

LaserCon

Laser Disc Player Conversion Card

Design and Firmware by Shaun D. Wood

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"M.A.C.H.-3" and "Us Vs. Them" Installation Instructions

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 apply to MACH-3 and Us Vs. Them installation.

Parts List

LaserCon board, Replacement Player Interface Cable and these Instructions.

Supported Replacement Player: Pioneer LD-V8000

The LD-V8000 is the only supported replacement player for use with M.A.C.H.3.

This is because of its ability to turn off the Drop Off Compensation and Sync signal during a search.

The MACH3 control board uses this loss of signal to determine that a search has occurred.

1. Verify your LaserCon board is ready for 8210/LD-1100 use.

Version 1.X of the LaserCon LDP Conversion board was not configured to work with games using the the PR-8210/A or LD-1100 Laserdisc players. If you have one of these earlier boards and wish to modify it for use with the PR-8210, download and follow these instructions first...

If your game uses:

IR remote at the front of the player: http://wood1st.com/LaserCon/Docs/LC_Conv8210IR.pdf

A direct wire into the back of the player: http://wood1st.com/LaserCon/Docs/LC_Conv8210plug.pdf

If your LaserCon is properly configured for PR-8210 use, then continue.

Installation Instructions

1. Configure your LD-V8000:

The player must be configured for proper serial communication as follows:

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

Connect the player to a TV or monitor.

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

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

Press “SCAN FORWARD” to reach Page-3
Set “SQUELCH” to “No Video”, Set “DOC CONTROL” to Off

Press “SCAN FORWARD” to reach Page-5 “RS-232 SWITCH P-5”
Set: Baud Rate: 4800, No Parity, 1 stop bit, Data Length: 8 bits

Press “SCAN FORWARD” to reach Page-7 “MEMORY CONTROL P-7”
Set “VIDEO MEMORY MODE” to “Control Disable”
Set “AUTO MEMORY” to Off

2. Install the LD-V8000 player into the game cabinet.

Attach the 15-pin connector of the interface cable to the back of the player.

Attach “Video Out #1” to J18 on the small filter board.

Attach “Audio Out (3L)” to J20 on the small filter board.

Attach “Audio Out (4R)” to J24 on the small filter board.

Plug AC power into the cabinet’s player outlet.

Make sure that the player’s power switch is pressed in (ON).

3. Set Dipswitches:

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

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

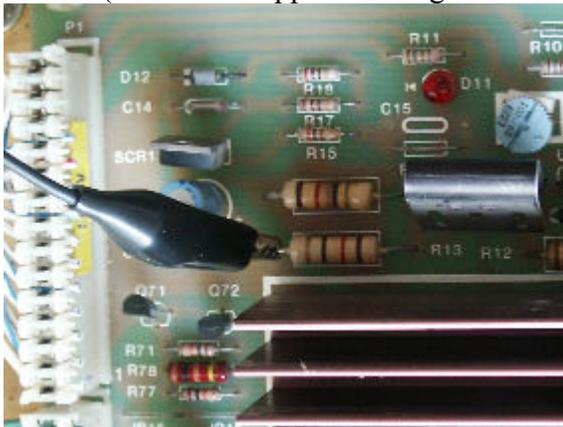
4. Install the LaserCon card:

Find a clear area on the back panel, near the Power Supply 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.

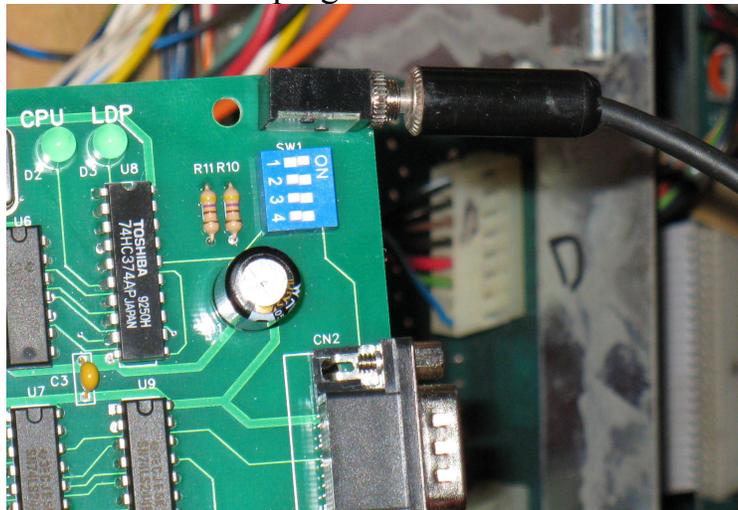
Attach the alligator lead wire to +5Volts.

You can attach to any point supplying +5V power that you like. My recommendation is to **attach to the leg of resistor R13 on the side closest to connector P1 of the power supply board.** (Ground is supplied through the interface cable.)



Direct-Wire Control install:

Plug the 3.5mm control plug into the 8210 Jack on the LaserCon board.



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

Note: This is a custom cable. The pin connections are as follows...

LaserCon	9-pin Female	15-pin Male	Player
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 board is properly powered.

After a one second delay, the "LDP" LED will flicker, indicating that LaserCon has established serial communication with the player.

After the game displays "Please Standby", the "CPU" LED will repeatedly flicker, indicating that LaserCon is receiving the "PLAY" command from the main board. This will continue until the player finishes spin-up, and play begins.

Once the game is up and running...

The red "POWER" LED will remain lit,

The green "CPU" LED will blink when receiving control commands.

The green "LDP" LED will blink when sending commands to the player.

Other Information

CN1 is not used for M.A.C.H.3.

If you wish to use your LaserCon card in other games, you will need to obtain the proper interface cables. You can contact me for these parts.

Disclaimer

Use at you own risk. By accepting this product, you also accept all responsibility for the use of this product and release its manufacturer, Shaun D. Wood, from all possible responsibilities for damages, or difficulties, that the user has incurred due to use or misuse of this product.

And Finally...

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

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