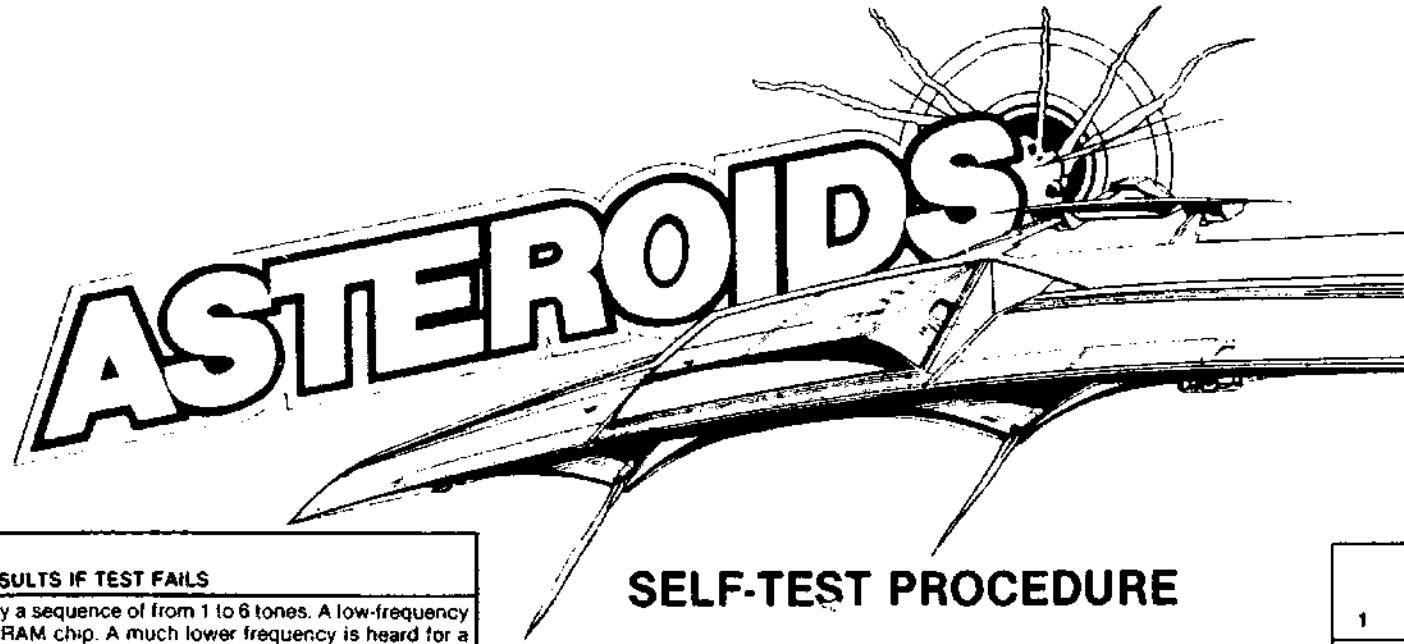## IMPORTANT NOTE TO OPERATORS:

If the operation, maintenance and service manual was not included in this game when you unpacked it, contact your distributor to get a free copy. (All Atari and Kee Games manuals for coin-operated games also include a complete illustrated parts catalog.)

ASTEROIDS

To change toggle positions of the switch assembly, you need not remove the game PCB. The switch, usually colored blue, is easily accessible when the game PCB is mounted in place.
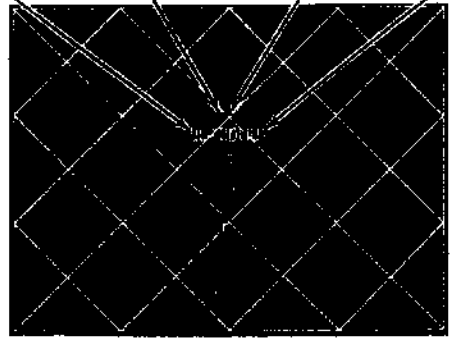
When changing the options, verify proper results on the TV monitor display during self-test. A switch toggle in the on position is indicated by a 0 for that switch on the TV monitor display. A switch in the off position is indicated by a 1.

SELF-TEST PROCEDURE

INSTRUCTION	RESULTS IF TEST PASSES	RESULTS IF TEST FAILS
1. Set self-test switch to on position as shown to right.	TV monitor displays picture as shown to right.	*RAM FAILURE* is indicated by a sequence of from 1 to 6 tones. A low-frequency tone is heard for each good RAM chip. A much lower frequency is heard for a failing RAM chip. The sequence stops with the last failing RAM chip. To restart the sequence, press the Reset pushbutton on the game PCB or set the self-test switch to off, then again to the on position. Identify the bad RAM chip with table below. Example: Three tones, then a tone of much lower frequency indicates failure of RAM chip R4.

TONE #	RAM CHIP LOCATION
1	D2
2	E2
3	M4
4	R4
5	N4
6	P4

ROM/PROM FAILURE is indicated by two lines of numbers in the upper left-hand corner of the display. The number on the first line indicates the failing ROM/PROM chip(s). Identify the bad ROM/PROM with table below.
The number on the second line indicates the failing data bit of the failing ROM/PROM. Identify the bad bit with the second table below. If more than one bit is failing, the displayed number(s) are hexadecimal combinations of the numbers shown below. Examples:
1) If bits D2 and D3 fail, C is displayed.
2) If bits D2, D3 and D7 fail, 8C is displayed.
3) If bits D4 and D5 fail, 30 is displayed.
4) If bits D1, D3, D5 and D6 fail, 6A is displayed

DISPLAYED NO.	FAILING ROM/PROM		
0			
1	N/P3	K4, L4	
2			F2, H1
3	F1	F2, L1	L2, L1
4			H2, J1
5	D/E1	H2, J1	M2, M1
6			J2, K1
7	C1	K1, J2	N2, N1

DISPLAYED NO.	FAILING BIT
1	D0
2	D1
4	D2
8	D3
10	D4
20	D5
40	D6
80	D7

RAMSEL SIGNAL FAILURE is indicated by PAGE SELECT ERROR message at lower middle of display.

2. Activate all control panel and coin door switches.	1 PLAYER START and 2 PLAYER START LEDs are lighted. High-pitched click for each activated switch.	1 PLAYER START and/or 2 PLAYER START LEDs not lighted. High-pitched click sound is not heard for any particular switch.

SWITCH TOGGLE 1   LEFT COIN MECH MULTIPLIER   RIGHT COIN MECH MULTIPLIER   SWITCH TOGGLE 8

Photograph above shows toggles 1, 2, 4-7 on, and toggles 3 and 8 off.

OPTION SWITCH SETTINGS

Toggle settings of 8-toggle switch on game PCB								Option	Suggested Setting
1	2	3	4	5	6	7	8		
ON	ON							English Language	
OFF	ON							German Language	
ON	OFF							French Language	
OFF	OFF							Spanish Language	
		ON						4-Ship Game	
		OFF						3-Ship Game	✓
			ON					Left Coin Mech × 1	✓
			OFF					Left Coin Mech × 2	
				ON	ON			Right Coin Mech × 1	✓
				OFF	ON			Right Coin Mech × 4	
				ON	OFF			Right Coin Mech × 5	
				OFF	OFF			Right Coin Mech × 6	
						ON	ON	Free Play	
						OFF	ON	1 Coin 2 Plays	
						ON	OFF	1 Coin 1 Play	✓
						OFF	OFF	2 Coins 1 Play	

VOLUME CONTROL

VOLUME DECREASE: TURN CLOCKWISE

SELF-TEST SWITCH

ON — OFF

REGULATOR/ AUDIO PCB

OPERATOR OPTION SWITCH

GAME PCB

ASTEROIDS GAME PCB

SAFETY INTERLOCK

POWER ON/OFF SWITCH

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