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Cromemco

3355A PRINTER DRIVER

INSTRUCTION MANUAL

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Instructions for using the 3355A Printer Driver

Included with your new 3355A printer is a diskette containing three versions of the 3355 driver. To determine which driver to use, consult the following table.

CDOS version	3355 Driver
02.17 or higher	3355A.COM
01.07	3355-107.COM
00.20	3355-20.COM

This driver requires approximately 1K of memory which is taken from the top of the CDOS user area. It can be loaded into memory by either entering its name without the .COM at a CDOS prompt or by running the automatic Batch file STARTUP.CMD upon booting up. The driver will stay appended to CDOS as long as CDOS remains in memory. If you are using the Cromemco Word Processing System Formatter, the 3355 driver is an intrinsic part of FORMAT.COM and does not need to be loaded.

Features of the 3355A Driver

The 3355A driver enables the user to underline, subscript, superscript, space characters at 10 or 12 per inch, and do simple graphics.

To underline, send a 01H (CTRL-A) followed by the text to be underlined. Underlining is terminated by sending another 01H.

Characters can be made bold-face by sending a 06H (CTRL-F) preceding the text. Bold-face is terminated by sending another 06H.

Subscripting can be accomplished by sending a 03H (CTRL-C) followed by the text to be subscripted. Subscripting is terminated by sending a 02H (CTRL-B).

Similarly, superscripting is accomplished by sending a 02H (CTRL-B) followed by the text to be superscripted. Superscripting is terminated by sending a 03H (CTRL-C).

1

The width allotted to characters may be set to elite, pica, or other spacing. Elite spacing (12 characters per inch) is set by sending a 8AH to the printer preceding the text. 8CH is the value for pica spacing (10 characters per inch). Pica spacing is the default character width setting. Width units in the following table are 1/120".

Character Width

Command Character	Width	Characters Per Inch	Command Character	Width	Characters Per Inch	Command Character	Width
80H	0		96H	22		ACH	44
81H	1		97H	23		ADH	45
82H	2		98H	24	5	AEH	46
83H	3		99H	25		AFH	47
84H	4		9AH	26		B0H	48
85H	5		9BH	27		B1H	49
86H	6		9CH	28		B2H	50
87H	7		9DH	29		B3H	51
88H	8	15	9EH	30	4	B4H	52
89H	9		9FH	31		B5H	53
8AH	10	12	A0H	32		B6H	54
8BH	11		A1H	33		B7H	55
8CH	12	10	A2H	34		B8H	56
8DH	13		A3H	35		B9H	57
8EH	14		A4H	36		BAH	58
8FH	15	8	A5H	37		BBH	59
90H	16		A6H	38		BCH	60
91H	17		A7H	39		BDH	61
92H	18		A8H	40	3	BEH	62
93H	19		A9H	41		BFH	63
94H	20	6	AAH	42			
95H	21		ABH	43			

Simple graphics, plot mode, can be enabled by sending a 05H (CTRL-E) to the printer preceding each line of data. Only the low six bits of each byte will have meaning. A dot will print if the bit contains a 1. The bits in a byte will print from bit 0 to bit 5. Plot mode is terminated by a line feed. The following diagram of a byte shows the order and signicance of bits in relation to plot mode.

7 6 5 4 3 2 1 0

2

Spaces of width 0 to 63 (units of 1/120") can be sent to the printer with the following command characters.

Variable Width Spaces

Command Character	Width	Spaces	Command Character	Width	Spaces	Command Character	Width	Spaces
C0H	0		D6H	22		ECH	44	
C1H	1		D7H	23		EDH	45	
C2H	2		D8H	24	2	EEH	46	
C3H	3		D9H	25		EFH	47	
C4H	4		DAH	26		F0H	48	4
C5H	5		DBH	27		F1H	49	
C6H	6		DCH	28		F2H	50	
C7H	7		DDH	29		F3H	51	
C8H	8		DEH	30		F4H	52	
C9H	9		DFH	31		F5H	53	
CAH	10		E0H	32		F6H	54	
CBH	11		E1H	33		F7H	55	
CCH	12	1	E2H	34		F8H	56	
CDH	13		E3H	35		F9H	57	
CEH	14		E4H	36	3	FAH	58	
CFH	15		E5H	37		FBH	59	
D0H	16		E6H	38		FCH	60	5
D1H	17		E7H	39		FDH	61	
D2H	18		E8H	40		FEH	62	
D3H	19		E9H	41		FFH	63	
D4H	20		EAH	42				
D5H	21		EBH	43				

Users having both a fully-formed character printer and a dot matrix printer in their system may alternately select either printer with the program Stat (version 2.09 or higher). Upon loading the 3355A driver, that printer is automatically selected. To select the dot matrix printer enter

       STAT PRT:=PAR:
   or STAT PRT:=0

The fully-formed character printer may be reselected by entering

       STAT PRT:=TYP:
   or STAT PRT:=2

Example of Underlining Using Assembly Language

```
LF       EQU     0AH        ; ASCII line feed
CR       EQU     0DH        ; ASCII carriage return
CTRLA    EQU     01H        ; Printer underline on/off flag
CTRLT    EQU     14H        ; Stop-printing command character
CTRLW    EQU     17H        ; Start-to-print command character .
         .
         .
         LD      C,9        ; Print buffered line system call
         LD      DE,PRINTL  ; DE points to the line to be printed
         CALL    5          ; Perform the system call
         .
         .
         .
PRINTL:  DB      CTRLW,CTRLA,'Underline me',CTRLA,CR,LF,CTRLT,'$'
         .
         .
         .
         END
```

Example of Underlining Using 32K BASIC

```
10 Open\1\"$LP"
20 Ctrla$=Chr$(1)
30 Ctrlw$=Chr$(23)
40 Ctrlt$=Chr$(20)
50 Return$=Chr$(13)
60 @\1\Ctrlw$;Ctrla$;"This is a test";Ctrla$;Return$;Ctrlt$
70 Close\1\
80 End
```

Summary of Character Commands

01H	underline
02H	superscript
03H	subscript
05H	plot mode
06H	bold characters
7FH	reset printer
80H-BFH	character width (default=12 units of 1/120")
8AH	elite spacing (12 characters per inch)
8CH	pica spacing (10 characters per inch)
C0H-FFH	variable width spaces