LaserCon
LaserDisc Player Conversion Card
Instructions for LD-V1000 based Games

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LaserCon is an adaptor card for the replacement of the laser disc player used in arcade lasergames. These are general installation instructions for any game configured to use the Pioneer LD-V1000 laserdisc player.

Supported Replacement Players:
Pioneer   -   LD-V8000, LD-V4400, LD-V4300D

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

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>.

LD-V4400, LD-V4300D:

    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 "RS-232 SWITCH P-3"

    Verify: Baud Rate: 9800, 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-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: 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.
Press "SCAN FORWARD" to reach Page-6 "RS-232 SWITCH P-6"
Verify: TxD terminator: <CR>.

LD-V8000 - Optional Settings:
P-7: Memory Control (The LD-V8000 player has the ability to hold and "freeze"
the last displayed frame of video during a search operation. Thereby eliminating
the blackout screen between scene searches. Some people prefer this mode, while
others consider it a change from the "original" feel of the game.)
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.

2. Install the player into the game cabinet.
Connect AC power, audio and video cables as usual. Connect the included serial cable to
the player's RS232 port.

3. Install the LaserCon card:

Find a mounting location within the cabinet that is convenient for power, serial
and interface cables to reach their connections.

Using your LaserCon card as a template, mark and drill pilot holes in the cabinet
near the main board, being careful not to drill all the way through. Be aware of
the length of the ribbon cable. Mount the LaserCon card using wood screws and
spacers.

Connect the original player ribbon cable to the LD-V1000 adaptor, and connect
the adaptor to LaserCon's "CN1". (See figure 1)
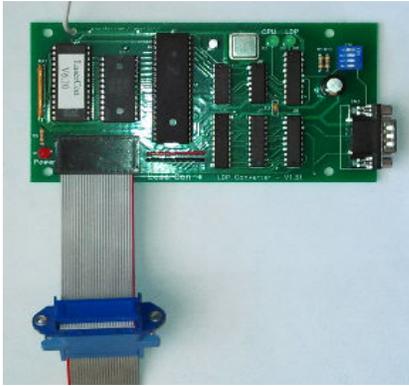
Figure 1 - LD-V1000 Adaptor

Attach the alligator lead wire to +5Volts.

(The +5V location is different for each game. Please use schematic diagrams and a voltage meter to find a proper location. If your unsure, email me for help).

Connect the serial cable from the player to LaserCon's CN2 connector.

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

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        9-pin Female                    15-pin Male
GND         pin-1 -------------------- pin-11      GND
TxD         Pin-2 -------------------- pin-10      RxD
RxD         Pin-3 -------------------- pin-9       TxD
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3. Set Dipswitches:

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

LaserCon Dip-switch settings (Ver. 7.0 firmware)

SW 1	SW 2	SW 3	SW 4	Original Player	Games	Baud Setting for new player
0	0	0	0	PR-7820	Dragon's Lair, Space Ace	4800
0	0	1	1	LD-V1000	Dragon's Lair, Space Ace (required if using MultiROM) Thayer's Quest, Interstellar	4800
0	1	0	1	LD-V1000	Dragon's Lair, Space Ace Thayer's Quest, Super Don Quixote Esh's Aurunmillia, Interstellar, Casino Strip, Astron Belt Cobra Command, Galaxy Ranger	9600
0	1	1	1	LD-V1000	1983 Space Ace using a 1991 disc	4800
1	0	0	0	PR-8210 LD-1100	Cliff Hanger, Cobra Command, MACH3, Goal to Go, Us vs Them, Quarter Horse	4800
1	0	1	0	22VP932	Dragon's Lair, Space Ace (Europe)	9600
1	1	0	0	22VP932	Space Ace with 1983NTSC disc (Europe)	9600
1	1	1	0	22VP932	Space Ace with 1991NTSC disc (Europe)	9600

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.

After a short time, the "CPU" LED should light, indicating that LaserCon has received the "PLAY" command from the main board.

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.