

LaserCon

LDP Conversion Card for Dragon's Lair & Space Ace Instructions for European Space Ace Games using a NTSC disc

Version 1.0

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LaserCon is an adaptor card for the replacement of the original laser disc player installed from the factory to a newer, more reliable player.

These instructions are for installation to the arcade version of Space Ace, which was manufactured by Atari or Sidam for use in Europe under license by Cinematronics, and using a 1983 or 1991 NTSC laserdisc.

Supported Replacement Players

Pioneer: LD-V8000, LD-V4400, or LD-V4300D

Parts List

LaserCon board, Main-board interface ribbon cable, Player interface serial cable.

Also required but not included with LaserCon: NTSC to PAL converter device and replacement video cables.

Installation Instructions

1. Configure your new player:

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

Baud Rate: 9600 No Parity, 1 stop bit, Data Length: 8 bits,

TxD terminator: <CR>.

Press and hold the "DISPLAY" key while powering on the player.

Press "SCAN FORWARD" to change pages.

Verify: Baud Rate: 9600, 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.

2. Set Dipswitches:

If your using the 1983 disc

On LaserCon, set switch	1	2	3	4
	ON	OFF	OFF	OFF

If your using the 1991 disc

On LaserCon, set switch	1	2	3	4
	OFF	OFF	OFF	OFF

LaserCon Dip-switch settings (Ver 5.2 firmware)

Program Space	Switch 1	Switch 2	Switch 3	Switch 4
European Space Ace with 1991 NTSC disc	0	0	0	0
European Space Ace with 1983 NTSC disc	1	0	0	0
European Dragon's Lair/Space Ace player set at 4800 baud	0	1	0	0
European Dragon's Lair/Space Ace player set at 9600 baud	1	1	0	0
Space Ace (U.S.) using 1991 disc LD-V1000 mode	0	0	1	1
M.A.C.H. 3 PR-8210 mode	1	0	1	0
Dragon's Lair / Space Ace (U.S.) LD-V1000 mode	0	1	1	1
Dragon's Lair / Space Ace (U.S.) PR-7820 mode	1	1	1	0

3. Install the LaserCon card:

- a. Remove the original player and interface cable.
- b. Find a clear area near the main board to mount the LaserCon card.
(Mark the hole locations with a pencil and pre-drill 1/16" pilot holes. Mount the card to the backboard with 1" screws and 1/2" spacers.)
- c. Attach the alligator lead wire to +5Volts.
(A good point could be anode of diode CR6, middle left of the board, or the positive leg of any disc capacitor.)
- f. Install the player into the game cabinet.
(The original player took its power supply from a 3-pin molex female connector on the Atari power supply. The supply provided 120V AC to the player. Most European players run on 240V AC. Check to see if your player has a voltage selector switch that it is set for 120V AC operation. A custom power cable to the player may be needed.)
- g. Connect the audio and video connectors.
Install a NTSC to PAL video converter device.
Remove the original SCART video cable.
Install a new video cable from the laserdisc player video out to the NTSC input of the video converter device. Connect another video cable from the PAL output of the video converter device to the video input on the main board. Provide power to the NTSC to PAL converter.
- h. Connect the supplied serial cable from LaserCon's CN2 to the player's 15-pin connector.

Serial Cable Pin-Out

The cable provided is custom made. You **cannot** use any other serial cable. If you need to replace the cable for any reason, the pin connections are as follows...

	9-pin Female		15-pin Male	
GND	pin-1	-----	pin-11	GND
TxD	Pin-2	-----	pin-10	RxD
RxD	Pin-3	-----	pin-9	TxD

Operation

Power on your machine.

The red LED should light, indicating that the LaserCon board is properly powered.

After a one second delay, the “LDP” LED should light, indicating that LaserCon has established serial communication with the player.

The Player should now begin to spin-up and play. The “LDP” LED will go dark, indicating that the player is busy.

Once the game is up and running, all three LEDs should remain lit, with only momentary blinking of the “LDP” LED during searches.

Enjoy!

Disclaimer

Use at you own risk. By accepting this product, user also accepts all responsibility for the use of this product and releases its manufacturer, Shaun D. Wood, from all possible responsibilities for damages of any kind that the user may incur due to use or misuse of this product.

And Finally...

If you are having any trouble installing your LaserCon card, please contact me immediately via email. I will help you get it working.

LaserCon is an open source project. If you want to write code for other games or players and would like to have copies of the schematics and firmware files, contact me, or visit www.wood1st.com/lasercon. Please consider donating your work to be included in future releases of LaserCon.

If you need any help or have any questions, comments, or suggestions, please contact me: shaun@wood1st.com.