

# SERIES 200

## 234 PLOTTER CONTROL

The Type 234 Plotter Control, which occupies one drawer of a standard Series 200 logic cabinet, enables Calcomp<sup>1</sup> Series 500 Plotters (Models 563, 564, 565, 566, 502, and 518) to operate on-line with any Honeywell Series 200 Central Processor. (The Model 120 must incorporate Feature 1015 or 1016 in order to use this control.) The Calcomp Series 500 Plotters create very accurate ink-on-paper plots, producing curves and symbols of any desired shape. They operate digitally, moving the pen in discrete .01- or .005-inch increments<sup>2</sup> in any of eight directions, with the pen either raised or lowered. The plotters are used to advantage in situations where graphical or pictorial representation of computer data is easier to interpret and use than extensive numeric or alphabetic listings.

### OPERATION

Operation is controlled, as with all other Series 200 peripheral devices, by Peripheral Control and Branch (PCB) and Peripheral Data Transfer (PDT) instructions. A complete plot may be executed by issuing a single PDT instruction. In executing the PDT, the control unit sequentially extracts six-bit characters from successive main memory locations, starting with the character specified in the A-address of the instruction. Each successive character will raise, lower, or move the pen in one of eight directions. Curves and symbols of any shape may be produced by the proper combination of such incremental motions. Extraction and plotting continue until the control unit senses a record-marked character, which terminates the operation. The record-marked character is not plotted.

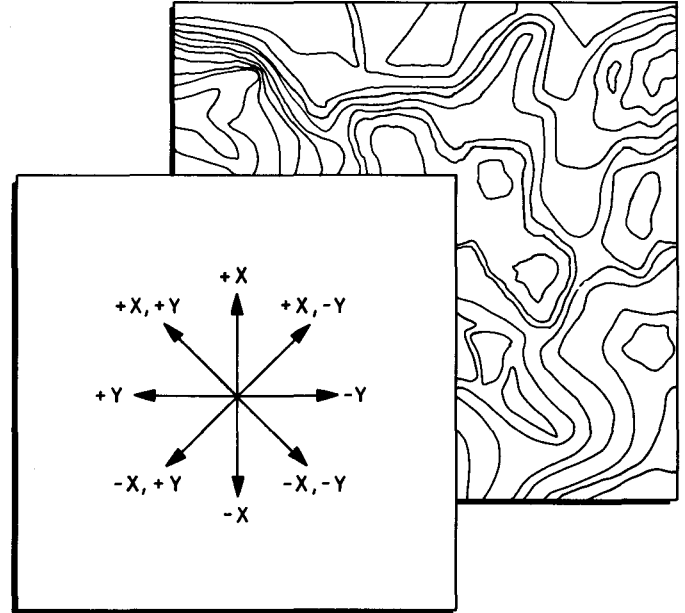
The program must be constantly aware of the pen position to ensure that it stays sufficiently within the limits of the plotting surface to accept a plotting command. Commands that attempt to move the pen beyond these limits will have no effect.

The maximum plotting speed is 300 increments per second, in any of eight directions. Increments parallel to an axis are .01 or .005 inches. Increments at 45° to an axis are 1.4 times .01 or .005 (i.e., .014 or .007 inches). This means that on a .01-inch plotter the pen can move at a maximum rate of 4.2 inches per second.

### INTERRUPT CAPABILITY

The plotter control employs the standard interrupt capability of the Series 200 processors. If the allow function is ON, the interrupt function will be turned on when a PDT is terminated. The interrupt function is reset when

Specifications remain subject to change in order to allow the introduction of design improvements.



another PDT is issued, or it may be reset by a PCB instruction or by depressing the central processor INITIALIZE button. The allow function is program controlled by PCB instructions.

### SPECIFICATIONS

MODEL	563	564	565	566	502	518
Type	Drum	Drum	Drum	Drum	Flat Bed	Flat Bed
Plot Size X	120"	120"	120"	120"	34"	72"
Plot Size Y	29½"	29½"	11"	11"	31"	48"
Normal Step Size	0.01"	0.005"	0.01"	0.005"	0.01"	0.005"
Maximum Step Rate (X + Y)	200/sec	300/sec	300/sec	300/sec	300/sec	200/sec

Maximum PEN UP/PEN DOWN rate for all models is 5 up and 5 down per second.

PEN MOVEMENT: +X, -X, +Y, -Y, +X+Y, -X+Y, +X-Y, -X-Y

ADDRESS ASSIGNMENT: One

1 - Registered trade mark of California Computer Products, Inc.  
2 - Other size increments can be supplied on special order.