



Operator's Handbook

presenting:

Lower Playfield Parts & Locations

Ramp Parts & Locations

Upper Playfield Parts & Locations

Solenoid Table & Locations

Game Lamps & Locations

Game Switches & Locations

Midway Manufacturing Company

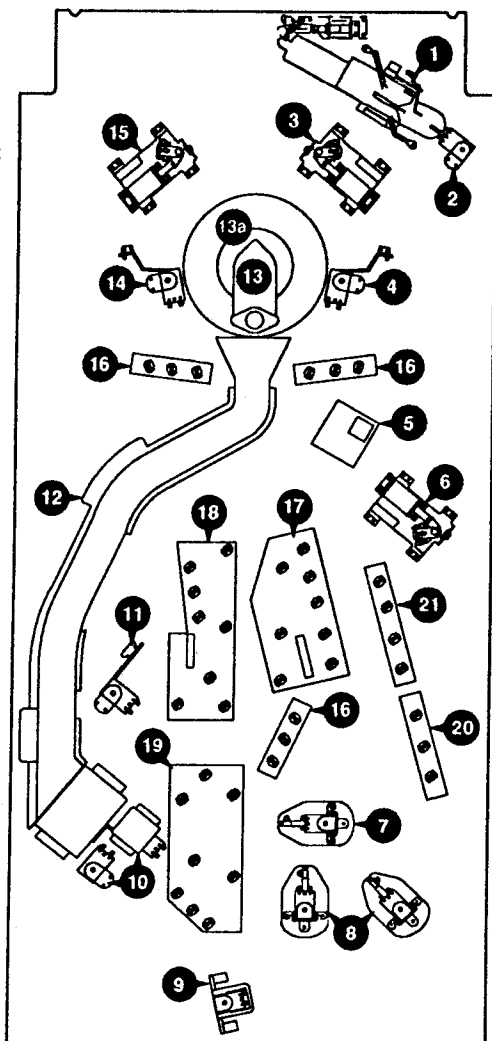
3401 N. California Ave.

Chicago, IL 60618

BLACK ROSE

Lower Playfield Parts

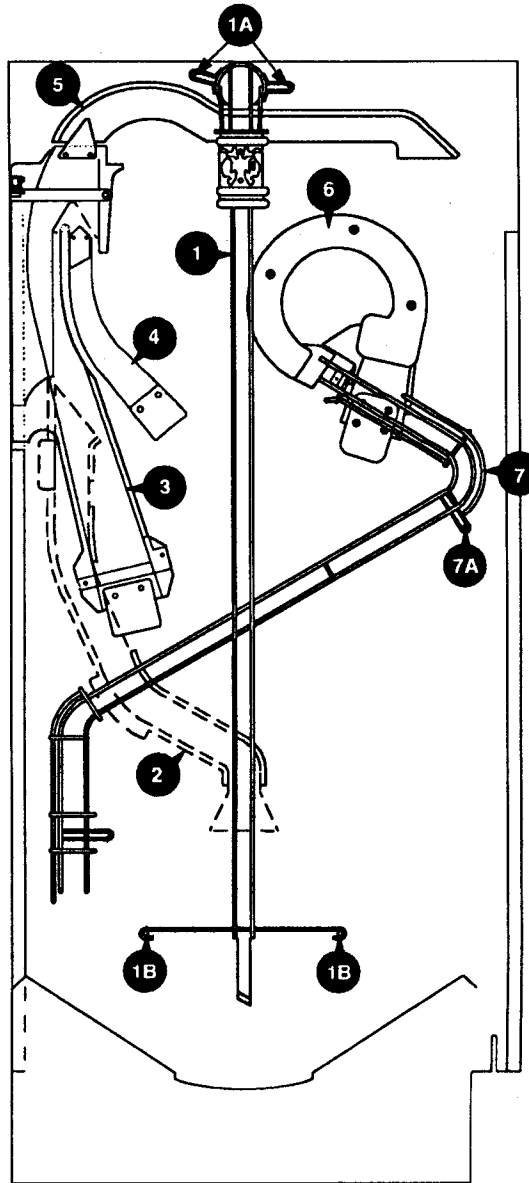
Item	Part Number	Description
1.	B-8925	Ball Trough Switches
2.	C-9638	Ball Shooter Assembly
a)	B-9362-L-2	Coil & Bracket Assembly
3.	A-14876-R	Flipper Assembly, Lower-Right
4.	A-14875-1	Kicker Arm Assembly
a)	B-11203-L-1	Coil & Bracket Assembly
5.	A-14423-1	Relay Board Assembly
6.	A-15205-R-1	Flipper Assembly, Upper-Right
7.	A-12842-3	Jumper Bumper Assembly
8.	A-12872-1	Thumper Bumper Assembly
9.	D-11335-1	Ball Popper Assembly
10.	A-14918	Ramp Lifting Mechanism
a)	B-9362-R-3	Coil & Bracket Assembly
11.	A-14874	Kicker Assembly
a)	B-11203-R-1	Coil & Bracket Assembly
12.	A-14824	Lower Trough Assembly
13.	A-14635	Cannon Assembly
a)	A-14640	Catapult Assembly
14.	A-14875-2	Kicker Arm Assembly
a)	B-11203-L-1	Coil & Bracket Assembly
15.	A-14876-L	Flipper Assembly, Lower-Left
16.	C-13361	3-Lamp Board Assembly
17.	A-15140	8-Lamp Board Assembly
18.	A-15141	8-Lamp Board Assembly
19.	A-15142	8-Lamp Board Assembly
20.	C-12982	3-Lamp Board Assembly
21.	C-13028	4-Lamp Board Assembly



Underside of Playfield, Viewed in Raised Position

BLACK ROSE Ramps

Item	Part Number	Description
1	A-15043	Center Wire Ramp
1A	02-4176-20	8-32 X 1 1/4" Spacer
1B	02-4252-10	6-32 X 5/8" Spacer
2	A-14824	Lower Ramp Assembly
3	A-14826	Ramp Assembly
4	A-14831	Lift Ramp Assembly
5	A-14825	Back Trough Assembly
6	A-14878	Ramp Assembly
7	A-14827	Wire Ramp & Switch Assy.
7A	02-4176-32	8-32 X 2" Spacer

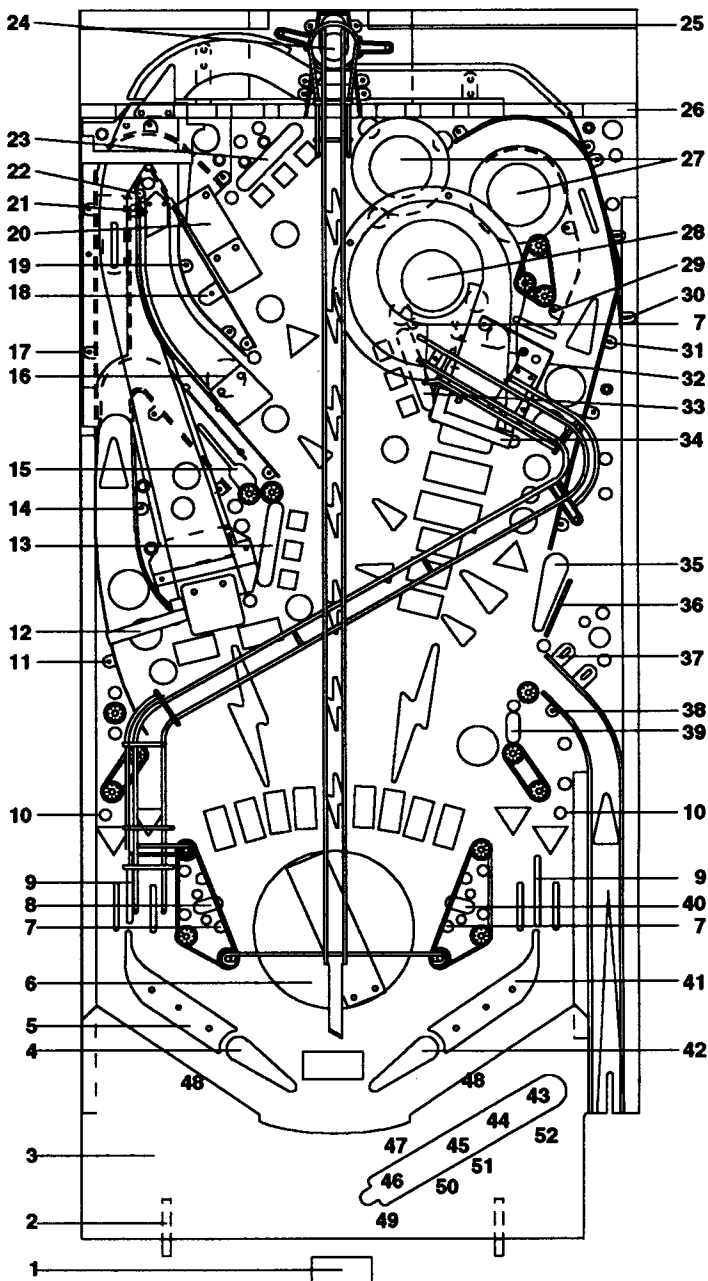


BLACK ROSE Playfield Parts

Item	Part Number	Description			
1	31-1567-5	Red Button	49	A-8039-3	Ball Release Assy.
2	01-8419	Playfield Holdown Brkt.	50	C-8235	Ball Runway Assy.
3	A-13204-20013	Bottom Arch Assy.	51	A-8645	Wire Form & Brkt. Assy.
4	A-14876-L-3	Left Flipper Assy.	52	B-9362-L-2	Coil & Brkt. Assy.
	20-9250-7	Black Flipper & Shaft		10-128	Spring
5	A-14981-1	Right Ball Guide Assy.	Not Shown:		
6	A-14635	Cannon Assy.	A-14967		Deflector Assy
7	B-11700-1	Kicker Switch Assy.	A-15155		Shield Assy.
8	A-14875-1	Nylon Kicker Assy., Left	A-15156		Reflector Assy.
	B-11203-L-1	Coil & Brkt. Assy.	03-7557		Slingshot Mylar
	10-128	Spring	*03-7960-20013-1		Full Playfield Mylar
9	12-6466-9	2 1/4" Wire Guide	03-7960-20013-2		Jet Bumper Mylar
10	01-9510	#8 Adjustment Plate	03-7960-20013-3		Drop Mylar
11	A-14843	Ball Guide	03-8063-4		Light Sleeve, Red (12)
12	A-15132	Ball Gate & Switch Assy.	08-7028-T		Playfield Glass
13	A-15118-6	Stand Up Targets, Yellow (3)	20-6500		1 1/16" Black Pinball (3)
14	A-14844	Ball Guide	31-1002-20013		Screened Playfield
15	A-14820	Switch & Brkt. Assy.	31-1009-20013		Shooter Gauge
	A-14874	Kicker Assy.	Optional		
	B-11203-R-1	Coil & Brkt. Assy.	Equipment:		
	10-128	Spring	60404		WPC Ticket Dispenser Kit
16	A-14821	Switch & Brkt. Assy.	* The BLACK ROSE Diamond Plate™		
	A-14918	Ramp Lifting Mechanism	playfield does not require a full mylar. However,		
	B-9362-R-3	Coil & Brkt. Assy.	mylars can be purchased thru your local Bally		
	01-10351	Ball Guide Entrance	Distributor.		
	10-128	Spring			
17	A-14839	Ball Guide			
18	A-14841	Ball Guide			
19	A-14832	Ball Guide			
20	A-14866	Ramp Extension			
21	A-14836	Ball Guide			
22	02-4176-40	8-32x2 1/2" Spacer			
23	A-15118-4	Stand Up Target, Red (3)			
24	D-11335-1	Ball Popper Assy.			
25	A-14941	Ball Guide Assy.			
26	A-15098	Back Panel Assy.			
27	A-12872-1	Thumper Bumper Assy.			
	03-8276-10	Collar, Blue			
	03-8277-10	Cap, Blue			
28	A-12842-3	Jumper Bumper Assy.			
29	A-14840	Ball Guide			
30	A-14835	Ball Guide			
31	A-14837	Ball Guide			
32	A-14838	Ball Guide			
33	A-15118-2	Stand Up Target, Green (3)			
34	A-15131	Ball Gate & Switch Assy.			
35	A-15205-R-3	Right Flipper Assy.			
	20-9250-7	Black Flipper & Shaft			
36	12-6466-8	2" Wire Guide			
37	A-14834	Ball Guide			
38	A-14833	Ball Guide			
39	A-15118-5	Stand Up Target, White			
40	A-14875-2	Nylon Kicker Assy., Right			
	B-11203-R-1	Coil & Brkt. Assy.			
	10-128	Spring			
41	A-14981-2	Left Ball Guide Assy.			
42	A-14876-R-3	Right Flipper Assy.			
	20-9250-7	Black Flipper & Shaft			
43	C-9638	MultiBall Eject Assy.			
44	B-8925	Micro Switch Plate Assy.			
45	12-6542	Wire Gate			
46	01-3569-1	Ball Return Runway			
47	B-8623	Guide & Baffle Assy.			
48	01-5575	Bottom Arch Mtg. Brkts.			

BLACK ROSE

Playfield Parts Locations



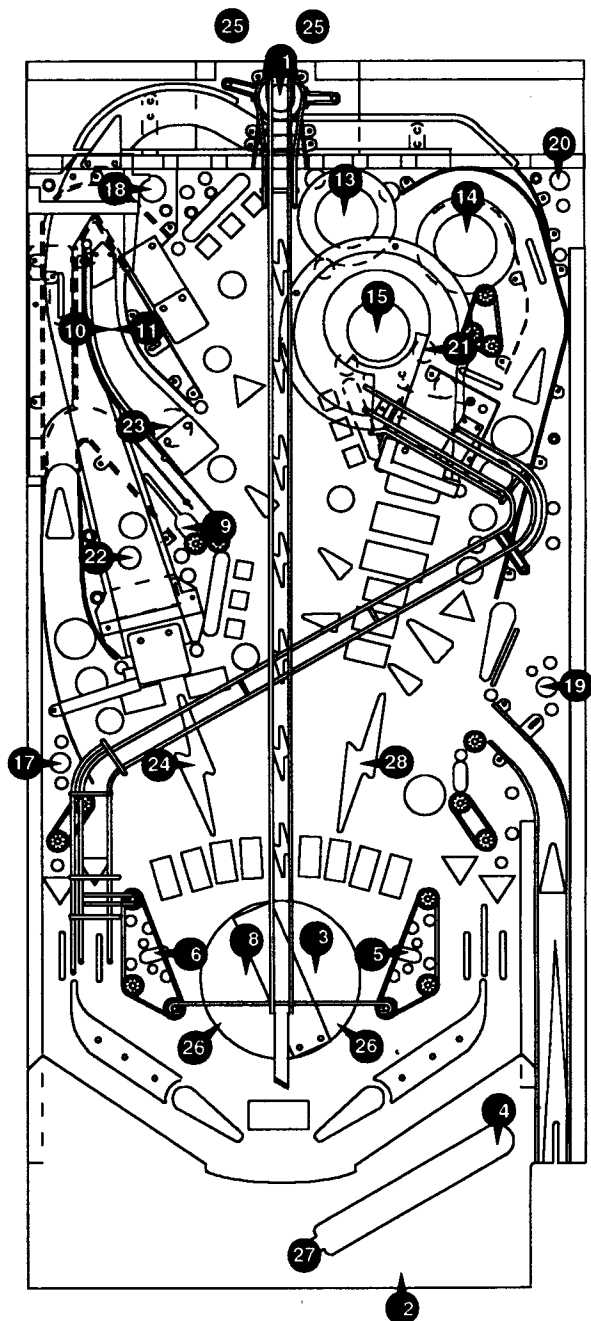
BLACK ROSE

Solenoid Table

Sol. No.	Function	Solenoid Type	Wire Color	Connection	Driver Trnsfr	Solenoid No. Flashlamp Type
01	Ball Popper	High Power	Vio-Brn	J130-1	Q82	AE-24-900
02	Outhole	High Power	Vio-Red	J130-2	Q80	AE-26-1200
03	Cannon Motor	High Power	Vio-Orn	J130-4	Q78	14-7965 20V
04	Ball Release	High Power	Vio-Yel	J130-5	Q76	AE-27-1200
05	Right Slingshot	High Power	Vio-Gm	J130-6	Q64	AE-26-1500
06	Left Slingshot	High Power	Vio-Blu	J130-7	Q66	AE-26-1500
07	Knocker	High Power	Vio-Blk	J130-8	Q68	AE-23-800
08	Cannon Kicker	Low Power	Vio-Gry	J130-9	Q70	A-15016
09	Left Ball Lockup	Low Power	Brn-Blk	J127-1	Q58	AE-26-1500
10	Ramp Up	Low Power	Brn-Red	J127-3	Q56	AE-26-1200
11	Ramp Down	Low Power	Brn-Org	J127-4	Q54	SM1-29-1000-DC
12	Not Used	Low Power	Brn-Yel	J127-5	Q52	
13	Left Jet Bumper	Low Power	Brn-Gm	J127-6	Q50	AE-26-1200
14	Right Jet Bumper	Low Power	Brn-Blu	J127-7	Q48	AE-26-1200
15	Bottom Jet Bumper	Low Power	Brn-Vio	J127-8	Q46	AE-26-1200
16	Not Used	Low Power	Brn-Gry	J127-9	Q44	
17	Left Bottom Flasher	Flasher	Blk-Brn	J125-1, J126-1	Q42	#906, #89
18	Left Top Flasher	Flasher	Blk-Red	J125-2, J126-2	Q40	#906, #89
19	Right Bottom Flasher	Flasher	Blk-Org	J125-3, J126-3	Q38	#906, #89
20	Right Top Flasher	Flasher	Blk-Yel	J125-5, J126-4	Q36	#906, #89
21	Right Ramp Flasher	Flasher	Blu-Gm	J125-6, J126-5	Q28	#906, #89
22	Left Ramp Flasher	Flasher	Blu-Blk	J125-7, J126-6	Q30	#906, #89
23	Locker Open Flasher	Low Power	Blu-Vio	J125-8, J126-7	Q34	#906
24	Left Sword Flasher	Low Power	Blu-Gry	J125-9, J126-8	Q32	#906
25	Top Popper Flasher	Flasher	Blu-Brn	J122-1	Q26	#906
26	Cannon Flasher	Flasher	Blu-Red	J122-2	Q24	#906
27	Fire Button Flasher	Flasher	Blu-Org	J122-3, J124-3	Q22	#906
28	Right Sword Flasher	Flasher	Blu-Yel	J122-4, J124-5	Q20	#906
G. I. Circuits						
01	Jet & Back Ramp String	G.I.	Brown	J120-1	Q18	#555
02	Top Playfield String	G.I.	Orange	J120-2	Q10	#555
03	Bottom Playfield String	G.I.	Yellow	J120-3	Q14	#555
04	Left Insert String	G.I.	Green	J121-5	Q16	#555
05	Right Insert String	G.I.	Violet	J121-6	Q12	#555
	Lower Right Flipper		Blu-Yel	J907-8,9		FL-11629
	Lower Left Flipper		Gry-Yel	J907-6,7		FL-11629
	Upper Right Flipper		Blu-Yel	J907-4,5		FL-11630

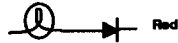
BLACK ROSE

Solenoid Locations



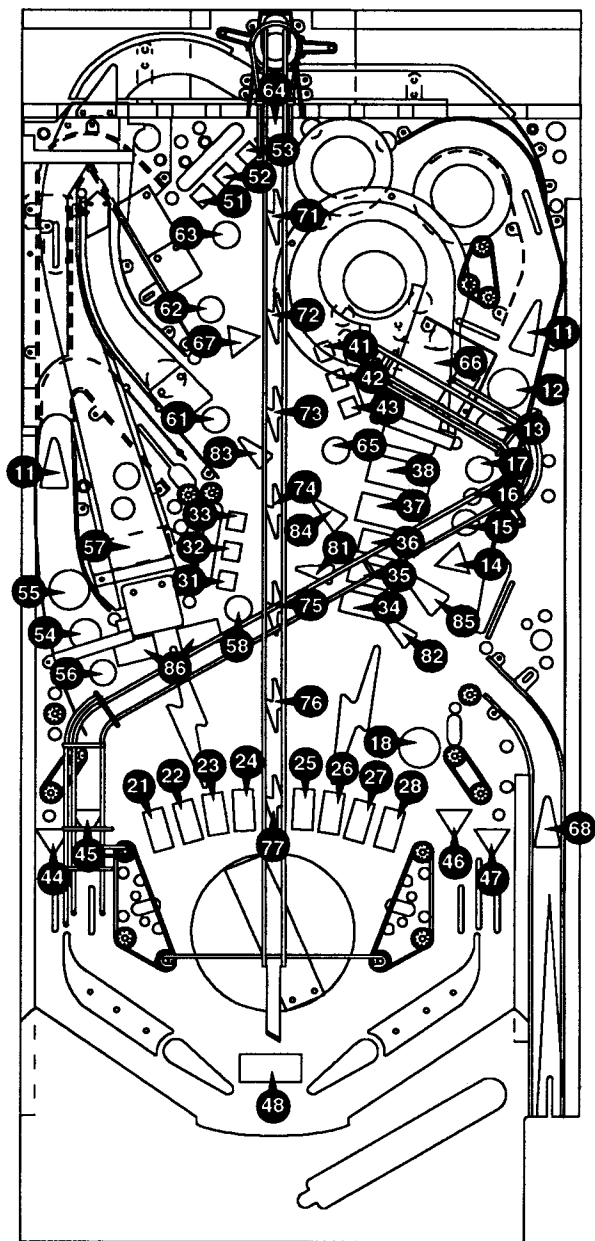
BLACK ROSE Lamp Matrix

Yellow (B→)



Column Row	1 Yellow-Brown J137-1 Q98	2 Yellow-Red J137-2 Q97	3 Yellow-Orange J137-3 Q96	4 Yellow-Black J137-4 Q95	5 Yellow-Green J137-5 Q94	6 Yellow-Blue J137-6 Q93	7 Yellow-Violet J137-7 Q92	8 Yellow-Gray J137-9 Q91
1 Red-Brown J133-1 Q90	Special 11	Letter (S) INK 21	Bottom Standup Bottom 31	Middle Standup Top 41	Top Standup Bottom 51	Middle Ramp Jewel 61	Millions 71	Skill (Open) 81
2 Red-Black J133-2 Q89	Jet Enter 8K 12	Letter S (I) NK 22	Bottom Standup Middle 32	Middle Standup Middle 42	Top Standup Middle 52	Top Loop Jewel 62	Rigging Swing 72	Skill (Locker) 82
3 Red-Orange J133-3 Q88	Jet Enter 4K 13	Letter SI (N) K 23	Bottom Standup Top 33	Middle Standup Bottom 43	Top Standup Top 53	Top Standup Jewel 63	Treasure Chest 73	Middle Ramp 200K 83
4 Red-Yellow J133-5 Q87	Jet Enter 2K 14	Letter SIN (K) 24	Right Ramp 100K 34	Left Outlane 44	Lock 1 54	Broadside Jewel 64	Walk The Plank 74	Middle Ramp 300K 84
5 Red-Green J133-6 Q86	Jet Enter 1K 15	Letter (S) HIP 25	Right Ramp 200K 35	Left Return Lane 45	Lockup 2 55	Bottom Standup Jewel 65	Instant Multi-ball 75	Middle Ramp 400K 85
6 Red-Blue J133-7 Q85	Jet Enter Jewel 16	Letter S (H) IP 26	Right Ramp 300K 36	Right Return Lane 46	Lockup Jewel 56	Right Ramp Coins 66	Knife Throw 76	Jackpot 86
7 Red-Violet J133-8 Q84	Combo Shot Right 17	Letter SH (I) P 27	Right Ramp 400K 37	Right Outlane 47	Left Ramp Coins 57	Combo Shot Left 67	Polly 77	Insert Right 87
8 Red-Gray J133-9 Q83	Right Single Standup 18	Letter SHI (P) 28	Right Ramp Million 38	Shoot Again 48	Bottom Standup Jewel 58	Multi-ball Ready 68	Insert Left 78	Credit Button 88

BLACK ROSE Playfield Lamp Locations



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BLACK ROSE Switch Matrix Table

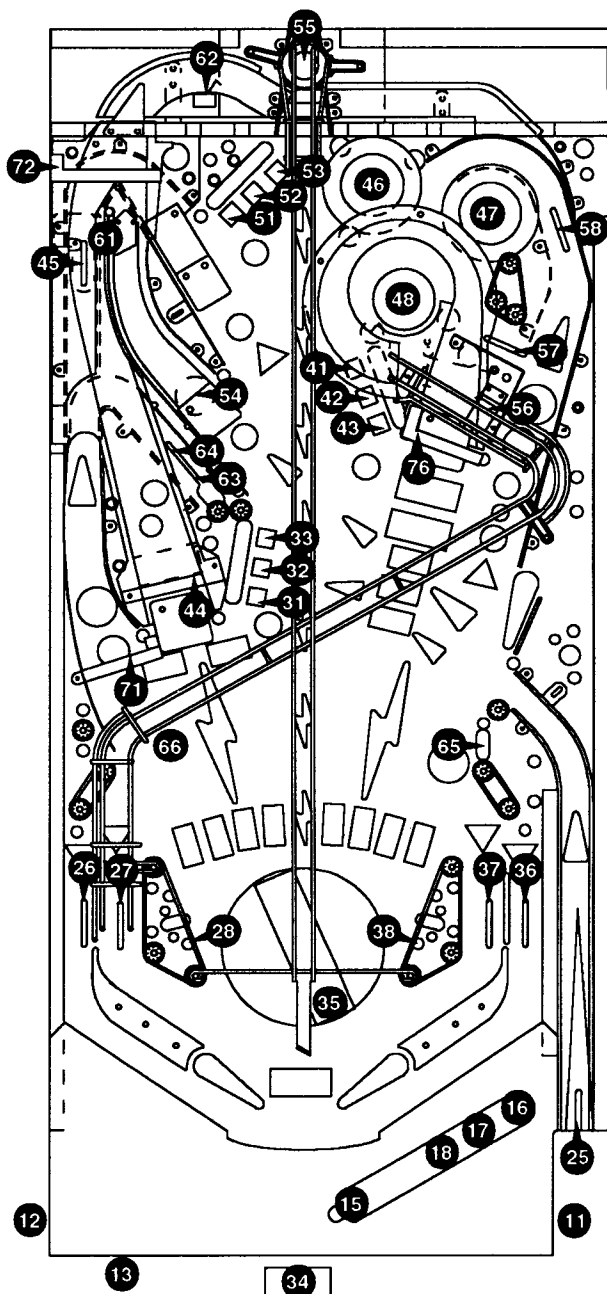
Flipper Grounded Switches	Black-Green J206-1 Right Flipper End of Stroke	F1
	Blue-Violet J206-1 Right Flipper Button	F2
	Black-Blue J206-3 Left Flipper End of Stroke	F3
	Blue-Gray J206-2 Left Flipper Button	F4
	Black-Violet J206-4 Upper Right Flipper End of Stroke	F5
	Black-Yellow J206-3 Upper Right Flipper Button	F6
	Black-Gray J206-5 Upper Left Flipper End of Stroke	F7
	Black-Blue J206-5 Upper Left Flipper Button	F8

		White		Green					
Row	Column	1	2	3	4	5	6	7	8
		Green-Brown J206-1 J206-18 U20-11	Green-Red J206-2 J206-17	Green-Orange J206-3 J206-16	Green-Yellow J206-4 J206-15	Green-Black J206-5 J206-14	Green-Blue J206-6 J206-13	Green-Violet J206-7 J206-12	Green-Gray J206-9 J206-11
1	1	Not Used	Slam Tilt	Bottom Standup Bottom	Middle Standup Top	Top Standup Bottom	Subway Top	Lockup Enter	Not Used
2	2	Not Used	Coin Door Closed	Bottom Standup Middle	Middle Standup Middle	Top Standup Middle	Backboard Ramp	Middle Ramp	Not Used
3	3	Start Button	Ticket Opto	Bottom Standup Top	Middle Standup Bottom	Top Standup Top	Lockup 1	Not Used	Not Used
4	4	Plumb Bob Tilt	Always Closed	Fire Button	Left Ramp Enter	Ramp Down	Lockup 2	Not Used	Not Used
5	5	Outfide	Shooter	Cannon Kicker	Top Left Loop	Ball Popper	Right Single Standup	Not Used	Not Used
6	6	Right Trough	Left Outfide	Right Outfide	Left Jet	Right Ramp Made	Subway Bottom	Right Ramp Enter	Not Used
7	7	Center Trough	Left Return Lane	Right Return Lane	Right Jet	Jet Bumpers Exit	Not Used	Not Used	Not Used
8	8	Left Trough	Left Sling	Right Slingshot	Bottom Jet	Jet Bumper Enter	Not Used	Not Used	Not Used

Dedicated Grounded Switches	(1)	D1	(2)	D2	(3)	D3	(4)	D4	(5)	(6)	(7)	(8)
Orange-Brown J206-1 U17-8 Left Coin Chute			Orange-Red J206-2 U17-7 Center Coin Chute		Orange-Black J206-3 U17-11 Right Coin Chute		Orange-Yellow J206-4 U17-9 4th Coin Chute		Orange-Green J206-5 U16-9 Normal Function Service Credits	Orange-Blue J206-7 U16-11 Normal Function Volume Down	Orange-Violet J206-6 U16-7 Normal Function Volume Up	Orange-Gray J206-9 U16-5 Normal Function Begin Test

BLACK ROSE

Switch Locations



WARNINGS & NOTICES

WARNING

FOR SAFETY AND RELIABILITY, substitute parts and equipment modifications are not recommended. Use of Non-BALLY parts or modifications of game circuitry, may adversely affect game play, or may cause injuries.

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WARNING

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generated, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RF Interference Notice

CABLE HARNESS PLACEMENTS and ground strap routing on this game have been designed to keep RF radiation and conduction within levels accepted by the FCC Rules.

TO MAINTAIN THESE LEVELS, reposition harnesses and reconnect ground straps to their original placements, if they become disconnected during maintenance.

FCC STICKER. Check the back of your game to verify that an FCC-certification sticker was attached to your game at the factory. All Games that leave the BALLY plant have been tested and found to comply with FCC Rules. Because the sticker is proof of this fact, legal repercussions to the owner and distributor may result, if the sticker is missing. If you receive a game, manufactured after December 1982, that has no FCC sticker, call BALLY for advice or write us a note on your Game Registration Card. Be sure that the card bears your game's serial number.

FOR SERVICE...

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Chicago, IL 60618

**CAUTION: Transport this game ONLY
with hinged backbox DOWN!**