Sullivan Bluth's

DRAGON'S LAIR II™

Leland
CORPORATION

DRAGON'S LAIR II

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Part Number B-701-00030-00

INTRODUCTION—

Welcome to the growing number of value conscious people
who operate Leland Corporation products. We are proud of
the advanced engineering and quality of each product we build.

Please take a few moments to read through this manual. It
has been designed to acquaint you with the features of your
new "Dragon's Lair II™"game and to help you make the most
profit from this machine.

When it comes to service, remember that your Authorized
Leland Distributor knows your game best and is dedicated to
your complete satisfaction. He can provide quality parts,
service, and any other assistance you may require.

THE LELAND CORPORATION—

Please leave this owner's manual in the game at the time of
resale. The next owner will also need this important information.

**All information and specifications in this manual are
current at the time of printing. However, because of the
Leland Corporation's policy of continual product improvement,
we reserve the right to make changes at any time without notice.**

NON-LELAND REPLACEMENT PARTS NOTICE—

The Leland Corporation recommends the use of genuine
Leland Corporation parts when replacing any malfunctioning
component or assembly in this game. For safety and reliability,
The Leland Corporation does not recommend or authorize any
substitution of parts or modifications of Leland equipment. Such
alterations may adversely affect game play or cause serious injury,
and will void your warranty. Unauthorized parts and/or modifications
may also void FCC compliance.

FCC WARNING—

This equipment generates, uses, and can radiate radio frequency
energy and if not installed in accordance with the Owners Manual,
may cause interference to radio communications. This game has
been tested and found to comply with the limits for a Class "A" computing
device pursuant to subpart "J" of part 15 of the FCC rules, which are
designed to provide reasonable protection against such interference
when operated in a commercial environment. Operation of this
equipment in a residential area is likely to cause interference, in which
case the user, at his own expense, will be responsible to correct the interference.

MAINTENANCE AND UPKEEP—

Maintaining your Dragon's Lair II™ game is of utmost importance
in order to enjoy steady earnings. A dirty cabinet, sticky
coin mechanism, or poorly adjusted monitor, can be the cause of
an abrupt drop in revenue.

The following are recommended procedures to follow when
servicing your machine.

EVERY COLLECTION---

Make sure that the cabinet and especially the control panel
and monitor are clean and free of gum, grease, and dirt.

Play the game. Check the joystick and buttons for proper response.

NOTE: Be sure to adjust, clean, or replace any marginal switches.

Examine the monitor to insure that the picture is "rich" and inviting.

ONCE A MONTH---

Check the inside of the cabinet for dirt and dust.
HINT: Carry a portable "Dustbuster"-type vacuum.

Confirm proper adjustment of game volume, brightness,
and contrast controls.

Check the screen corners for "rainbows" or color "fringing."
This can indicate a need for degaussing. Your game is equipped
with an automatic degaussing circuit which operates when AC
power is applied. This will take care of most situations without
operator attention. If the game is moved (or subject to mechanical
shock) with the power on, supplemental degaussing may be needed.

Look for proper fluorescent lamp operation. The reduced brightness
caused by one inoperative bulb is highly noticeable. Check coin slot
lamps and coin mechanisms, clean or lubricate if required. To replace
coin lamps use 6 volt type GE259 or equivalent.

Be sure to keep the Laser Disc Player clean and free of dust and dirt.
Before transporting the game, remove the Laser Disc from the player.
See the player instruction manual, and subsequent pages of this manual,
for additional Laser Disc information.

LASER DISC PLAYER SETTINGS---

Your game is shipped with the Laser Disc Player installed and configured.
The only operator assembly required is unpacking and inserting the Laser Disc
into the player. This requires powering up the game and pressing the
"open/close" button on the player front panel to extend the disc loading platform.
Holding the Laser Disc by the edges only, carefully insert it into the recess in
the extended platform label side up. Press the "open/close" button again to
retract the loading platform.

If the player is removed or replaced, before re-installing it check the rear panel
configuration switches for proper settings.

> For Philips brand machine:
> 1. Set the "Replay" button to "Off."
> 2. Set the "Baud rate" button to "9600."
>
> For Sony brand machine:
> 1. Use a small screwdriver or similar tool
> to set the four numbered slide switches
> labeled "baud rate" as follows:
>
> #1- down #2- down #3- down #4- up

See the Laser Disc Player manual for additional information regarding handling
and care of the Disc and Player.

GENERAL TROUBLESHOOTING

GAME CONTROLLER CIRCUIT BOARD—

The Controller Assy is provided with seven diagnostic LED indicators.
The relationship between circuit board nomenclature, and LED functions are:

D1 = ALE (Address Latch Enable), On during normal operation.

D2 = Watchdog Timer, Blinks at approximately 2 HZ.

D3 = +5VDC (Logic Power Supply)

D4 = Transmit Data Comm1, Not used.

D5 = Receive Data Comm1, Not used.

D6 = Transmit Data Comm2, To Disc Player.

D7 = Receive Data Comm2, From Disc Player.

Also installed on the Controller board is **Logic Reset Pushbutton, S1.**

The active Comm Port, (Comm2) employs the standard RS-232 protocol
for communication with the Laser Disc Player. See subsequent manual sections
for more information about the serial interface.

If you require a mechanical coin counter, connections are provided on J16
for a 12 Volt type. Pins 2 and 3 are 12VDC normally high, pins 1 and 4 pulse
to Ground for coins dropped. Voltage spikes are clamped by diodes D12 and
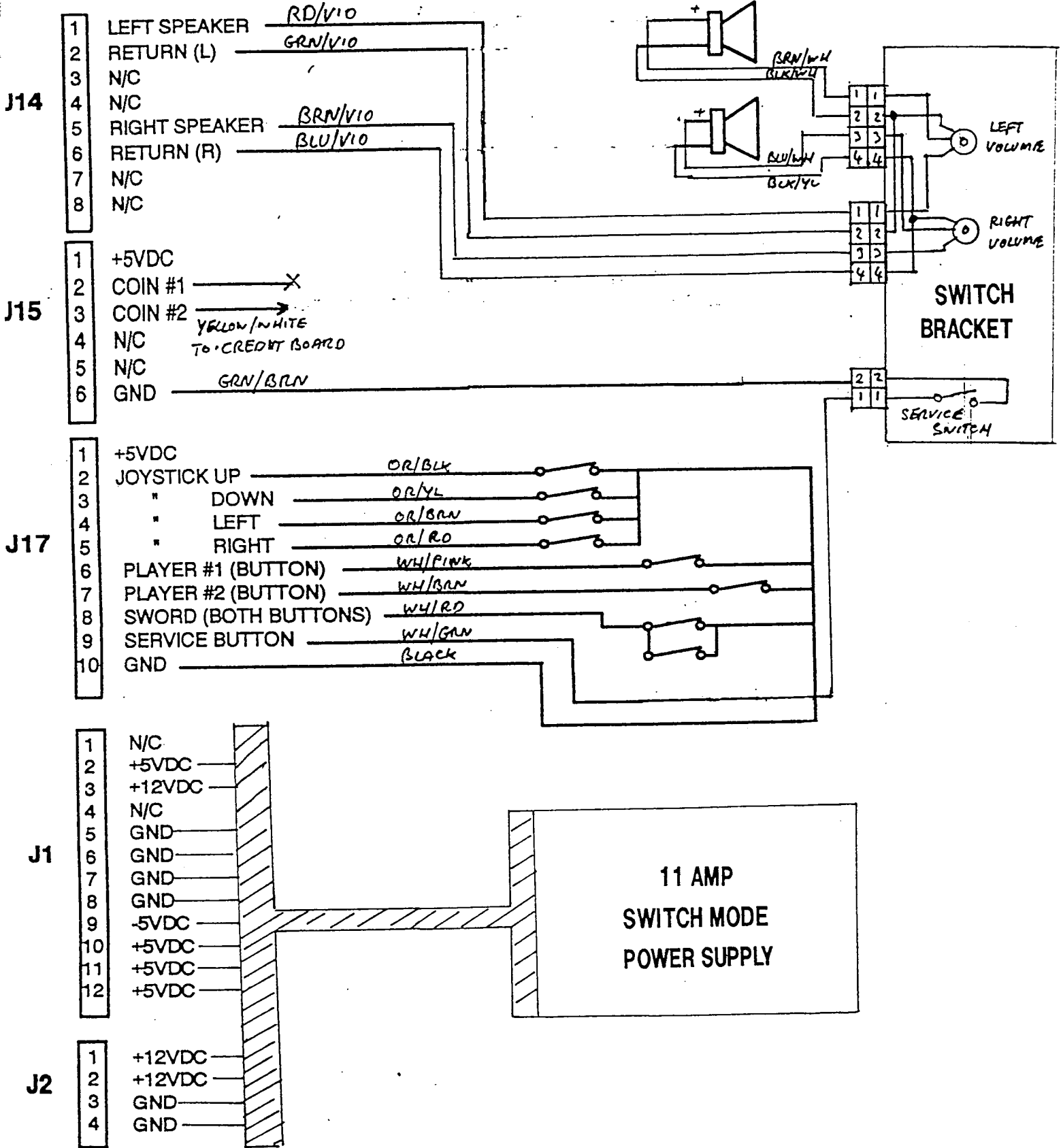D13, but it is prudent to install a diode across the coil of the mechanical counter.

Audio levels are adjusted by two potentiometers mounted on the top edge
of the board, (Left and Right stereo channels marked "L" and "R"). When
adjusting game volume, "balance" both controls to maintain proper stereo imaging.

POWER SUPPLY—

Depending upon which model you have, the AC Mains protective device is
either a discrete 5AMP fuse (3AG type) or a combination circuit breaker/on-off switch.

Connect this game only to a grounded three-wire outlet which provides 240 Volts,
50 Hz. Do not use AC Mains of a different voltage or frequency. If you have only a
two-wire outlet, we recommend that you have a licensed electrician install a
grounded outlet. This will reduce the possibility of a player receiving a shock.

ONTROLLER BOARD CONNECTOR WIRING —

J14

1	LEFT SPEAKER	RD/VIO
2	RETURN (L)	GRN/VIO
3	N/C	
4	N/C	
5	RIGHT SPEAKER	BRN/VIO
6	RETURN (R)	BLU/VIO
7	N/C	
8	N/C	

BRN/WH
BLK/WH

BLU/WH
BLK/YL

LEFT VOLUME

RIGHT VOLUME

SWITCH BRACKET

J15

1	+5VDC	
2	COIN #1	
3	COIN #2	
4	N/C	YELLOW/WHITE TO CREDIT BOARD
5	N/C	
6	GND	GRN/BRN

SERVICE SWITCH

J17

1	+5VDC	
2	JOYSTICK UP	OR/BLK
3	" DOWN	OR/YL
4	" LEFT	OR/BRN
5	" RIGHT	OR/RD
6	PLAYER #1 (BUTTON)	WH/PINK
7	PLAYER #2 (BUTTON)	WH/BRN
8	SWORD (BOTH BUTTONS)	WH/RD
9	SERVICE BUTTON	WH/GRN
10	GND	BLACK

J1

1	N/C
2	+5VDC
3	+12VDC
4	N/C
5	GND
6	GND
7	GND
8	GND
9	-5VDC
10	+5VDC
11	+5VDC
12	+5VDC

11 AMP
SWITCH MODE
POWER SUPPLY

J2

1	+12VDC
2	+12VDC
3	GND
4	GND

P3

1	GND
2	TRANSMIT DATA
3	RECEIVE DATA
4	RTS
5	CTS
6	DSR
7	GND
8	DCD
11	HSYNC
18	VSYNC
20	DTR
22	RI

J12

1	AUDIO IN "RIGHT"
2	SHIELD

J13

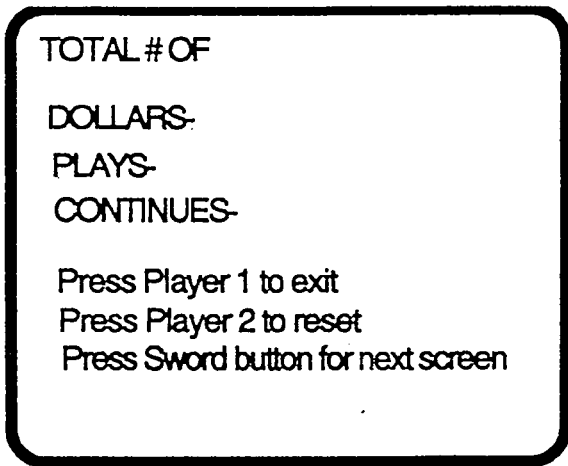|	
1	AUDIO IN "LEFT"
2	SHIELD

BOOKKEEPING AND DIAGNOSTIC SCREENS—

Dragon's Lair II records bookkeeping information in internal memory. Game software also provides a set of helpful hardware tests. To access these features, switch to the Service Mode.

> To place the game in Service Mode:
>   1. Open the Coin Door, press and hold the "Service Button".
>   2. Press the "Player 1" button on game front panel.
>   3. Release both buttons.

The first screen will be displayed as indicated below:

```
TOTAL # OF

DOLLARS-
PLAYS-
CONTINUES-

Press Player 1 to exit
Press Player 2 to reset
Press Sword button for next screen
```

This first screen can be used for "period" totals, (i.e. between collections). Pressing the "Player 2" button returns all three counters to zero.

A NOTE ABOUT SCREENS:

The following series of screens may vary slightly, depending on the revision level of your Laser Disc. Differences are basically cosmetic and the items described in subsequent pages are functionally the same in all versions. You may find the "partitioning" of individual functions between screens, or the order of screens, to vary from your games Service Mode display. These differences are necessary to accommodate Laser Disc Players from several manufacturers.

Most screens contain instructions for using them on the bottom few lines. When the "Sword Button" is mentioned, either right or left button will work.

SCREEN
#2

Lifetime # of

DOLLARS-
PLAYS-

Press Player 1 to exit
Press Sword Button for next screen

Cumulative (lifetime) totals.

SCREEN
#3

Attract Sound-
Free Play-

Joystick up/down to select
Joystick right = ON
Joystick left = OFF

Press Player 1 to exit
Press Sword Button for next screen

Toggels for Attract Mode
audio and Free Play.

SCREEN
#4

Average play time =
Difficulty   1 to 4

Press Player 1 to exit
Press Sword Button for next screen

Game time average
continuously updated.

Difficulty level adjustment
is not implemented in this
version of the game.

SCREEN
#5

Player Controls test

Move joystick and hit buttons
one at a time for feedback
Press Player 1 and Player 2 to exit

The "feedback" sounds
are superimposed on
both stereo channels.

SCREEN
#6

Move joystick to start sound test

Press Player 1 to exit
Press Sword Button for next screen

This will produce a stream
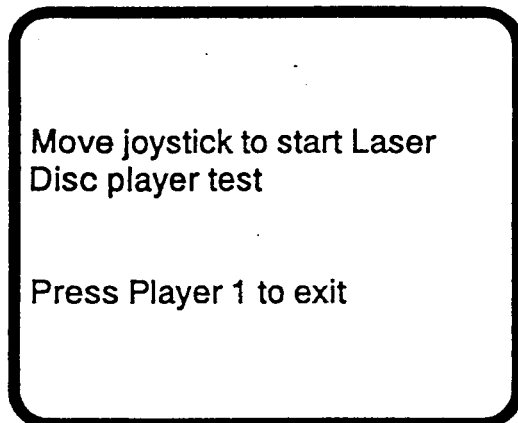of Controller generated
sounds.

SCREEN
#7

HIT PLYR 1
Continue
.50 3 LIVES   .25 1 LIFE

This toggles between
".50 for 3 lives" fixed,
or continue (buy in)
".25 for 1 life".
Press Sword Button
for next screen.

BOOKKEEPING AND DIAGNOSTIC SCREENS CONTINUED—

SCREEN
#8

Move joystick to start Laser
Disc player test

Press Player 1 to exit

This will start a surface scan
of the entire Laser Disc. If a
defect is found, the screen will
display "BAD AREA" for one
second, accompanied by a
"warbling" sound, testing then
resumes automatically. When
scanning is complete, the screen
will display "Disc OK" or "Disc
Bad" until any button is pressed.
Pressing Sword button returns
game to attract mode.

SCREEN
#9

Joystick up/down
Chg Screen
Sword = next
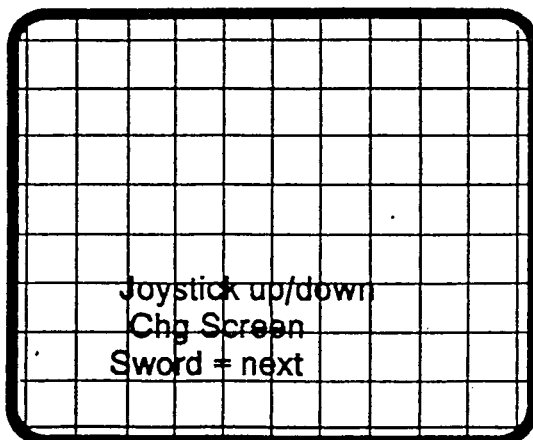
This is the first of a series of
monitor adjustment screens.
Subsequent screens are
provided for adjustment of:
- Gray Scale
- Linearity
- Convergence
- Red, Green, Blue, Purity
- White "Temperature"
- "Cutoff"
- Color Bars

TROUBLESHOOTING TIPS—

Save the packing materials that your Laser Disc was shipped in for protecting
the disc when it's not installed in the player.

Be sure to remove the Laser Disc from the player before transporting the game.

TROUBLESHOOTING TIPS CONTINUED—

If the Laser Disc fails the test of screen #8 with a "Disc Bad" indication it is usually the result of foreign matter (i.e. dust, smoke) accumulation. If the disc is in need of cleaning, use only a damp cloth, (well wrung out), then wipe with a dry cloth. For difficult cases use a cleaning product such as "Glass Plus" and a *soft* cloth. Never use solvents or cleaning materials that contain alcohol.

Treat the Laser Disc with care. Particularly avoid dropping it, or exposure to high temperatures. If the disc appears to be warped or cracked **DO NOT USE IT!** See the Laser Disc Player manual for additional information.

The vendor's warranty on the Laser Disc Player is supplemented by the Advance Replacement policy of the Leland Corporation. This provides the operator with the fastest possible replacement in case of problems. More information about warranty requirements are on the last page. Be sure to record the serial number of the Laser Disc Player, (there is a place provided in the front of this manual.) Contact your distributor for details of your warranty.

PARTS LIST—

PART IDENTIFIER	DESCRIPTION
A-210-00038-00	Circuit board, Dragon's Lair II, complete
B-601-00035-00	Cabinet graphics, right side
B-601-00036-00	Cabinet graphics, left side
B-603-00027-00	Graphics, marquee
B-604-00047-00	Graphics, control panel
C-703-00023-00	Button, 2" round, yellow, (sword button)
D-741-00006-00	Joystick, digital, 4 way
C-910-00001-00	Laser Disc, Dragon's Lair II

For these parts, please have the model and cabinet serial number available at time of order.

Power supply
Control panel assembly, Dragon's Lair II
Coin mechanism
Laser Disc player
Monitor, 25"

SWITCH OPTIONS   (DIP SW 1, 2, 3, 4)

1	2	3	4	Coins under $1.00	Games per $1.00 Coin	Games per $2.00 Coin
off	off	off	off	20¢ per game	5	10
on	off	off	off	"	5	11
off	on	off	off	"	6	12
on	on	off	off	40¢ "	3	6
off	off	on	off	" "	3	7
on	off	on	off	" "	3	8
off	on	on	off	" "	4	8
on	on	on	off	60¢ "	2	4
off	off	off	on	" "	2	5
on	off	off	on	" "	2	4
off	off	on	on	80¢ "	2	3
✳ on	off	off	on	$1 "	1	2
off	off	on	on	" "	1	3
on	off	on	on	" "	2	3
off	on	on	on	" "	2	4
on	on	on	on	" "	3	4

Credit PCB reset LED

To simplify diagnosis of any coin board faults, should the credit PCB become faulty the LED will flash on and off. A short flash when power is applied is normal, with the LED being off when operating correctly.

✳ **CREDIT BOARD DIP SWITCH SETTING**

✳ **FACTORY SETTING**