



## Micro-Professor Application Note

— DOC. NO. MPF-I-03-210A —

# MPF-I AS A GAME SOUND GENERATOR

Flying Saucer & Laser Gun.



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US\$0.50

**Purpose:** Simulating flying saucer sound and other computer-controlled sound.

**Required Equipment:** MPF-I

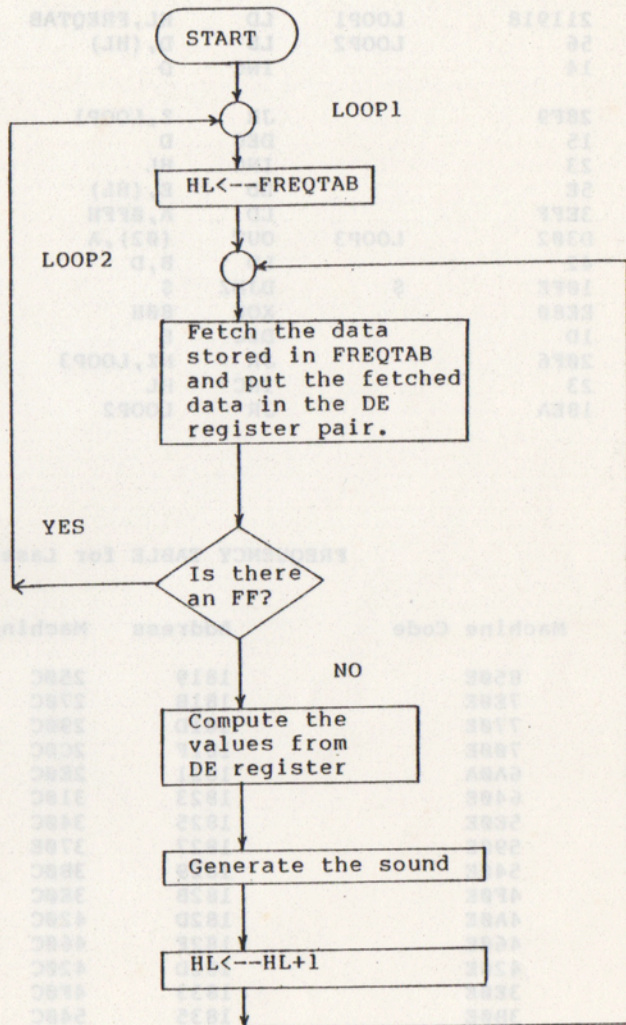
**Experiment Explanation:**

1. The simulated flying saucer sound is created by rapidly raising the frequency from 800Hz to 2400Hz.
2. The frequency table is stored in the memory locations pointed to by the addresses following 1819H. The first byte is the parameter of frequency, and the second byte is used to store the length of a sound. The machine code "FF" at the end of the frequency table is designed to begin another sound cycle.
3. The frequency table can be changed so that various computer synthesized sounds can be generated.
4. The frequency table for the sound of a laser gun is provided. The sound of the laser gun is generated by rapidly reducing the frequency from 2400Hz to 800Hz.

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Flowchart



Address	Machine Code	Label	OP Code	Operand	Comment
1800	211918	LOOP1	LD	HL, FREQTAB	
1803	56	LOOP2	LD	D, (HL)	
1804	14		INC	D	Check FEPEAT code --FF
1805	28F9		JR	Z, LOOP1	
1807	15		DEC	D	
1808	23		INC	HL	
1809	5E		LD	E, (HL)	
180A	3EFF		LD	A, 0FFH	
180C	D302	LOOP3	OUT	(02), A	
180E	42		LD	B, D	
180F	10FE	\$	DJNZ	\$	LOOP B times
1811	EE80		XOR	80H	
1813	1D		DEC	E	
1814	20F6		JR	NZ, LOOP3	LOOP E times
1816	23		INC	HL	
1817	18EA		JR	LOOP2	

### FREQUENCY TABLE for Laser Gun

Address	Machine Code	Address	Machine Clde
1819	850E	1819	250C
181B	7E0E	181B	270C
181D	770E	181D	290C
181F	700E	181F	2C0C
1821	6A0A	1821	2E0C
1823	640E	1823	310C
1825	5E0E	1825	340C
1827	590E	1827	370E
1829	540E	1829	3B0C
182B	4F0E	182B	3E0C
182D	4A0E	182D	420C
182F	460E	182F	460C
1831	420E	182D	420C
1833	3E0E	1833	4F0C
1835	3B0E	1835	540C
1837	370E	1837	590C
1839	340E	1839	5E0C
183B	310E	183B	640C
183D	2E0E	183D	6A0C
183F	2C0E	183F	700C
1841	290E	1841	770C
1843	270E	1843	7E0C
1845	250E	1845	850C
1847	FF	1847	FF
	END		END