

GTCO CalComp 100xx UltraSlate Commands RS232

POWER UP DEFAULT

9600 8 no parity 1 stop bit
Format #23
Run mode
1000 lpi
100 pps

OPERATING MODES

RUN MODE - The digitizer outputs coordinate data continuously.

INCREMENT MODE FILTER- puts a movement filter on the data in any mode. The transducer must move N counts before the data can be sent. Then both axis data are updated. If out of proximity data is enabled and in increment mode 1 data point may be sent on leaving proximity.

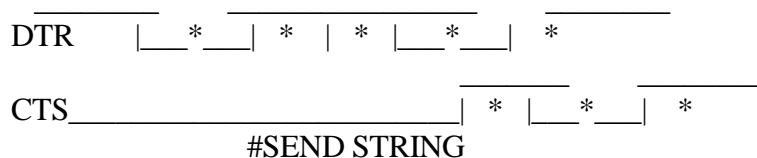
PROMPT MODE MODIFIER- places the additional restriction on data transmission that the host must transmit a prompt character to the tablet for each data point output. All other rules of normal operation apply. The prompt character is "?". Prompting is a feature, which operates in conjunction with any of the above standard modes.

SEND DATA OUT OF PROXIMITY MODE MODIFIER- If this flag is set coordinate data will be sent when it meets the output conditions in or out of the active area. Cordless units may not respond to button information until cursor is close to table. NOTE this command should be sent after the mode commands.

SEND DATA IN MARGIN - if this flag is set coordinate data point will be sent when it meets the output conditions in the active area or when in margins. NOTE margins on some of the tablets are very small and are larger leaving the tablet than coming in to the tablet.

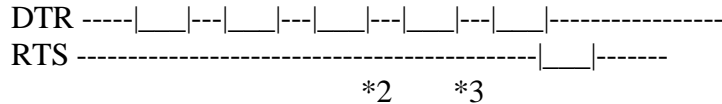
PLUG AND PLAY (WIN 95)

* .2+/- .035 SEC



DTR goes high and then within 165 msec to 235 msec CTS goes high. Then tablets sends the plug and play string at 1200 baud 7 data no parity 2-stop bits. The string could be "(^a\$CAL0010\\TABLET\\ 4x5 TABLET cs) cr lf" or similar. See plug and play speculation for more information.

DTR WIGGLE



RTS should be high well before DTR is dropped (1/18). DTR low times should be at least one timer tick (1/18) long and no longer than 2 ticks. This wiggle does not work 100% like older products. It is the same as sending Esc % C 1 N 8 1 cr and ESC % A 0 cr. And go to effect at *2. CTS should be low for at least 1 timer tick and DTR should be high during this time. At time *3 the tablet will send "T". and for each time CTS is toggled one more T will be sent. To get out of this mode send the tablet esc % VR cr (hard reset) or use the esc %A1 command.

BINARY FORMATS

20 format AFT

	7	6	5	4	3	2	1	0	
1	1	C4	C3	C2	C1	C0	X15	X14	PR 0= IN PROXIMITY 1= OUT OF PROXIMITY SB= 0 byte 10 is height data SB = 1 byt3 10 is special data TILT 40 TO 3F HEX 00= VERT. PRESSURE 0 TO 127 HEIGHT 0 TO 127 OR SPECIAL DATA IT CAN FLAG TRANSDUCER TYPE AND PRESSURE LSBS 0000= pressure pen 0100,1000 = UNKNOWN ELSE RESERVED
2	0	X13	X12	X11	X10	X9	X8	X7	
3	0	X6	X5	X4	X3	X2	X1	X0	
4	0	SB	PR	(X17 X16 Y16)	Y15	Y14			
5	0	Y13	Y12	Y11	Y10	Y9	Y8	Y7	
6	0	Y6	Y5	Y4	Y3	Y2	Y1	Y0	
7	0	XT6	XT5	XT4	XT3	XT2	XT1	XT0	
8	0	YT6	YT5	YT4	YT3	YT2	YT1	YT0	
9	0	P6	P5	P4	P3	P2	P1	P0	
10	0	H6	H5	H4	H3	H2	H1	H0	
	0	0	0	0	0	0	p-1	p-2	
		extra pressure							
	0	0	0	1	T3	t2	t1	t0	
		transducer type							
	0	0	1	x	reserved				
	0	1	x	x	reserved				

23 format

	7	6	5	4	3	2	1	0	
1	1	C4	C3	C2	C1	C0	X15	X14	PR 0= IN PROX 1= OUT OF PROX
2	0	X13	X12	X11	X10	X9	X8	X7	
3	0	X6	X5	X4	X3	X2	X1	X0	
4	0	0	PR	(X17 X16 Y16)	Y15	Y14			
5	0	Y13	Y12	Y11	Y10	Y9	Y8	Y7	
6	0	Y6	Y5	Y4	Y3	Y2	Y1	Y0	

PEN CODING

PEN	20,23
Up	00000
TIP 0	00001
SW1 1	00010
SW2 2	00100
0+1	00011
0+2	00101
1+2	00110
0+1+2	00111

COMMANDS (RS232)

DC1 (X ON) start transmission after a x off. (SAME AS ESC % A 1)
 DC3 (X OFF) stop transmission on the next PACKET SAME AS (ESC % A 0)
 ? is the prompt character.

9X00 COMMANDS

ESC % A 0 cr disable data out of RS232 port
 ESC % A 1 cr enable data out of RS232 port

ESC % C 0 N 8 1 cr set communication parameters 19200 8 NONE
 ESC % C 1 N 8 1 cr set communication parameters 9600 8 NONE

Note at baud rates > 9600 care should be taken that command will not be overwritten.

ESC % I R cr inc run mode inc value = 1
 ESC % R cr run mode

ESC % J R 1000,0 cr set resolution 1000 Lines per inch
 ESC % J M 100,0 cr set res To 100 Lines per mm

ESC % N 0 CR enable margin data
 ESC % N 1 cr disable margin data

ESC % Q cr clear prompt mode
 ESC % Q ? cr set prompt mode and prompt character MUST BE"?"

ESC % V B 0 CR disable special data
 ESC % V B 1 CR enable special data

ESC % V R cr reset tablet
 ESC % V R 5 cr equivalent to Z0,^23,IR,Qcr,JR1000,VB0,C1N81

ESC % V S cr send tablet size in current format

ESC % Z 0 cr send data out of proximity
ESC % Z 1 cr do not send data out of proximity

ESC % ^ 23 cr set format to gtco bin
ESC % ^ 20 cr set format to 20 cal bin with atf

ESC % W n CR data rate n= points pre sec . will round down to even divisors of 200.
 le 200,100,66,50,40,33,....5,4,3,2,1

ESC % _ _ V CR firmware version, rev and date "900xxx rr mm/yy cr lf"

ESC % _ _ p CR product id "CalComp 1000 cr lf"