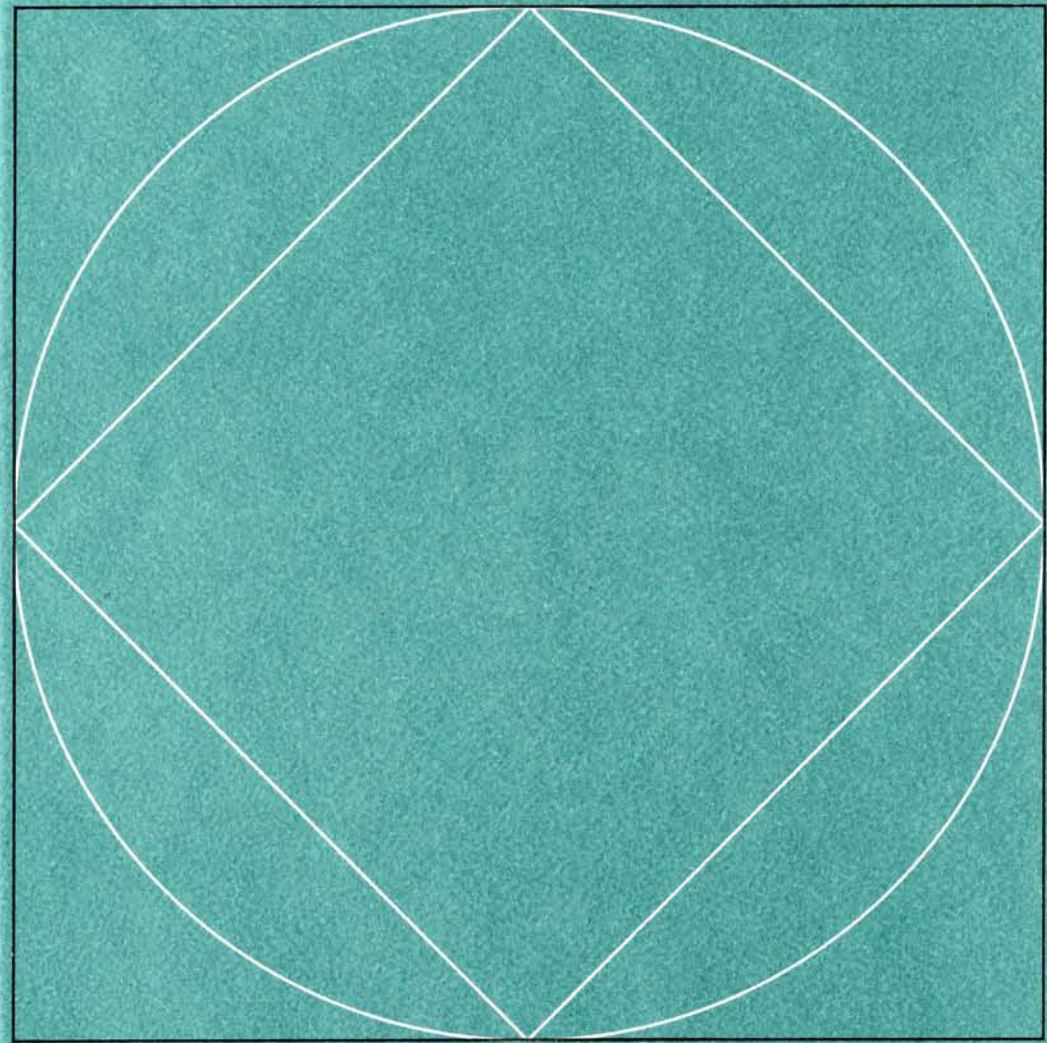


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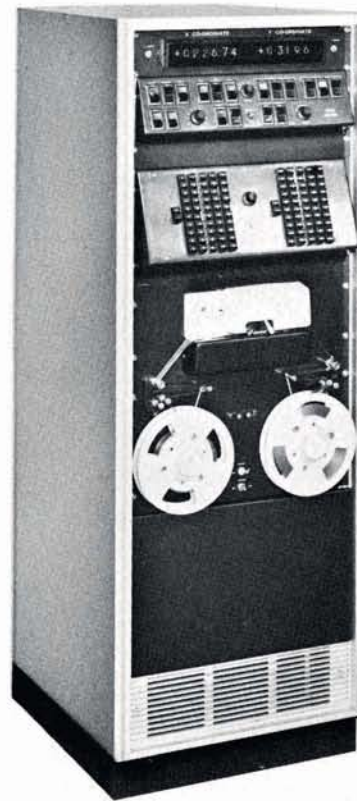


Economical Automatic Drafting Systems / Series 600

THE GERBER SCIENTIFIC INSTRUMENT COMPANY



The Gerber Series 600 economical, automatic drafting systems offer unlimited flexibility — one control console can be integrated with any or all four separate and distinct drafting tables to satisfy the widest ranges of speed, accuracy and working area requirements.



The Gerber Series 600 automatic drafting systems are designed to solve application problems ranging from verification and display to design and scribing as well as printed circuit layouts.

The Series 600 systems perform specific or interrelated drafting functions at a fraction of the time and with an accuracy impossible manually. Plots can be drawn and scribed up to 5 by 20 feet, at speeds up to 300 inches per minute, and with accuracies up to ± 0.001 of an inch. Complex problems are reduced to simple drafting functions. Inherent instrument flexibility and simplicity of operation ensure maximum, economic, on-line or off-line adaptability to present systems, methods and procedures.

The use of digital logic, digital stepping motors, together with superior mechanical design guarantees long-term reliability, stability and accuracy.

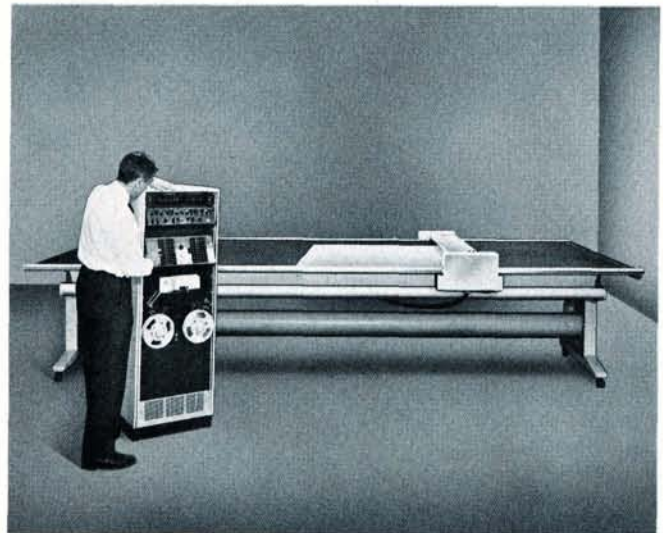
OPERATION

The operations performed by the Series 600 automatic drafting systems may be described simply as converting digital information into a graphic display — or the converse function of converting graphic information into digital data.

The Series 600 digital control network accepts all on-line or off-line forms of data input — directly from the computer or paper tape, punched cards, manual keyboard or magnetic tape. Simple, conveniently located controls allow automatic or manual positioning of the drafting table stage for printing, scribing, inking or photoexposing. X-Y coordinate data is instantly translated to either inked drawings on standard drawing surfaces; scribed drawings on metal, coated Mylar, or optical comparator screen material; printed and integrated circuit board layouts on light sensitive material. The converse operation, that of translating graphic displays such as maps and templates into digital form, is accomplished by optional accessories.

A variety of manual controls are integrated with the automatic network to allow operator control and enhance system flexibility. The controls feature mirror-image drawing, two axes selection from three axes tapes, single and continuous reading, speed, slewing and pen control. Typical of optional manual controls are those for scaling, symbol generation and dash lines.

The core of the digital control console is composed of highly stable and accurate logic modules. They are functionally grouped, color-coded and keyed for maximum interchangeability and ease of system maintenance. The control signals from the digital console are fully integrated with any table configuration to present a truly functional and complete automatic drafting system.

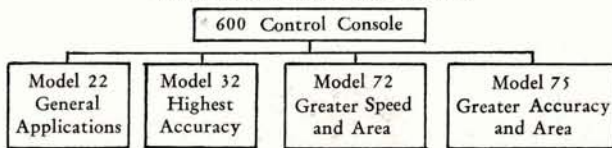


APPLICATION

The Series 600 control systems have an infinite number of applications. Its special purpose computer can handle variable block word formats. Inherent versatility enables a wide variety of tape formats to be accommodated without additional postprocessing.

The Series 622, a combination of the Series 600 control console and the Model 22 table, is designed for general applications requiring relative speeds and accuracies at low cost. Where greater working area, higher speeds, and more precise accuracies are required, the Series 600 control console can be integrated with any of the Series 600 table configurations available. As an example: the Series 600 control console may be mated with the Model 75 automatic drafting table to provide speeds up to 250 inches per minute at an accuracy of ± 0.006 of an inch.

COMPREHENSIVE FLEXIBILITY*



*Note: Any number of drafting tables may be combined with a single Series 600 control console to meet a variety of operational requirements.

The chart below illustrates the wide variety of table configurations available with the basic Series 600 digital control console.

	622	632-1	632-2	672	675-1	675-2
SPEED (IPM)	200	30	100	300	150	250
ACCURACY	± 0.010	± 0.001	± 0.0025	± 0.010	± 0.005	± 0.006
REPEATABILITY	± 0.004	± 0.0005	± 0.0015	± 0.004	± 0.002	± 0.003
RESOLUTION	.002	.0002	.0008	.002	.001	.002
TABLE POSITION	electric tilting	horizontal	horizontal	electric tilting	electric tilting	electric tilting
TABLE SIZE	50" x 60"	4' x 5'	4' x 5'	5' x 5' to 5' x 20'	5' x 5' to 5' x 20'	5' x 5' to 5' x 20'

The display of graphs, curves, preliminary design data, verification of machine tool cutter paths, map and chart reading require a drafting system allowing greater speeds. High accuracies are required for printed and integrated circuit applications, as well as comparator chart scribing, pattern and template production. The complete range of drafting table sizes can satisfy small drafting work as well as lofting — as in the case of the aircraft, marine and automotive industries.

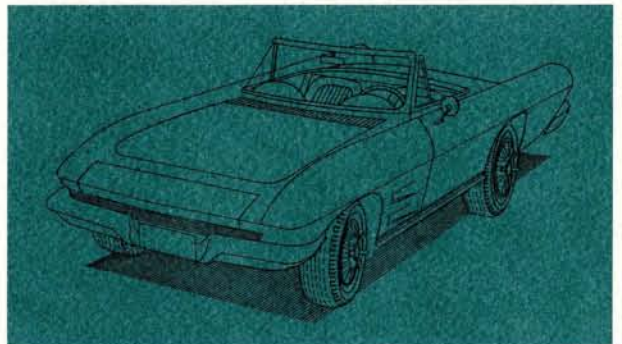
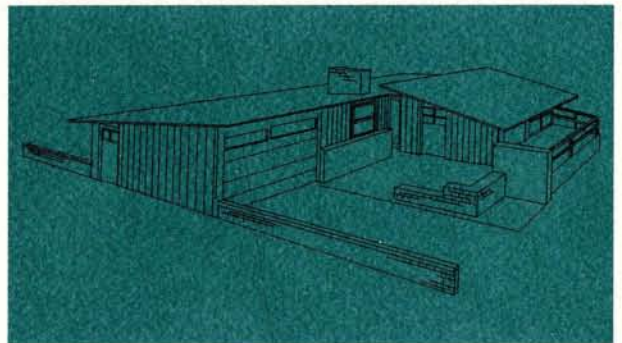
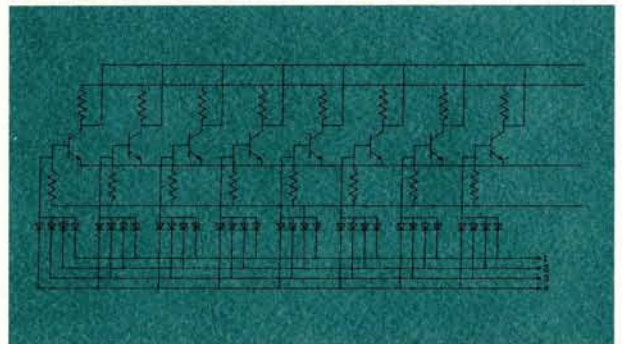
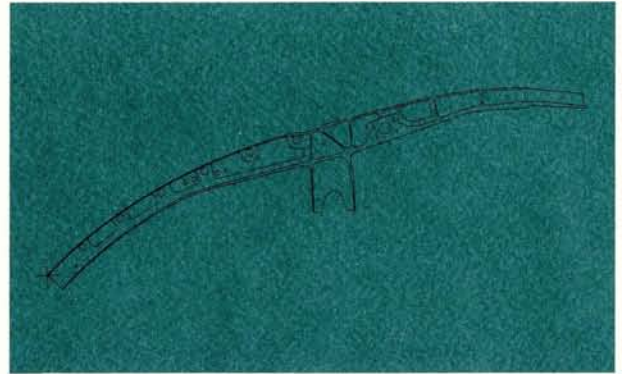


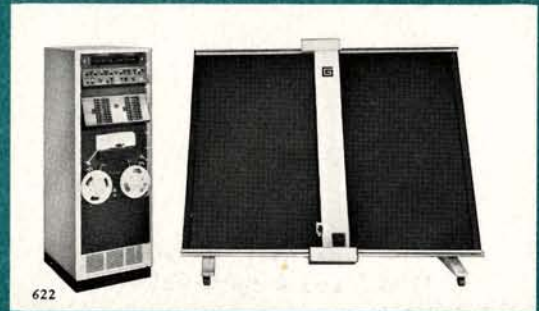
TABLE DESIGN FEATURES

MODEL 22 automatic drafting table offers exceptional rigidity in a simple design. The readily adjustable plotting surface can accommodate sheet or roll plotting material. The X carriage, mechanically connected to ensure perpendicularity, acts as a precision way for the Y carriage, which mounts the drawing head. Model 22 encompasses greater overall flexibility — offers tighter specifications and unique operating features previously attainable only at a much higher price.

MODEL 32 drafting table incorporates a rigid and simple carriage drive system guaranteeing extremely high accuracy. Roller bearings and precision ways, complemented by a ball screw drive network, allow precise positioning of the X and Y carriages. A vacuum hold-down system, utilizing a rubber platen ground flat to eliminate depressions and irregularities, firmly retains plotting materials.

MODEL 72, a torsionally rigid, light-weight structure, uses advanced aircraft design principles. The table is infinitely adjustable from the horizontal to the vertical, electrically. A novel, continuous dust cover protects the precision racks, preventing foreign matter from impairing accuracy.

MODEL 75 drafting table incorporates all the features of the Model 72, as well as utilizing greater precision components for greater accuracy.



OPTIONAL FEATURES

HI-SPEED PHOTOELECTRIC TAPE READER AND HANDLER — reads up to 300 cps . . . with 8 inch tape handler . . . also available with 10 1/2 inch reels.

***VACUUM CHUCK** — remote controlled, self-contained vacuum package, connected to the plotting table by flexible hoses and quick disconnect couplings . . . holds drawing materials to a perforated rubber platen.

ACCUMULATED COMMAND POSITION INDICATORS — in-line decimal displays indicate the accumulation of incremental data . . . five digits, including three decimal places, and sign for X and Y axis or six digits and sign.

OUTPUT ACCESSORY — enables conversion of the basic verifier plotter into a coordinate digitizer . . . provides a display of five digits and sign as well as output to a key punch, tape punch, typewriter, flexowriter or magnetic tape and includes an output format patchboard . . . also may include a variety of counters. (i.e.) channel, time index or fixed digits.

***CARBIDE SCRIBING TOOL** — for scribing uniform width (.003) lines on coated Mylar or metallic plate . . . other sizes upon request.

MAGNIFYING RETICLE — for alignment of scribing material or high accuracy work with magnifying capability of 4x normal size.

ADDITIONAL PEN — may be mounted beside the standard pen at a fixed offset.

72 SYMBOL PRINT HEAD — with automatic control from the input tape to print alpha numeric characters up to 0.187 high . . . interchangeable with standard drawing head, contains two drawing pens.

SWITCH SELECTED SCALING — of the input command is available in six ranges: 1) 1/10 size . . . 2) 1/4 size . . . 3) 1/2 and 2 times size . . . 4) 1/2, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 times size . . . 5) 10-99 times size, increments of 1 . . . 6) 100-999 times size, increments of 1.

SEQUENCE NUMBER DISPLAY — furnishes a display of tape sequences being plotted . . . number displayed continuously . . . allows manual data search without plotting . . . automatic search feature also available (operator enter desired number and starts operation — the tape reader stops when the number is reached).

DASH LINE GENERATION — by a single special draft function command on the input tape.

SYSTEMS INPUTS — in place of, or in addition to, the standard punched paper tape input may include:

PUNCHED CARD — from I.B.M. 519 or 523 card reader.

MANUAL — 10 position thumbwheel switches and "execute" pushbutton enter commands into the system.

MAGNETIC TAPE — input via digital incremental magnetic tape reader capable of reading 1/2 inch seven channel tapes written at standard density of 200 or 556 bits per inch . . . reading speed 300 cps . . . mounted in a separate cabinet . . . compatible with I.B.M. tapes.

ON LINE OPERATION — permits operating on-line with digital computers using either a serial binary coded decimal output from the computer or direct incremental pulses from the computer output section.

ADDITIONAL AXIS RECOGNITION — allows any two axes to be selected from up to five axes of linear input data.

BLOCK DELETE — allows all blocks of tape preceded by SLASH code (/) to be disregarded by the control unit . . . a toggle switch enables or disables this feature.

AUXILIARY DISPLAYS — for displaying feed rate (f), spindle speed (s), and tool number (t) commands for verification purposes . . . audible warnings are also available.

PLOTTING MATERIAL ROLL FEED — manual, or motorized under control of the input command.

OSCILLOGRAM RECORD DRIVES — enables paper records to be read with digitizer readout option . . . one, two, or three records can be transported at one time.

OPTIONAL STOP — on the control tape is recognized only when toggle switch is in ON position.

ABSOLUTE COORDINATE INPUT — in place of, or in addition to, the standard incremental word address format.

TAB SEQUENTIAL INPUT FORMAT — in place of, or in combination with other input options, such as word address.

INTERNAL SYMBOL GENERATOR — for drawing symbols with a single input command.

INCREASED SPEED AND ACCURACY — available for Model 622.

*Standard on Model 632



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