

**RELAYS (Relais)**

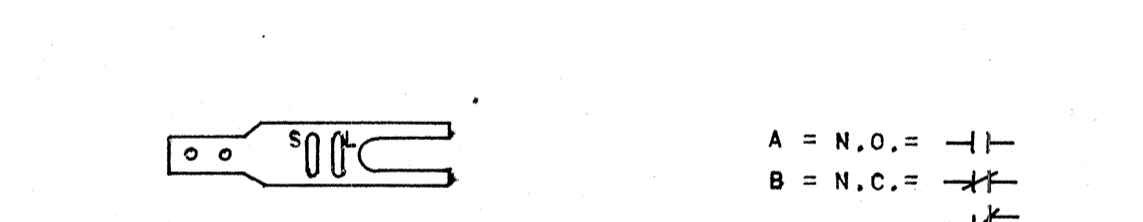
INDEX	POSITION IN MACHINE	COILS-SPULEN	CONTACTS	USE
INDEX	SP	SP	SP	BEZEICHNUNG
4E	B	9.500	5A-2B	5 BONUS
3C	C	9.500	3A	500 POINTS
5E	D	9.500	4A-2B	SPECIAL
3E	E	11.500	2A-2C	LEFT HOLE ILLUMINATION
3E	F	11.500	2A-2C	FLIPPERS ROLLOVERS ILLUM
3E	G	11.500	2A-2C	RIGHT HOLE ILLUMINATION
11E	H	13.500	8-2C	TILT
3E	I	9.500	5A-B	5.000 POINTS
7E	J	11.500	2A-2B	EXTRA BALL
7E	K	9.500	5A	10.000 POINTS
6E	L	9.500	5A	1.000 POINTS
11E	LT	107950	2 DISC.	00-90 LT
6E	M	9.500	6A	100 POINTS
5E	N	9.500	3A	10 POINTS
17E	O	9.500	7A-B	BALL RETURN
17E	P	9.500	2A-2B	ADD. BALLS
17E	Q	9.500	4A-2B	BONUS SCORE
18E	R	13.500	2A-C	HOLD
18E	S	9.500	6A	START
11E	T	9.500	B	TILT
18E	V	9.500	3A	REPLAY BUTTON
18E	W	9.500	4A-3B	2ND. COIN CHUTE
19E	X	9.500	3A	1ST. COIN CHUTE
14E	Y	9.500	5A-2B	SCORE LEFT HOLE
15E	Z	9.500	3A-B	SCORE FLIPPERS ROLLOVERS
15E	PC1	9.500	7A-B	SCORE RIGHT HOLE
17E	PC2	9.500	7A-B	1ST. & 2ND. PLAYER RESET
17E	PC3	9.500	7A-B	2ND. & 3RD. PLAYER RESET
17E	PC4	9.500	7A-B	3RD. & 4TH. PLAYER RESET
19E	AS	107950	2A	3RD. COIN CHUTE
15E	J2	9.500	3A-B	2ND. PLAYER
15E	J3	9.500	3A-B	3RD. PLAYER
15E	J4	9.500	2A-2B	4TH. PLAYER
11E	UB	9.500	3B-C	GAME OVER
17E	UB	9.500	3B-C	LAST BALL
18E	PP	9.500	2A-B-C	1ST. BALL
18E	PP	9.500	2A-B-C	1ST. RESET CONTROL
18E	PH	9.500	A	2ND. RESET CONTROL

**BANK**

INDEX	POSITION IN MACHINE	COILS-SPULEN	CONTACTS	USE
INDEX	SP	SP	SP	BEZEICHNUNG
15E	J2	9.500	3A-B	2ND. PLAYER
15E	J3	9.500	3A-B	3RD. PLAYER
15E	J4	9.500	2A-2B	4TH. PLAYER
11E	UB	9.500	3B-C	GAME OVER
17E	UB	9.500	3B-C	LAST BALL
18E	PP	9.500	2A-B-C	1ST. BALL
18E	PP	9.500	2A-B-C	1ST. RESET CONTROL
18E	PH	9.500	A	2ND. RESET CONTROL

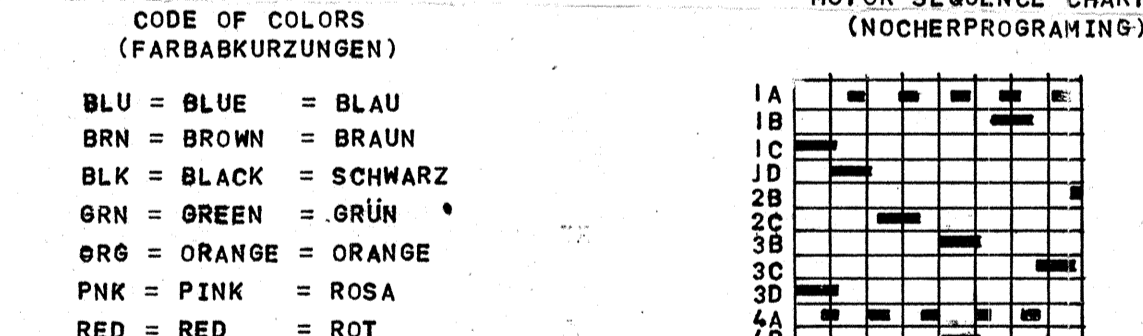
**Other coils used**

INDEX	DESCRIPTION	COIL = SPULEN
INDEX	BESCHREIBUNG	
1H	LEFT FLIPPER COIL	
1H	RIGHT FLIPPER COIL	
1G	LEFT KICKING RUBBER COIL	
1G	RIGHT KICKING RUBBER COIL	
1G	CENTER BUMPER COIL	
1G	LEFT BUMPER COIL	
1G	RIGHT BUMPER COIL	
2F	10.000 CHIME COIL	
2F	1.000 CHIME COIL	
2F	100 CHIME COIL	
2F	ADD. BONUS COIL	
4F	UP POST COIL	
5F	BELL CHIME COIL	
10F	ADD. REPLAY COIL	
11F-14F	SCORING UNIT COILS	
14F	SUBTRACT BONUS COIL	
15F	LEFT SIDE HOLE COIL	
15F	RIGHT SIDE HOLE COIL	
15F	DOWN POST COIL	
16F	SUBTRACT REPLAY COIL	
16F	TOTAL PLAY METER COIL	
16F	MOTOR ASSY	
16F	ADD. BALLS COIL	
17F	BALL RETURN COIL	
18F	KNOCKER COIL	
18F	COIN LOCK OUT COIL	
19F	BANK COIL	
20E	TRANSFORMER	



CODE OF COLORS (FARBABKÜRZUNGEN)	MOTOR SEQUENCE CHART (MOTORENPROGRAMMIERUNG)
BLU = BLUE = BLAU	1A 1B 1C 1D 1E 1F 1G 1H 1I 1J 1K 1L 1M 1N 1O 1P 1Q 1R 1S 1T 1U 1V 1W 1X 1Y 1Z 1AA 1AB 1AC 1AD 1AE 1AF 1AG 1AH 1AI 1AJ 1AK 1AL 1AM 1AN 1AO 1AP 1AQ 1AR 1AS 1AT 1AU 1AV 1AW 1AX 1AY 1AZ 1BA 1BB 1BC 1BD 1BE 1BF 1BG 1BH 1BI 1BJ 1BK 1BL 1BM 1BN 1BO 1BP 1BQ 1BR 1BS 1BT 1BU 1BV 1BW 1BX 1BY 1BZ 1CA 1CB 1CC 1CD 1CE 1CF 1CG 1CH 1CI 1CJ 1CK 1CL 1CM 1CN 1CO 1CP 1CQ 1CR 1CS 1CT 1CU 1CV 1CW 1CX 1CY 1CZ 1DA 1DB 1DC 1DD 1DE 1DF 1DG 1DH 1DI 1DJ 1DK 1DL 1DM 1DN 1DO 1DP 1DQ 1DR 1DS 1DT 1DU 1DV 1DW 1DX 1DY 1DZ 1EA 1EB 1EC 1ED 1EE 1EF 1EG 1EH 1EI 1EJ 1EK 1EL 1EM 1EN 1EO 1EP 1EQ 1ER 1ES 1ET 1EU 1EV 1EW 1EX 1EY 1EZ 1FA 1FB 1FC 1FD 1FE 1FF 1FG 1FH 1FI 1FJ 1FK 1FL 1FM 1FN 1FO 1FP 1FQ 1FR 1FS 1FT 1FU 1FV 1FW 1FX 1FY 1FZ 1GA 1GB 1GC 1GD 1GE 1GF 1GG 1GH 1GI 1GJ 1GK 1GL 1GM 1GN 1GO 1GP 1GQ 1GR 1GS 1GT 1GU 1GV 1GW 1GX 1GY 1GZ 1HA 1HB 1HC 1HD 1HE 1HF 1HG 1HH 1HI 1HJ 1HK 1HL 1HM 1HN 1HO 1HP 1HQ 1HR 1HS 1HT 1HU 1HV 1HW 1HX 1HY 1HZ 1IA 1IB 1IC 1ID 1IE 1IF 1IG 1IH 1II 1IJ 1IK 1IL 1IM 1IN 1IO 1IP 1IQ 1IR 1IS 1IT 1IU 1IV 1IW 1IX 1IY 1IZ 1JA 1JB 1JC 1JD 1JE 1JF 1JG 1JH 1JI 1JJ 1JK 1JL 1JM 1JN 1JO 1JP 1JQ 1JR 1JS 1JT 1JU 1JV 1JW 1JX 1JY 1JZ 1KA 1KB 1KC 1KD 1KE 1KF 1KG 1KH 1KI 1KJ 1KK 1KL 1KM 1KN 1KO 1KP 1KQ 1KR 1KS 1KT 1KU 1KV 1KW 1KX 1KY 1KZ 1LA 1LB 1LC 1LD 1LE 1LF 1LG 1LH 1LI 1LJ 1LK 1LL 1LM 1LN 1LO 1LP 1LQ 1LR 1LS 1LT 1LU 1LV 1LW 1LX 1LY 1LZ 1MA 1MB 1MC 1MD 1ME 1MF 1MG 1MH 1MI 1MJ 1MK 1ML 1MM 1MN 1MO 1MP 1MQ 1MR 1MS 1MT 1MU 1MV 1MW 1MX 1MY 1MZ 1NA 1NB 1NC 1ND 1NE 1NF 1NG 1NH 1NI 1NJ 1NK 1NL 1NM 1NN 1NO 1NP 1NQ 1NR 1NS 1NT 1NU 1NV 1NW 1NX 1NY 1NZ 1OA 1OB 1OC 1OD 1OE 1OF 1OG 1OH 1OI 1OJ 1OK 1OL 1OM 1ON 1OO 1OP 1OQ 1OR 1OS 1OT 1OU 1OV 1OW 1OX 1OY 1OZ 1PA 1PB 1PC 1PD 1PE 1PF 1PG 1PH 1PI 1PJ 1PK 1PL 1PM 1PN 1PO 1PP 1PQ 1PR 1PS 1PT 1PU 1PV 1PW 1PX 1PY 1PZ 1QA 1QB 1QC 1QD 1QE 1QF 1QG 1QH 1QI 1QJ 1QK 1QL 1QM 1QN 1QO 1QP 1QQ 1QR 1QS 1QT 1QU 1QV 1QW 1QX 1QY 1QZ 1RA 1RB 1RC 1RD 1RE 1RF 1RG 1RH 1RI 1RJ 1RK 1RL 1RM 1RN 1RO 1RP 1RQ 1RR 1RS 1RT 1RU 1RV 1RW 1RX 1RY 1RZ 1SA 1SB 1SC 1SD 1SE 1SF 1SG 1SH 1SI 1SJ 1SK 1SL 1SM 1SN 1SO 1SP 1SQ 1SR 1SS 1ST 1SU 1SV 1SW 1SX 1SY 1SZ 1TA 1TB 1TC 1TD 1TE 1TF 1TG 1TH 1TI 1TJ 1TK 1TL 1TM 1TN 1TO 1TP 1TQ 1TR 1TS 1TT 1TU 1TV 1TW 1TX 1TY 1TZ 1UA 1UB 1UC 1UD 1UE 1UF 1UG 1UH 1UI 1UJ 1UK 1UL 1UM 1UN 1UO 1UP 1UQ 1UR 1US 1UT 1UU 1UV 1UW 1UX 1UY 1UZ 1VA 1VB 1VC 1VD 1VE 1VF 1VG 1VH 1VI 1VJ 1VK 1VL 1VM 1VN 1VO 1VP 1VQ 1VR 1VS 1VT 1VU 1VV 1VW 1VX 1VY 1VZ 1WA 1WB 1WC 1WD 1WE 1WF 1WG 1WH 1WI 1WJ 1WK 1WL 1WM 1WN 1WO 1WP 1WQ 1WR 1WS 1WT 1WU 1WV 1WW 1WX 1WY 1WZ 1XA 1XB 1XC 1XD 1XE 1XF 1XG 1XH 1XI 1XJ 1XK 1XL 1XM 1XN 1XO 1XP 1XQ 1XR 1XS 1XT 1XU 1XV 1XW 1XX 1XY 1XZ 1YA 1YB 1YC 1YD 1YE 1YF 1YG 1YH 1YI 1YJ 1YK 1YL 1YM 1YN 1YO 1YP 1YQ 1YR 1YS 1YT 1YU 1YV 1YW 1YX 1YY 1YZ 1ZA 1ZB 1ZC 1ZD 1ZE 1ZF 1ZG 1ZH 1ZI 1ZJ 1ZK 1ZL 1ZM 1ZN 1ZO 1ZP 1ZQ 1ZR 1ZS 1ZT 1ZU 1ZV 1ZW 1ZX 1ZY 1ZZ

**BALLS UNIT (SPIELER-SCHRITTMERK)**



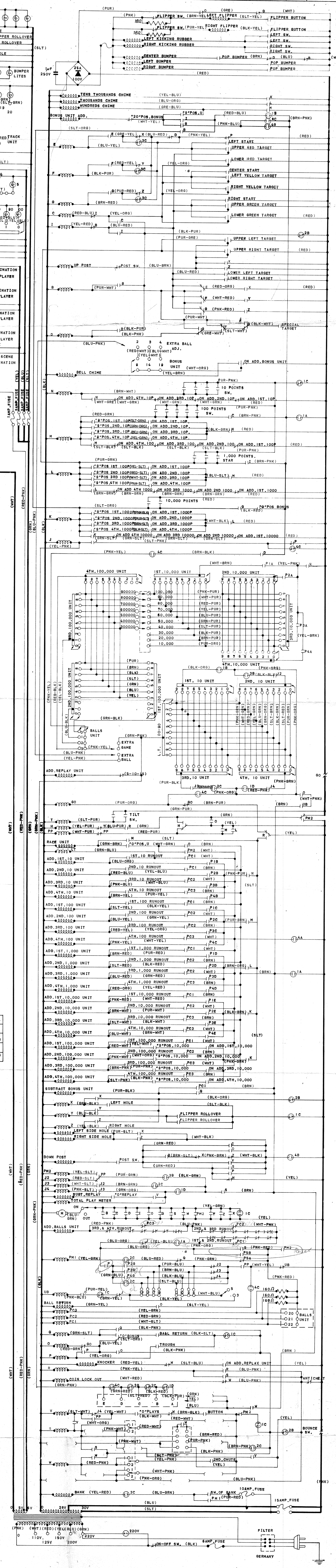
**FUSES**

INDEX	IN MACHINE	U S E
INDEX	BOARD PANEL	BEZEICHNUNG
20H	8AMP	PRIMARY
19I	10AMP	28V-30V
19I	10AMP	BANK
6E	8AMP	PLAYERS SCORE
6E	8AMP	NUMERICAL
6E	8AMP	PLAYBOARD ILLUMINATION
6E	8AMP	COIN CHUTE ILLUMINATION
2B	1AMP	TRACK ILLUMINATION
3B	1AMP	LT 00-90
1F	10AMP	DIRECT CURRENT

**SOCKET**

INDEX	IN MACHINE	U S E
INDEX	BOARD PANEL	BEZEICHNUNG
18-19B	3P	COIN CHUTE ADJ.
19B	4P	RELAY W ADJ.
19F-9	5S	GAMES ADJ.
21H-17H	2P	P=PAIRS S=SINGLE
16,20E,4	6S	AS RELAY ADJ.
100	4P	EXTRA BALL-EXTRA GAME ADJ.
8F	2S	ON-OUT MOTOR
8F	2S	EXTRA GAME FOR SCORE ADJ.
50	3S	EXTRA BALL 2,3,4 ADJ.

**TOP SPEED 1.042**



T O P S P E E D

---

REF.		COLOUR	FARBEN		REF.
B 10	Relay Coil 9500	YELLOW	GELB	Relais-Spule 9500	B 10
B 15	Relay Coil 11500	PINK	ROSA	Relais-Spule 11500	B 15
B 13	Relay Coil 13500	SLATE	GRAU	Relais-Spule 13500	B 13
B 25	Stepper Relay Coil 107950	YELLOW	GELB	Schrittwerk-Spule 107.950	B 25
B 26	Coin Lockout Coil, 25-1360-O'25	BLUE	HL.BLAU	Münzsperr-Spule	B 26
B 55-750	DC Flipper & Bumper Coil	BLACK	SCHWARZ	Flipper- und Schlagturm-Spule (Gleichstrom)	B 55-750
B 45-1000	DC Rubber Kicker & Hole Kicker Coil	WHITE	WEISS	Bandenkick- und Kugelausstoss-Spule (Gleichstrom)	B 45-1000
B 55-700	Ball Return Kicker, Ball Trap Post and Drive Coil on Ball Counter/Player & Replay Unit	YELLOW	GELB	Kugelrückgabe-, Kugelstop-Spule u. Additionspule für Kugelschrittwerk, Spieler- und Freispiel-Unit	B 55-700
B 50-800	Knocker and Replay Reset Coil	BLUE	BLAU	Klopfer und Freispiel-Subtraktion-Spule	B 50-800
B 40-800	Counter Unit Coil	WHITE	WEISS	Wertungszähler-Spule	B 40-800
B 90-450	Relay Bank Reset Coil	RED	ROT	Rückstell-Spule für Relais-Bank	B 90-450

TOP SPEED

	RUBBER PARTS	REF.	GUMMI
A	Rebound Rubber	RB 01-02	Dämpfgummi
B	Rubber Ring No 1	TJ 069	Gummiring Nr. 1
C	Rubber Ring No 1½	TJ 078	Gummiring Nr. 1½
D	Rubber Ring No 2	TJ 071	Gummiring Nr. 2
E	Rubber Ring No 2½	TJ 072	Gummiring Nr. 2½
F	Rubber Ring No 3	TJ 073	Gummiring Nr. 3
G	Rubber Ring No 4	TJ 074	Gummiring Nr. 4
H	Rubber Ring No 4½	TJ 075	Gummiring Nr. 4½
J	Rubber Ring No 0	TJ 079	Gummiring Nr. 0
K	Flipper Rubber Ring	F 20-02	Flipper-Gummiring
1	Rubber Rebound	RB 01-00	Prellbock
2	Rollover Star Insert - red	TJ 257	Überrollstern-Einsatz - rot
3	Rollover Star Insert - yellow	TJ 267	Überrollstern-Einsatz - gelb
4	Rollover Star Insert - green	TJ 266	Überrollstern-Einsatz - grün
	Rollover Star - white	TJ 259	Überrollstern - weiss
5	Ball Gate Assembly	BS 02-00	Prellfeder
6	Plastic shield	1042/1	Plastik-Abdeckung
7	Plastic shield	1042/2	Plastik-Abdeckung
8	Octgl. Red Target sw. Assbly	GC 70	Zielkontakt, rot/achteckig
9	Rnd. green Target sw. Assbly	GC 108	Zielkontakt, grün/rund
10	Round red Target sw. Assbly	GC 41	Zielkontakt, rot/rund
11	Metal Guide	TJ 062	Metallführung
12	Pop Bumper	S 21-00	Schlagturm
13	Plastic shield	1042/3	Plastik-Abdeckung
14	Pop Bumper	S 21-00	Schlagturm
15	Ball Stop	TJ 252	Kugel-Stop
16	Hole Kicker Insert - red	TJ 250	Kugelausstoss-Einsatz - rot
17	Hole Kicker Insert - green	TJ 273	Kugelausstoss-Einsatz - grün
18	Metal Guide	TJ 298	Metallführung
19	Metal Guide	TJ 299	Metallführung
20	Plastic shield	1042/4	Plastik-Abdeckung
21	Plastic shield	1042/5	Plastik-Abdeckung
22	Octgl. Red Target sw. Assbly	GC 48	Zielkontakt, rot/achteckig
23	Rnd. Yellow Target sw. Assbly	GC 40	Zielkontakt, gelb/rund
24	Captive Ball Stop	TJ 224	Kugelgatter-Stop
25	Metal Shield	TJ 096	Metall-Abdeckung
26	Plastic Shield	1042/6	Plastik-Abdeckung
27	Plastic Shield	1042/7	Plastik-Abdeckung
28	Plastic Shield - blank	1031/7	Plastik-Abdeckung - farblos
29	Flipper Head	F 20-00	Flipperkappe
30	Ball Post Trap	PS 06-00	Kugelstop-Unit
31	Metal Guide	TJ 067	Metallführung
32	RH Contact Kicker	IB 22-00	Bandenkick - rechts
33	LH Contact Kicker	IB 15-00	Bandenkick - links
34	Rollover Wire Form	TJ 231	Überroll-Kontakt
35	Rollover Wire Form	TJ 228	Überroll-Kontakt
36	Rollover Wire Form	TJ 229	Überroll-Kontakt

TOP SPEED 1.042

