Address	Code	Label	Mnemonic	Comment
0430	C4 05	INIT:	LDI 05H	P1 points to 500 500-5FF = RAM buffer
0432	35		XPAH1	
0433	C4 00		LDI 00H	
0435	31		XPAL1	
0436	C4 08		LDI 08H	P2 points to 800 0803 = address clock 0806 = bits 0-2 74151 inputs
0438	36		XPAH2	
0439	C4 00		LDI 00H	
043B	32		XPAL2	
043C	C4 04		LDI 04H	P3 points to byte-read routine and vars
043E	37		XPAH3	
043F	C4 6F		LDI 6FH	
0441	33		XPAL3	
0442	C4 01		LDI 01H	set F0=1, reset 7493 address counters
0444	07		CAS	set status register
0445	C4 00		LDI 00H	F0 = 0, enable the counters
0447	07		CAS	set status register
0448	CB 00		ST 00(P3)	init ROM address counter
044A	3F	ADL:	XPPC3	call byte read routine
044B	C2 03		LD 03(P2)	apply clock pulse on 0803
044D	C4 6F		LDI 6FH	restore vars/routine pointer
044F	33		XPAL3	
0450	AB 00		ILD 00(P3)	increment ROM address
0452	9C F6		JNZ ADL	repeat until 256 bytes read
0454	C4 01	RDX:	LDI 01H	256 bytes read, stop address counter, is triggered by keyboard input in monitor clear CY/L bit return to monitor
0456	07		CAS	
0457	02		CCL	
0458	C4 00		LDI 00H	
045A	37		XPAH3	
045B	C4 00		LDI 00H	
045D	33		XPAL3	
045E	3F		XPPC3	
Variables				
046C	00	vSTK		P3L save
046D	00	vMASK		OR mask for setting result
046E	00	vBIT		read bit counter
046F	00	vADDR		ROM address counter
Sub: Read one byte from PROM				
0470	33		XPAL3	A= lowbyte return address
0471	01		XAE	save in EX
0472	C4 6F		LDI 6FH	
0474	33		XPAL3	P3 points to vars
0475	01		XAE	get P3L back
0476	CB FD		ST FD(P3)	save for returning
0478	C4 F8		LDI F8H	port 806 (printer D0-D7) is inverted
047A	CA 06		ST 06(P2)	set 74151 inputs to start with D7
047C	C4 08		LDI 08H	
047E	CB FF		ST FF(P3)	init read bit counter
0480	C4 80		LDI 80H	
0482	CB FE		ST FE(P3)	init OR mask to bit 7=1
0484	C4 00		LDI 00H	
0486	01		XAE	EX= read byte = 0
0487	06		CSA	A= status
0488	DC 02		ORI 02H	set F1, 74151 enable = L
048A	07		CAS	write it

Address	Code	Label	Mnemonic		Comment
048B	08	RBIT:	NOP		a short delay
048C	06		CSA		get sense B, the ROM bit status
048D	D4 20		ANI	20H	mask senseB
048F	98 04		JZ	RBINC	if zero, nothing to to
0491	C3 FE		LD	FE(P3)	bit is 1, A= OR mask
0493	58		ORE		A= A^EX
0494	01		XAE		EX= new result
0495	BB FF	RBINC:	DLD	FF(P3)	decrement bit counter
0497	98 10		JZ	RBDONE	if zero, all bits done
0499	C3 FF		LD	FF(P3)	get decremented bit counter
049B	03		SCL		set CY/L
049C	FC 01		CAI	01H	subtract 1
049E	E4 FF		XRI	FFH	invert it (data port is inverted)
04A0	CA 06		ST	06(P2)	and write to port
04A2	C3 FE		LD	FE(P3)	A= OR mask
04A4	1C		SR		shift mask bit right
04A5	CB FE		ST	FE(P3)	and write it back
04A7	90 E5		JMP	RBIT	read next bit
04A9	01	RBDONE:	XAE		A= ROM byte
04AA	CD 01		ST	@01(P1)	store it in buffer
04AC	06		CSA		A= status
04AD	D4 FD		ANI	FDH	clear F1, 74151 strobe = H
04AF	07		CAS		write it
04B0	C3 FD		LD	FD(P3)	A= lowbyte of return address
04B2	33		XPAL3		to P3L
04B3	3F		XPPC3		return to caller