6502 tester V1.0 2026 www.jbretro.com

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4000  78        SEI        disable interrupt
4001  A2 FF     LDX #FF    X=FF
4003  9A        TXS        Transfer X to stack pointer
4004  A9 FF     LDA #FF    A=FF
4006  8D 00 00  STA 0000   Write A to LEDs
4009  A2 00     LDX #00    X=00
400B  A0 00     LDY #00    Y=00
400D  E8        INX        Increment X
400E  D0 FD     BNE FD     Branch back to 400D if not zero
4010  C8        INY        Increment Y
4011  D0 FA     BNE FA     Branch back to 400D if not zero
4013  EA        NOP        No Operation
4014  A9 00     LDX #00    A=00
4016  8D 00 00  STA 0000   Write A to LEDs
4019  A2 00     LDX #00    X=00
401B  A0 00     LDY #00    Y=00
401D  E8        INX        Increment X
401E  D0 FD     BNE FD     Branch back to 401D if not zero
4020  C8        INY        Increment Y
4021  D0 FA     BNE FA     Branch back to 401D if not zero
4023  6C FF 7E  JMP (7EFF) Jump to vector at 7EFF, 7F00 or 7E00 (NMOS)

;second flash for CMOS
4034  A9 FF     LDA #FF    A=FF
4036  8D 00 00  STA 0000   Write A to LEDs
4039  A2 00     LDX #00    X=00
403B  A0 00     LDY #00    Y=00
403D  E8        INX        Increment X
403E  D0 FD     BNE FD     Branch back to 403D if not zero
4040  C8        INY        Increment Y
4041  D0 FA     BNE FA     Branch back to 403D if not zero
4043  EA        NOP        No Operation
4044  A9 00     LDX #00    A=00
4046  8D 00 00  STA 0000   Write A to LEDs
4049  A2 00     LDX #00    X=00
404B  A0 00     LDY #00    Y=00
404D  E8        INX        Increment X
404E  D0 FD     BNE FD     Branch back to 404D if not zero
4050  C8        INY        Increment Y
4051  D0 FA     BNE FA     Branch back to 404D if not zero
4053  4C 34 41  JMP 4134   Jump to knight rider display

;knight rider display
4134  A9 01     LDA #01    A=01
4136  8D 00 00  STA 0000   Write A to LEDs
4139  A2 00     LDX #00    X=00
413B  A0 00     LDY #00    Y=00
413D  E8        INX        Increment X
413E  D0 FD     BNE FD     Branch back to 413D if not zero
4140  C8        INY        Increment Y
4141  D0 FA     BNE FA     Branch back to 413D if not zero
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4143	EA			NOP	No Operation
4144	A9	02		LDX #02	A=02
4146	8D	00	00	STA 0000	Write A to LEDs
4149	A2	00		LDX #00	X=00
414B	A0	00		LDY #00	Y=00
414D	E8			INX	Increment X
414E	D0	FD		BNE FD	Branch back to 414D if not zero
4150	C8			INY	Increment Y
4151	D0	FA		BNE FA	Branch back to 414D if not zero
4153	EA			NOP	No Operation
4154	A9	04		LDA #04	A=04
4156	8D	00	00	STA 0000	Write A to LEDs
4159	A2	00		LDX #00	X=00
415B	A0	00		LDY #00	Y=00
415D	E8			INX	Increment X
415E	D0	FD		BNE FD	Branch back to 415D if not zero
4160	C8			INY	Increment Y
4161	D0	FA		BNE FA	Branch back to 415D if not zero
4163	EA			NOP	No Operation
4164	A9	08		LDX #08	A=08
4166	8D	00	00	STA 0000	Write A to LEDs
4169	A2	00		LDX #00	X=00
416B	A0	00		LDY #00	Y=00
416D	E8			INX	Increment X
416E	D0	FD		BNE FD	Branch back to 416D if not zero
4170	C8			INY	Increment Y
4171	D0	FA		BNE FA	Branch back to 416D if not zero
4173	EA			NOP	No Operation
4174	A9	10		LDA #10	A=10 Hex
4176	8D	00	00	STA 0000	Write A to LEDs
4179	A2	00		LDX #00	X=00
417B	A0	00		LDY #00	Y=00
417D	E8			INX	Increment X
417E	D0	FD		BNE FD	Branch back to 417D if not zero
4180	C8			INY	Increment Y
4181	D0	FA		BNE FA	Branch back to 417D if not zero
4183	EA			NOP	No Operation
4184	A9	20		LDX #20	A=20 Hex
4186	8D	00	00	STA 0000	Write A to LEDs
4189	A2	00		LDX #00	X=00
418B	A0	00		LDY #00	Y=00
418D	E8			INX	Increment X
418E	D0	FD		BNE FD	Branch back to 418D if not zero
4190	C8			INY	Increment Y
4191	D0	FA		BNE FA	Branch back to 418D if not zero
4193	EA			NOP	No Operation
4194	A9	40		LDA #40	A=40 Hex
4196	8D	00	00	STA 0000	Write A to LEDs
4199	A2	00		LDX #00	X=00
419B	A0	00		LDY #00	Y=00
419D	E8			INX	Increment X
419E	D0	FD		BNE FD	Branch back to 419D if not zero
41A0	C8			INY	Increment Y

41A1	D0	FA		BNE FA	Branch back to 419D if not zero
41A3	EA			NOP	No Operation
41A4	A9	80		LDX #80	A=80 Hex
41A6	8D	00	00	STA 0000	Write A to LEDs
41A9	A2	00		LDX #00	X=00
41AB	A0	00		LDY #00	Y=00
41AD	E8			INX	Increment X
41AE	D0	FD		BNE FD	Branch back to 41AD if not zero
41B0	C8			INY	Increment Y
41B1	D0	FA		BNE FA	Branch back to 41AD if not zero
41B3	EA			NOP	No Operation
41B4	A9	40		LDA #40	A=40 Hex
41B6	8D	00	00	STA 0000	Write A to LEDs
41B9	A2	00		LDX #00	X=00
41BB	A0	00		LDY #00	Y=00
41BD	E8			INX	Increment X
41BE	D0	FD		BNE FD	Branch back to 41BD if not zero
41C0	C8			INY	Increment Y
41C1	D0	FA		BNE FA	Branch back to 41BD if not zero
41C3	EA			NOP	No Operation
41C4	A9	20		LDX #20	A=20 Hex
41C6	8D	00	00	STA 0000	Write A to LEDs
41C9	A2	00		LDX #00	X=00
41CB	A0	00		LDY #00	Y=00
41CD	E8			INX	Increment X
41CE	D0	FD		BNE FD	Branch back to 41CD if not zero
41D0	C8			INY	Increment Y
41D1	D0	FA		BNE FA	Branch back to 41CD if not zero
41D3	EA			NOP	No Operation
41D4	A9	10		LDA #10	A=10 Hex
41D6	8D	00	00	STA 0000	Write A to LEDs
41D9	A2	00		LDX #00	X=00
41DB	A0	00		LDY #00	Y=00
41DD	E8			INX	Increment X
41DE	D0	FD		BNE FD	Branch back to 41DD if not zero
41E0	C8			INY	Increment Y
41E1	D0	FA		BNE FA	Branch back to 41DD if not zero
41E3	EA			NOP	No Operation
41E4	A9	08		LDX #08	A=08
41E6	8D	00	00	STA 0000	Write A to LEDs
41E9	A2	00		LDX #00	X=00
41EB	A0	00		LDY #00	Y=00
41ED	E8			INX	Increment X
41EE	D0	FD		BNE FD	Branch back to 41ED if not zero
41F0	C8			INY	Increment Y
41F1	D0	FA		BNE FA	Branch back to 41ED if not zero
41F3	EA			NOP	No Operation
41F4	A9	04		LDA #04	A=04
41F6	8D	00	00	STA 0000	Write A to LEDs
41F9	A2	00		LDX #00	X=00
41FB	A0	00		LDY #00	Y=00
41FD	E8			INX	Increment X
41FE	D0	FD		BNE FD	Branch back to 41FD if not zero

4200	C8			INY	Increment Y
4201	D0	FA		BNE FA	Branch back to 41FD if not zero
4203	EA			NOP	No Operation
4204	A9	02		LDX #02	A=02
4206	8D	00	00	STA 0000	Write A to LEDs
4209	A2	00		LDX #00	X=00
420B	A0	00		LDY #00	Y=00
420D	E8			INX	Increment X
420E	D0	FD		BNE FD	Branch back to 420D if not zero
4210	C8			INY	Increment Y
4211	D0	FA		BNE FA	Branch back to 420D if not zero
4213	EA			NOP	No Operation
4214	A9	01		LDA #01	A=01
4216	8D	00	00	STA 0000	Write A to LEDs
4219	A2	00		LDX #00	X=00
421B	A0	00		LDY #00	Y=00
421D	E8			INX	Increment X
421E	D0	FD		BNE FD	Branch back to 421D if not zero
4220	C8			INY	Increment Y
4221	D0	FA		BNE FA	Branch back to 421D if not zero
4223	EA			NOP	No Operation
4224	A9	00		LDX #00	A=00
4226	8D	00	00	STA 0000	Write A to LEDs
4229	A2	00		LDX #00	X=00
422B	A0	00		LDY #00	Y=00
422D	E8			INX	Increment X
422E	D0	FD		BNE FD	Branch back to 422D if not zero
4230	C8			INY	Increment Y
4231	D0	FA		BNE FA	Branch back to 422D if not zero
4233	4C	04	40	JMP 4004	Back to start

7E00	41			Jump Vector	NMOS page#	41
7EFF	34	40		Jump Vector	CMOS	4034
7FFA	00	40				
7FFC	00	40		Reset Vector		
7FFE	00	40				
FFFA	00	40				
FFFC	00	40				
FFFE	00	40				