



# SERVICE NOTE

**EFFECT:** PENGOTM

**NUMBER:** 001

An error has been identified on page 17, ITEM NO. 53 of your PENGOTM Owner's Manual (P/N 420-0811). Please correct your documentation to reflect the following:

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY.REQ'D.</u>	<u>DESCRIPTION</u>
53.	420-0839	1	Graphic Interior

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# SERVICE NOTE

EFFECT: PENGOTM

NUMBER: 002

The following list comprises the Recommended Spare Parts for the support of 10 games (and presumes the user to a stock of common IC's and transistors consistent with a contemporary digital electronic repair facility):

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>	<u>REF. DES.</u>	<u>PRICE-EA.</u>
AC JUNCTION BOX ASSEMBLY			800-0145		\$
1.	270-0001	1	FILTER, EMI		20.00
2.	514-0001	5	FUSE, 2A 250V S.B.		1.50
3.	514-0051	5	FUSE, 1A 250V		.70
4.	514-0053	5	FUSE, 5A S.B.		.70
CONTROL PANEL ASSEMBLY			800-3280-00		
5.	240-0009	2	BUTTON, Plunger - Yellow		.40
6.	240-0006	2	BUTTON, Plunger - Red		.40
VOLUME CONTROL BLOCK ASSEMBLY			800-3282-00		
7.	475-0007	1	POT., 10 KOHM		1.25
EMI TRANSFORMER ASSEMBLY			800-0190		
8.	560-0055	1	XFMR, G-80 Power Supply		120.70
G-80 POWER SUPPLY CHASSIS ASSEMBLY			800-0191		
9.	482-0104	2	XSTR, PWR TIP141		4.12
10.	482-0100	2	XSTR, PWR TIP125		1.20
11.	482-0019	2	XSTR, PWR TIP120		2.00
G-80 POWER SUPPLY PC ASSEMBLY			800-0170		
12.	150-0088	2	CAP, 10MF 25V	C5,8, et al.	.40
13.	150-0097	1	CAP, 4700MF 16V	C15,16, et al.	2.20
14.	151-0011	1	CAP, 0.01UF 50V	C21,22, et al.	.50
15.	481-0002	1	DIODE, MR751	D10,12.	1.60
16.	481-0004	3	DIODE, MR501	D6-9, et al.	1.00
17.	481-0006	1	DIODE, 1N914	D1,4,5	1.00
18.	514-0002	3	FUSE, 3A		.50
19.	514-0006	3	FUSE, 1.5A		.26
20.	514-0008	3	FUSE, 10A S.B.		.70

SEGA Electronics, Inc., 16250 Technology Drive, San Diego, CA. 92127-1985

Toll-free technical assistance inside CA 1-800-722-8576

Toll-free technical assistance outside CA 1-800-854-1938

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>	<u>REF. DES.</u>	<u>PRICE-EA.</u>
GAME ELECTRONICS ASSEMBLY			834-0386-00		
21.	151-0041	6	CAP, 220PF 50V	C21,29,31	.06
22.	220-0186	1	VOL. CONT.	VR1	*
23.	230-0023	2	XTAL, 18.432 MHZ	X1	6.00
24.	315-0041	1	IC Z80A	U2 (-5092-00) (-5092-01)	22.50
25.	315-5010	1	IC Controller	U2	85.45
26.	315-0127	1	IC RAM AM25LS2519	U74	3.49
27.	315-0045	1	IC RAM CD4066	U50	1.50
MONITOR 19" WELL GARDNER 19K4675			200-0019		
28.	560-0096	1	XFMR, Flyback		17.00
29.	481-0225	3	RECTIFIER, 1A 600V		.55
30.	180-0023	1	COIL, Peaking		.31
31.	560-0061	1	XFMR, Horiz. Drive		.80
32.	481-0227	2	DIODE, Zener RD10F(C)	D402	.80
33.	481-0229	1	DIODE, Zener RD11E(B)	D507	.30
34.	481-0231	1	DIODE, Zener RD20EV2	D701	.15
35.	481-0198	1	DIODE, Zener RD6.8EV3	D905	*
36.	514-0072	3	FUSE, 1.25A 125V	F901	*
37.	514-0058	3	FUSE, 3A 125V	F902	*
MONITOR 19" ELECTROHOME G07-907			200-0022		
38.	481-0214	2	RECTIFIER, RM-2AV 600V	X601-4	.30
39.	481-0218	2	RECTIFIER, PWR 500V PIV	X610-12	.46
40.	560-0094	1	XFMR, Horiz. Drive	T602	13.20
41.	800-3253	1	HV Unit	T701	*
42.	481-0014	1	DIODE, Zener 1N5228B	ZD201	.11
43.	514-0058	3	FUSE, 3A 125V	F601	*
MONITOR 19" WELLS GARDNER 19K4961			200-0091		
44.	481-0175	3	DIODE, 1S2076-27	D203-209	*
45.	481-0245	2	DIODE, RM-1AV	D501-506	.55
46.	560-0121	1	XFMR, Horiz. Drive	T351	1.70
47.	478-0012	1	THERMISTOR	TH501	2.20
48.	514-0054	3	FUSE, 4A 125V	F501	*

\* Contact SEGA Customer Service Parts Information toll-free:

inside CA 1-800-722-8575

outside CA 1-800-854-1900



# SERVICE NOTE

**EFFECT:** PENGOTM

**NUMBER:** 003

There has been a re-designation of part number for the 4-Way Joystick Assembly. On page 31 of your PENGOTM Owner's Manual (P/N 420-0811), please correct Item No. 17 as follows:

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY. REQ'D</u>	<u>DESCRIPTION</u>	<u>REF. DESG.</u>
17	510-0071	1	Joystick 4-Way Long Shaft	S5 - S8

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outside CA 1-800-854-1938



16250 Technology Drive  
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(619) 485-0910

# SERVICE NOTE

## TOLL-FREE NUMBERS

Technical Assistance (800) 854-1938  
Parts Assistance (800) 854-1900  
California-Only Technical (800) 722-8576  
California-Only Parts (800) 722-8575

## PRIORITY:

- Urgent  
 Upon Game Failure  
 For Information Only

DATE: 3-16-83

GAME/ASSEMBLY  
AFFECTED: PENGOTM

NUMBER: 005

In the advent that you are experiencing difficulty controlling the volume of your game, we recommend that you exchange the existing 10K potentiometer in the Volume Control Block Assembly (Drawing No. 800-3282), page 38 of your PENGOTM Owner's Manual (P/N 420-0811), for a 100 ohm pot. (P/N 475-0052-00), and make the following corrections to page 37 of your Owner's Manual:

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY REQD.</u>	<u>DESCRIPTION</u>
5	475-0052-00	1	Pot., 100 ohm

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 Parts Assistance (800) 854-1900  
 California-Only Technical (800) 722-8576  
 California-Only Parts (800) 722-8575

## PRIORITY:

- Urgent  
 Upon Game Failure  
 For Information Only

DATE: 4-11-83

GAME/ASSEMBLY  
 AFFECTED: COIN MECH.S

NUMBER: 83-002

SEGA uses two "over-and-under" style coin systems. These are used on PENGOTM, BUCK ROGERS™, and STAR TREK™ and are entirely interchangeable as sub-assemblies. Both carry the same assembly part number (P/N 220-0265); the WICO model can be distinguished from the COINCO by the presence of a rectangular protrusion located directly below the dual coin slots, as well as a manufacturer's tag placed on the case of the coin acceptors inside the coin door. Below are parts lists for the major component parts of both units:

### COINCO

<u>PART NO.</u>	<u>QTY REQD.</u>	<u>DESCRIPTION</u>
220-0309	1	Harness, Coin Door
220-0297	1	Cash Box, Metal
220-0298	1	Lock, Lower Door, Flat Key
220-0299	1	Lock, Upper Door
220-0300	1	Door, Upper
220-0301	1	Door, Lower
220-0302	1	Frame
510-0076	2	Switch and Wire Assembly
220-0316	1	Bracket, Coin Counter

### WICO

<u>PART NO.</u>	<u>QTY REQD.</u>	<u>DESCRIPTION</u>
220-0310	1	Harness, Coin Door
220-0303	1	Cash Box, Metal
510-0074	2	Coin Switch
600-0124	2	Actuator Switch Wire
220-0311	1	Door Frame w/ Hinge Assembly
220-0008	1	Coin Meter

Both the COINCO and WICO models use the 220-0008 Coin Meter. The original mounting bracket should be retained for re-installation.



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Technical Assistance (800) 854-1938  
 Parts Assistance (800) 854-1900  
 California-Only Technical (800) 722-8576  
 California-Only Parts (800) 722-8575

## PRIORITY:

- Urgent
- Upon Game Failure
- For Information Only

DATE: 4-11-83

GAME/ASSEMBLY VOLUME  
 AFFECTED: CONTROL BLOCK  
 NUMBER: 83-003

In the event that you are experiencing difficulty controlling the volume of your PENGOTM or BUCK ROGERS™ video game, we recommend that you exchange the existing 10K potentiometer in the Volume Control Block Assembly (Drawing Number 800-3282) for a 100 ohm unit (P/N 475-0052-00), and make corrections to the parts lists of the applicable game as follows:

On page 37 of the PENGOTM Owner's Manual (P/N 420-0811), or  
 On page 26 of the BUCK ROGERS™ Owner's Manual (P/N 420-0881):

DELETE Item No. 5, and  
 ADD Item No.s 29 and 30 as shown;

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY REQD.</u>			<u>DESCRIPTION</u>
		-00	-01	-02	
29	283-0060-26	-	-	1	Washer, #10 Flat
30	475-0052-00	1	-	-	Pot., 100 ohm



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# SERVICE NOTE

## TOLL-FREE NUMBERS

Technical Assistance (800) 854-1938  
Parts Assistance (800) 854-1900  
California-Only Technical (800) 722-8576  
California-Only Parts (800) 722-8575

## PRIORITY:

- Urgent  
 Upon Game Failure  
 For Information Only

DATE: 4-6-83

GAME/ASSEMBLY  
AFFECTED: PENGOTM

NUMBER: 83-007

There have been some additions to the parts list for the Game Electronics Assembly (Drawing No. 834-0386), beginning on page 99 of your PENGOTM Owner's Manual (P/N 420-0811). Please include the following items into your Manual:

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>QTY REQD.</u>	<u>DESCRIPTION</u>	<u>REF DES.</u>
69	390-0003-00	1	LED, Red	D2
70	470-0101-00	1	RES, 100 ohm $\frac{1}{4}$ W 5%	R52
71	470-0102-00	23	RES, 1K $\frac{1}{4}$ W 5%	R19, R21-23, R26, R28, R31, R33, R34, R37, R40-43, R48, R51, R53-55, R57, R58, R60, R61.
72	470-0103-00	3	RES, 10K $\frac{1}{4}$ W 5%	R24, R25, R35
73	470-0104-00	1	RES, 100K $\frac{1}{4}$ W 5%	R38
74	470-0221-00	4	RES, 220 ohm $\frac{1}{4}$ W	R20, R45, R46, R49
75	470-0222-00	1	RES, 2.2K $\frac{1}{4}$ W 5%	R32
76	470-0223-00	3	RES, 22K $\frac{1}{4}$ W 5%	R36, R39, R56.
77	470-0471-00	7	RES, 470 ohm $\frac{1}{4}$ W	R17, R18, R30, R44, R47, R50, R59.
78	470-0472-00	1	RES, 4.7K $\frac{1}{4}$ W 5%	R29
79	470-0473-00	1	RES, 47K $\frac{1}{2}$ W 5%	R37
80				
81	477-0035-00	3	RES PACK, 4 X 1K	RA4, RA8, RA10
82	477-0039-00	7	RES PACK, 8 X 1 ohm	RA1-3, RA5-7, RA9.
83				
84	481-0031-00	1	RECT, Sil. Diode	D1
85				
86	482-0043-00	1	XSTR, 2SC-458C	Q1
87				
88				
89	510-0049-00	2	SW, 8 Pos. DIP SPST	SW1, SW2.