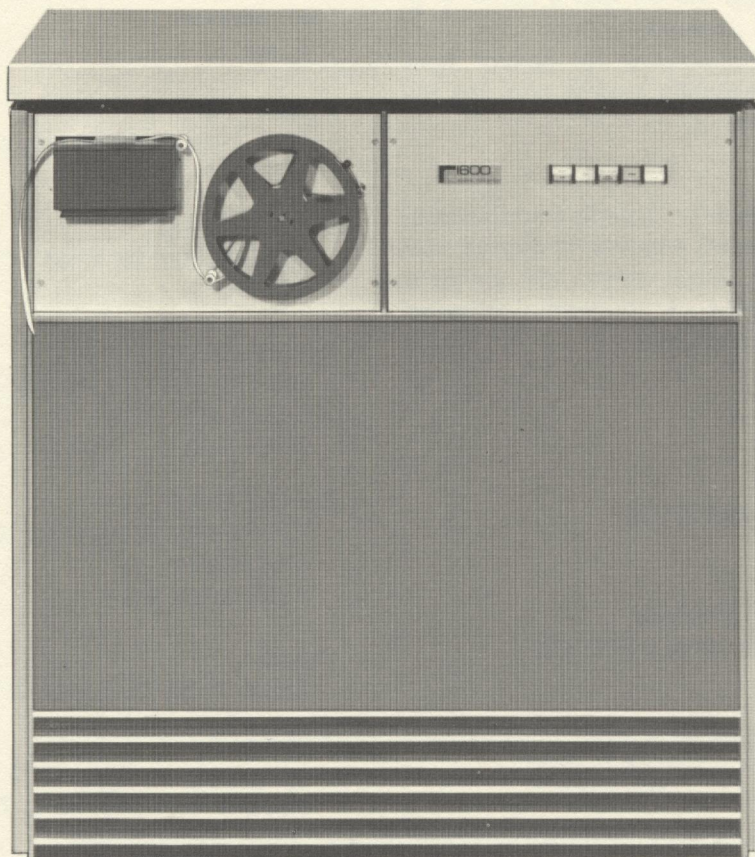# RC4000 COMPUTER®

SPECIFICATION

RC 1600 GRAPHIC CONVERTER

The graphic converter, developed by Regne-centralen in collaboration with the Laboratory for Pulse and Digital Techniques at the Technical University of Denmark, operates drafting and graphic display devices, automatically generating symbols and vectors on the basis of digital input from 8-track paper tape or 8-bit characters from the low-speed data channel of the RC 4000.

Alphanumerical characters and similar symbols are produced by a symbol generator in association with a small read/write core store. When a symbol set is read in, the individual symbols in it can be written out by inputting single 8-bit characters.

Symbol scaling and tilting (e. g. a text in italics) as well as symbol string turning can be specified in the input characters. Since the symbol set can be changed simply by input to the symbol store, each user can have his own set of symbols according to need.

Available Interface

- Standard output interface for Calcomp Incremental Digital Plotters, Series 500 and 600.
- Optional output interface for analog drafting devices, e. g. the Kingmatic 1215 MK II Drafting Machine (120×150 cm, 80 mm/second).
- Optional output interface for a cathode ray display (100,000 steps/second maximum).
- Optional output interface for other digital drafting devices of the Calcomp type.
- Optional data channel for input from a magnetic tape system with a buffer, e. g. the RC 3000 converter system.
- Optional data channel for on-line input from a time-sharing system, e. g. the RC 4000 computer.

Technology

The graphic converter, actually a small wired-program computer, employs integrated circuits, standard circuit cards, and standard power supply modules for greater reliability and simpler maintenance.

CHARACTERISTICS

Standard Input Medium

8-track paper tape, odd parity

Input Formats

vector block (fixed length)
symbol block (variable length)
control block (fixed length)
store block (variable length)
stop instruction

Paper Tape Reader

GNT Model 24
reading speed: 50 char/sec

Output

step instructions in 8 directions:

| X, O | O, Y | $-$X, O | O, $-$Y |
| X, Y | $-$X, Y | $-$X, $-$Y | X, $-$Y |

Standard Output Interface

for Calcomp Incremental Digital Plotters, Series 500 and 600
typical plotting speed: 30 mm/sec

Pen Control

Lines of 8 different types can be generated: solid line, dots, dashes, no line, etc.

Interpolation

linear

Symbol Scaling

$(1 + 2 \times a) \times 2^b$ where: $a = 1$ or 0, and $b = 0, 1, 2, 3, 4, 5, 6,$ or 7

Symbol Tilting

Symbols can be tilted 14° in the X direction.

Symbol String Turning

Symbol strings can be generated in 4 directions:

X, O   O, Y $-$X, O   O, $-$Y

Symbol Store

read/write core store for 1024 12-bit characters
cycle time: 4 μs

Power

220 V $\pm$ 10 %, 50 Hz $\pm$ 5 %, 650 W

Ambient Air

temperature: 10 to 40°C
relative humidity: 30 to 70 %

Size and Weight

width: 105 cm
depth: 56 cm
height: 113 cm
weight: 85 kg approximately

rc4000 COMPUTER®