

TO DESTANTANTONIES

OPERATIONS MANUAL

Operations & Adjustments
Testing & Problem Diagnosis
Parts Information
Wiring Diagrams & Schematics

Williams Electronics Games, Inc. 3401 N.California Chicago, II 60618

A-12697-3 WPC Power Driver Assembly

<u>Item</u>	Part Number	Ckt Designator	Description				
	1	#29-3110-COF	Vescribuon		Part Number	Ckt Designator	Description
1	Not Used			32	5043-08996-00	C13-C20, C31	Capacitor, .1µfd, 50v (±20%)
2	4006-01005- 06	Q1, Q2	Mach. Screw, 6-32 x 3/8	33 34	5043-09845-00	C1, C12	Capacitor, 1,000pfd, 50v (±20%)
3	4406-01128-00	Q1, Q2	Nut, 6-32 KEPS	35	5048-10994-00 5070-08919-00	C3	Capacitor, .33µfd, 50v (±20%) Ax.
4	4004-01005-06	Q10, Q12, Q14, Q16, Q18	Mach. Screw, 4-40 x 3/8	36	5070-09919-00	D33, D34 D1-D3, D5-D12, D17-D32,	Diode, 1N4148, 150MA. Diode, 1N4004, 1.0A.
5	4404-01119-00	Q10, Q12, Q14, Q16, Q18	Nut, 4-40 SNUT	37	5100-09690-00	D38	.
6 7	5010-08981-00	R260	Resistor, 10KΩ, 1/2w, 5%	38	5131-12725-00	BR1-BR5	Bridge Rectifier, 35A., 200v
7	5010-089 91-00	R9, R12, R15, R18, R21,	Resistor, 4.7KΩ, 14w, 5%	39	5162-12422-00	Q10, Q12, Q14, Q16, Q18 U19	Triac, BT138E
		R23, R27, R31, R35, R39,		40	5162-12635-00	Q20, Q22, Q24, Q26, Q28	IC, ULN 2803 Transistor, TIP 102
		R43, R47, R51, R55, R59, R63, R67, R71, R75, R79,				Q30, Q32, Q34, Q36, Q38,	11411016101, 111- 102
		R83, R87, R91, R95, R99,				Q40, Q42, Q44, Q46, Q48,	
		R126, R128, R130, R132,				Q50, Q52, Q54, Q56, Q58,	
		R134, R136, R138, R140,				Q63, Q65, Q67, Q69, Q75,	
		R227		41	5194-09055-00	Q77, Q79, Q81, Q83 - Q90	_
8	5010-08992-00	R8, R11, R14, R17, R20,	Resistor, 560Ω, 1/4w, 5%	41	5194-09055-00	Q9, Q11, Q13, Q15, Q17,	Transistor, 2N5401 PNP
		R177, R179, R181, R183,				Q19, Q21, Q23, Q25, Q27, Q29, Q31, Q33, Q35, Q37,	
9	5010-08993-00	R185, R187, R189, R191 R25, R29, R33, R37, R41,				Q39, Q41, Q43, Q45, Q47,	
	0010 00000 00	R45, R49, R53, R57, R61,	Resistor, 68Ω, 1/4w, 5%			Q49, Q51, Q53, Q55, Q57,	
		R65, R69, R73, R77, R81.				Q59-Q62, Q71-Q74	
		R85, R89, R93, R97, R101,		42	5191-12179-00	Q64, Q66, Q68, Q70, Q76	Transistor, TIP36C PNP
		R103, R106, R109, R112.		43	5192-12428-00	Q78, Q80, Q82 Q91-Q98	T
10	5010-08997-00	R115, R118, R121, R124		44	5250-12634-00	Q1	Transistor, TIP 107 Reg LM 323 5v
	3010-00337-00	R24, R28, R32, R36, R40, R44, R48, R52, R56, R60,	Resistor, 2.7KΩ, 1/4w, 5%	45	5281-09486-00	U1-U5, U18	IC, 74LS374 8 Dual D Flipflop
		R64, R68, R72, R76, R80,		46	5281-09487-00	U10-U13	IC, 74LS74 Dual D flipflop
		R84, R88, R92, R96, R100,		47	5281-10182-00	U9	IC, 74LS240, L/Drvr
		R102, R105, R108, R111,		48 49	5370-12272-00	U6, U15, U16	IC, LM339 Quad. Comp
		R114, R117, R120, R123,		50	5460-12423-00 Not Used	Q2	IC, LM 7812
11	5010-08998-00	R195 R155, R157, R159, R161.	B. I. Salar	51	5671-13732-00	LED1 - LED7	Display LED Red
	00.0000000	R165, R167, R169, R171	Resistor, 2.2KΩ, 1/4w, 5%	52	Not Used		Display LED Neo
12	5010-09034-00	R3, R4, R6, R142-R149,	Resistor, 10KΩ, 1/4w, 5%	53	5701-09652-00	Q1	Thermal Pad TO-3
40	5010 0000	R197, R198		54 55	5705-09199-00 Not Used	Q2	Heatsink, #6030B
13	5010-09085-00	R194, R196, R251, R253-	Resistor, 1.5KΩ, 1/4w, 5%	56	5705-12637-00	01	Handata Page
14	5010-09086-00	R257 R252	Budge age	57	5705-12638-00	Q10, Q12, Q14, Q16, Q18	Heatsink 5054 Heatsink 5298B
15	5010-09224-00	R1, R2, R192, R201, R205,	Resistor, 6.8K Ω , 1/4w, 5% Ressistor, 270 Ω , 1/4w, 5%	58	5733-12060-01	= 10, = 10, = 10, = 10	Fuse Holder, F101-F116
		R208	nessistor, 270t2, 1/4W, 5%	59	Not Used		
16	5010-09314-00	R176, R178, R180, R182	Resistor, 1.2KΩ, 1/4w, 5%	60 61	5791-10862-03	J108, J119, J136	Connector, 3-pin Header STR Sq.
17	5010 00001 00	R184, R186, R188, R190		62	5791-10862-04 5791-10862-05	J103, J116-J118	Connector, 4-pin Header STR Sq.
18	5010-09324-00 5010-09358-00	R206	Resistor, 27KΩ, 1/4w, 5%		5.57 1000E 00	J128, J129, J131, J132	Connector, 5-pin Header STR Sq.
10	3010-03336-00	R154, R156, R158, R160, R164, R166, R168, R170,	Resistor, 1KΩ, 1/4w, 5%	63	5791-10862-06	J107	Connector, 6-pin Header STR Sq.
		R162, R193, R199, R200		64	5791-10862-07	J101, J109, J114	Connector, 7-pin Header STR Sq.
		R250		65	5791-10862-09	J102, J122, J125,	Connector, 9-pin Header STR Sq.
19	5010-09361-00	R104, R107, R110, R113	Resistor, 220Ω, 1/4w, 5%	66	5791-10862-11	J127, J130, J137, J138	_
20	5010-09416-00	R116, R119, R122, R125			5791-10862-12	J120, J121 J115	Connector, 11-pin Header STR Sq.
20	3010-09416-00	R22, R26, R30, R34, R38, R42, R46, R50, R54, R58,	Resistor, 470Ω, 1/4w, 5%		5791-10862-13	J126	Connector, 12-pin Header STR Sq. Connector, 13-pin Header STR Sq.
		R62, R66, R70, R74, R78,			5791-12461-05	J111	Connector, 5-pin Header STR Sq.
		R82, R86, R90, R94, R98.			5791-12461-09	J133-J135	Connector, 9-pin Header STR Sq.
		R127, R129, R131, R133,			5791-12516-00 5824-09248-00	J113	34 HEN 2x17 STR
0.4		R135, R137, R139, R141			5041-09248-00	TP1-TP8 C9	Test Point #1502-1
	5010-09534-00	W1, W2	Resistor, 0Ω		Not Used	Ca	Capacitor, 2.2μfd TANT
	5010-11079-00 5010-12427-00	R7, R10, R13, R16, R19	Resistor, 51Ω, 1/4w, 5%		Not Used		
	5012-12632-00	R150-R153, R172-R175 R224	Resistor, .22Ω, 1w, 5%		5730-09071-00	F114	Fuse, 8A, 32v
	Not Used		Resistor, .12 Ω , 10w, 5%		Not Used	_	
26	5019-10143-00	SR1	SIP, 9R, 10 pin, 470Ω, 5%		5731-09432-00	F112	Fuse, S-B, 7A., 250v
27	5040-08986-00	C4	Capacitor, 100µfd, 10v (±20%)		5731-09651-00	F106 - F111, F113	Fuse, S-B, 5A., 250v
	5040-09421-00	C2	Capacitor, 100µfd, 25v (+50, -10%)		Not Used 5731-10356-00	E101 E105 E116	F 0.B. 04. 050
	5040-09537-00	C8	Capacitor, 100µfd, 100v (±20%)		5730-09797-00	F101 - F105, F116 F115	Fuse, S-B, 3A., 250v Fuse, S-B, 3/4A., 250v
	5040-12313-00	C5, C6, C7, C11, C30	Capacitor, 15,000µfd, 25v (±20%)		5705-12698-00		Heatsink #62365
J1	5043-08980-00	B-BYPASS	Capacitor, .01µfd, 50v (+80, -20%)		4010-01006-00		Mach. Screw, 10-32 x 5/8
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