

LaserCon "Arthur"

Installation Instructions

Design and Control Firmware V6.x - by [Shaun D. Wood](#)

If using Dexter, Read "[Instructions for setting up your MultiGame](#)" available on the Arthur-Dx page of the LaserCon website before continuing with this document.

The Arthur board is a reproduction main logic board for Dragon's Lair and Space Ace, to be used in arcade machines made by Cinematronics in 1983-'84.

The Arthur board comes ready to play with ROM sets for Dragon's Lair, Dragon's Lair II, Space Ace, Cliffhanger and Super Don Quixote. Any game can be configured to run alone, or as a changeable multi-game system.

The Arthur board can be configured to operate with 3 different systems of laserdisc players. Choices are...

Arthur-1000: for the original Pioneer LD-V1000, or PR-7820.

Arthur-8000: to work with the upgraded Pioneer LD-V8000, or LD-V4400.

Arthur-Dx: to work with the solid state Dexter laserdisc replacement player.

When you purchase your Arthur board, you will select one of the three versions above, and the appropriate EPROM will be installed. If you later wish to change your player choice, simply contact me at the LaserCon website for a replacement EPROM, or Download the binary file from the Arthur website.

Installed ROM sets:

Dragon's Lair – Original factory game – Revision-F2

Dragon's Lair – Enhanced – Revision-G (Dexter version only)

Dragon's Lair II Time Warp

Space Ace – Original factory game – Revision-A3

Cliff Hanger

Super Don Quixote (Dexter Version only)

Parts List: The Arthur CPU board with Mounting Plate, Dip-Switch sheets, and these instructions.

Set Dip-Switch options First:

Set Arthur's dip-switches according to your liking using the included settings chart.

*Note - The circuit board is printed with A0-A7 and B0-B7.

The switch banks are printed with 1-8.

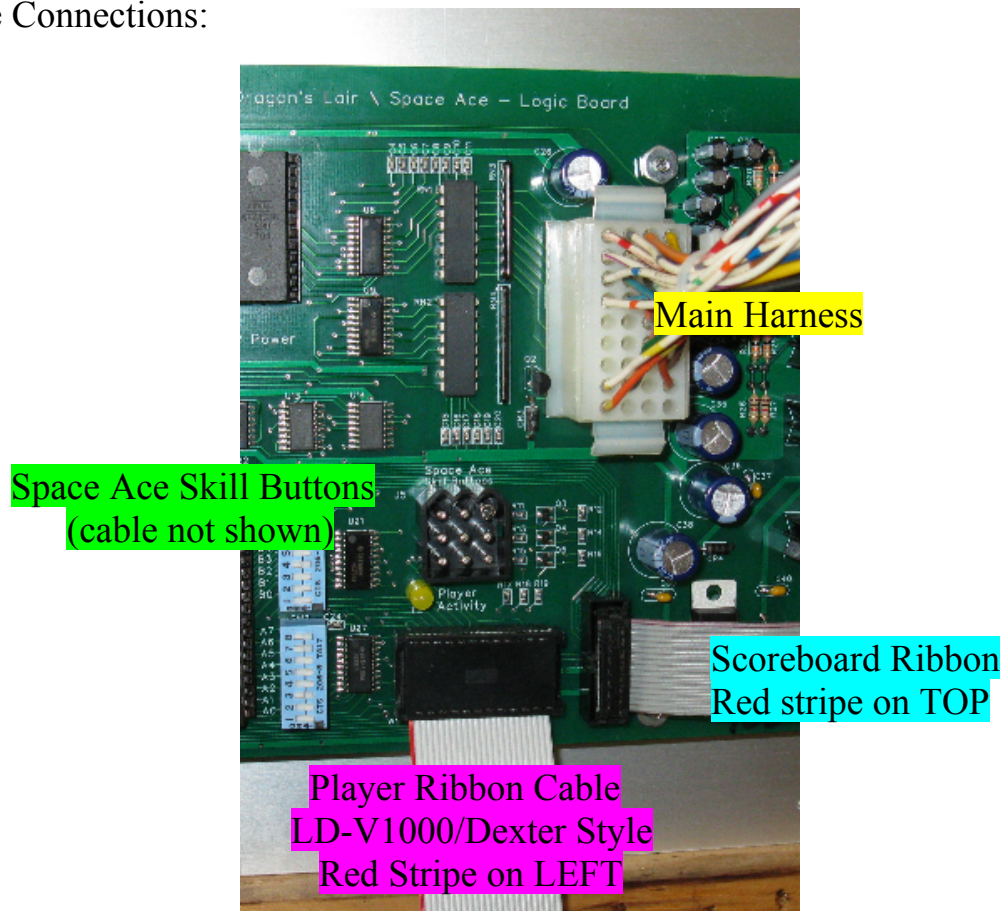
Ignore the incorrect numbers printed on the switch banks.

Installation:

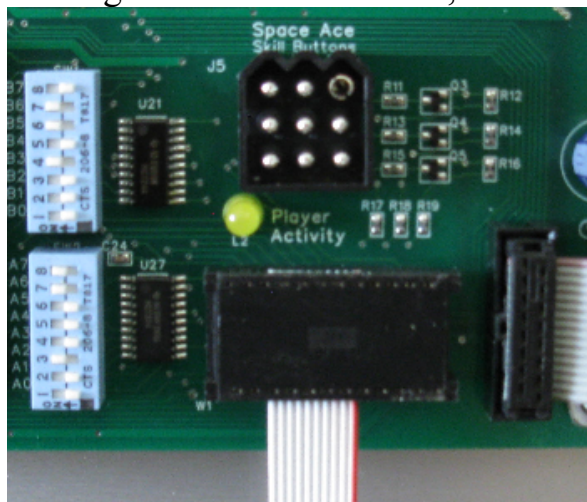
1. If your machine has an original CPU board installed, disconnect all cables, remove the screw holding the mounting plate to the cabinet. Remove the old board.

Place the Arthur CPU board in the cabinet. Secure the mounting plate and the green ground wire to the cabinet using the screw removed earlier.

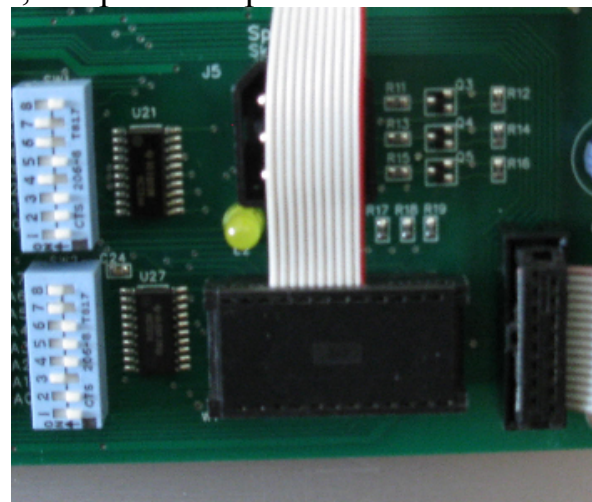
2. Make Connections:



If using a Pioneer LD-V8000, LD-V4400, Keep Red stripe on the RIGHT



New "Arthur" V8000 ribbon



Older "Merlin" V8000 ribbon

3. Space Ace Skill Buttons: The control panel on a Space Ace machine has an extra set of "Skill" option buttons on the right side. These buttons have a 9 wire cable and connector which, on an original machine, connect to a small add-on board (the annunciator board), mounted just above the main board.

Arthur will work perfectly with an annunciator board.

If you do not have the annunciator board, you may plug your Space Ace skill buttons directly into the Arthur board, using the 9-pin connection, and get the exact same functionality.

4. Feedback Volume Control: Arthur includes a volume control for the feedback beeps and buzzes produced by the game. Make certain that your volume pot is set at mid-range for normal beep volume.



5. Player Preparation:

Dexter - The Dexter board is usually purchased with the "Dragon's Lair Trilogy" of laserdisc images, which include the discs for Dragon's Lair, Space Ace and Dragon's Lair 2.

However, you most likely will need to update your Merlin Menu disc, and you may want to add the other games. Follow these instructions...

http://wood1st.com/LaserCon/Docs/Instructions_4_MultiGame.pdf

Pioneer LD-V8000/LD-V4400 - Baud rate is auto configured with V2 and later of the Arthur-8000 firmware.

Connect the A/V cables, Player control ribbon, and supply AC power to the player.

Operation:

Upon power up, Arthur will begin a quick diagnostics. When finished you will hear a soft beep. Information about your player connection will be momentarily displayed in Player One's score area.

If any problems are found, an error code will be displayed on the scoreboard, otherwise the default game will scroll through the Player two score area.

A second beep will be heard, and the results of the board's clock test will be displayed. Finally, the third "chime" will be heard, and the game will begin.

You may change the game by holding LEFT + SWORD/FIRE for 2 seconds. This only works *while the attract is playing*, not during game play. The game will stop, and the game selection menu will come on. Move the joystick to select the desired game. Press Sword/Fire to start the game.

High Scores

High scores require the use of a Pioneer LD-V8000, LD-V4400 or LD-V4300D laserdisc player, and will not be displayed properly if using a player with a lower model number.

High score save/display is available only for DL-F2, DLII and SA-A3.

*To Reset High Scores, start the machine with switch A6 off. Power off and set A6 as you like.

Error Codes

If your game fails to start, check the Player-1 score area for error codes:

E1 - Command/Ready signal from player remains HIGH

E2 - Status signal from player stays LOW

E3 - Status signal from player stays LOW after a HIGH

E1-E3: Check ribbon cable for proper connection (see image above).

Check SD card on Dexter is fully inserted and Dexter is powered on.

Hold down "mode" on Dexter for 5 seconds (set Dexter to Auto Detect)

E4 - LD I/O error (U20, U21)

(Main control board is defective, Player ribbon installed backwards)

E5 - Dexter version error - (Use Dexter Manager to update Dexter firmware)

E61 - No Merlin menu disc V2 - (Download and install Merlin menu V2 disc)

E7 - No game discs loaded in Dexter

E8 - No usable game discs loaded in Dexter

Contact <http://laserdisc-replacement.com/> to obtain DL and SA laserdisc images.

E9 - No INT or RTC signal. - (Main control board is defective)

E10 - RAM test failure - (Main control board is defective)

E11 - Dexter failed to switch to SuperMode communications

(Check that Dexter is powered on simultaneously with the board. Place Dexter into player

Auto-Detect by holding the MODE button for 5 seconds)

E20-E27 - EPROM checksum failure - (Replace EPROM)

E30 - Communication failure with laserdisc player. (Check ribbon cable)

If you have any error codes, questions, or comments, contact me at

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