

FOR APPLE II MICROCOMPUTERS

LIGHT PEN

ADDCOM ELECTRONICS INC.

LIGHTPEN FOR APPLE II 10K BASIC

INSTALLATION

Plug your lightpen connector into GAME I/O connector of your APPLE II. Load and run the lightpen color demo or the lightpen calculator, machine language will be loaded into memory from address HM at the same time. You can enjoy demos. If it does not work properly you can have good sensitivity of lightpen by turning the variable resistance on the lightpen connector.

HOW TO PROGRAM YOUR OWN

After load and run demo program you can load and enjoy your own program. You can light up cursors up to 128 to read them. You had better not to place cursors adjacently as the lightped can not easily distinguish one from adjacent one. You can put your own constants to the lightpen subroutine by POKE command todecide the position of cursors and so on. Followings are detailed commands.

NOTE: HM, A2 and A1 are calculated as in APPENDIX.

POKE 0,0

You should put this command at first to clear the table of cursors.

POKE 1,HT You can specify the horizontal position of each cursor. HT is 0 to 39.

POKE 2,VT

You can specify the vertical position of each cursor. VT is 0 to 23.

CALL A2

After specifing cursor position this command write the cursor position to the table, then light up the cursor. You can light up cursor up to 128. CALL Al

This command sense the cursor position when you touch the cursor with lightpen. As soon as reading the cursor "X" will be written instead of cursor mark when beep will sound.

A=PEEK(0)

You can get the position number of cursor which you read.

EXAMPLE

Light up cursors of which position are (17,10), (17,12), (17,14), (17,16). Then read the position of cursor when you touch a cursor with lightpen, and print the position number. Display format is right below. # means cursor.

ITEM	4	#	See	next	page
ITEM	3	#			
ITEM	2	#			
ITEM	1	#			

100 CALL -936 110 VTAB 10:HTAB 10:PRINT"ITEM 1" 120 VTAB 12:HTAB 10:PRINT"ITEM 2" 130 VTAB 14:HTAB 10:PRINT"ITEM 3" 140 VTAB 16:HTAB 10:PRINT"ITEM 4" 150 POKE 0,0 160 FOR I=9 TO 15 STEP 2 170 POKE 1,16:POKE 2,I:CALL A2 180 NEXT I 190 CALL Al 200 A=PEEK(0) 210 VTAB 20:HTAB 10:PRINT A 220 END APPENDIX: Calculation of HM, A2 and A1 6000 TEXT 6010 CALL -936 6020 HM=PEEK(116) 6070 KK=HM*256+16*11+15 6100 IF PEEK(KK) = HM THEN 6190 6120 HM=HM-3:POKE 116,HM 6140 DOR I=HM*256 TO HM*256+199 6160 READ D:IF D=12 THEN D=HM 6170 POKE I, D:NEXT I 6180 POKE KK-256*3, HM 6190 Al=HM*256+16+12:A2=Al+100 6200 RETURN Data statements are from line 5000 to 6190 in each program.

You can program like this way.

If you have a question please feel free to write us.



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POKE 1.HT

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You can specify the horizontal position of each cursor. HT is 0 to 39.

POKE 2,VT You can specify the vertical position of each cursor. VT is 0 to 23.

CALL 3200

After specifing cursor position this command write the cursor position to the table, then light up the cursor. You can light up cursor up to 128.

CALL 3100

This command sense the cursor position when you touch the cursor with lightpen. As soon as reading the cursor "X" will be written instead of cursor mark when beep will sound.

A=PEEK(0)

You can get the position number of cursor which you read.

EXAMPLE

Light up cursors of which position are (17,10),(17,12),(17,14),(17,16). Then read the position of cursor when you touch a cursor with lightpen, and print the position number. Display format is right blow. # means cursor.

			You can program like this way.
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			110 VTAB 10: TAB 10: PRINT "ITEM 1"
I TEM	2	#	120 VTAB 12: TAB 10: PRINT "ITEM 2"
			130 VTAB 14: TAB 10: PRINT "ITEM 3"
ITEM	3	#	140 VTAB 16: TAB 10: PRINT "ITEM 4"
			150 POKE 0,0
ITEM	4	#	160 FOR I=9 TO 15 STEP 2
			170 POKE 1,16:POKE 2,I:CALL 3200
			180 NEXT I
			190 CALL 3100
			-200 A=PEEK(0)
			210 VTAB 20:TAB 10:PRINT A
			220 END