEFT + SWORD/FIRE for 4 seconds.

This only works while the attract is playing, not during game play, nor during "deposit coins" type screens. The Game will stop, the ROM selection will be visible as described above.

Important Information

DLE2.1 has been provided twice: one version for Standard play, and another with prototype animation when using the newer 2003 disc.

*Note- a prototype disc (2003) can be operated in either Standard or Prototype mode. Do not select "Prototype Animation" if you have a standard (1983) disc installed. If you do, no harm will be done, but the game will fail to start.

If you have any questions, comments or suggestions, contact me at shaun@wood1st.com or by posting a note on the message board at the Dragon's Lair Project website. <http://www.dragons-lair-project.com/>