GIER SYSTEM – Typical Extension
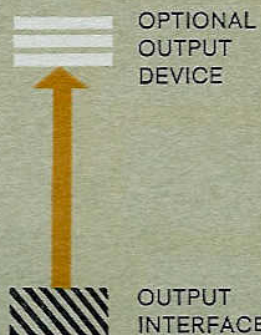
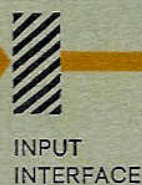## RC 3000
Example of Off-Line Conversion

OPTIONAL
OUTPUT
DEVICE

OUTPUT
INTERFACE
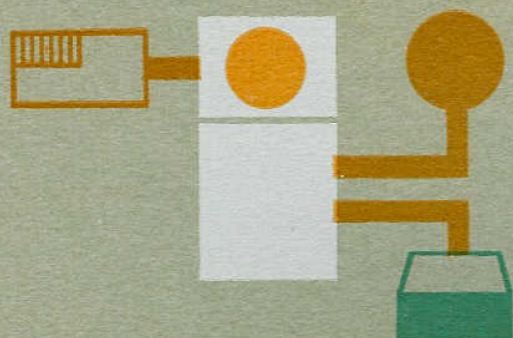
RC 2000

RC 3000

ALTERNATIVE
INPUT DEVICE

INPUT
INTERFACE

SERVO INPUT
BUFFER
SYSTEM

PAPER
TAPE
READER

CONVERTER UNIT

MAGNETIC
TAPE
STATION
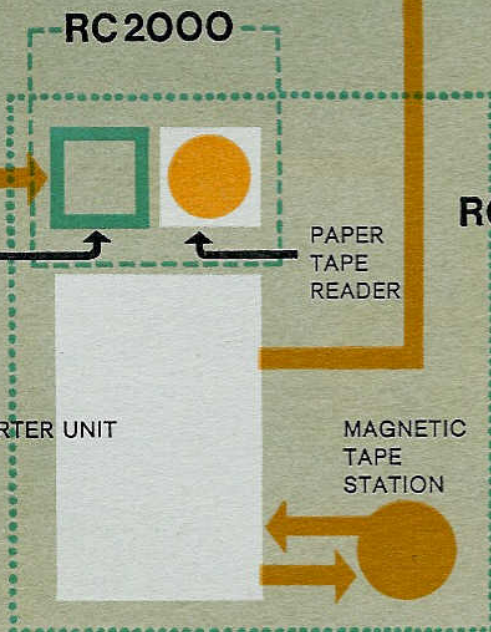
RC 3000
Organization of Conversion Process

SUMMARY

GIER Computer	compact, general purpose digital computer – ALGOL 60 compiler, flexible operating system – binary, parallel operation with 6.6 μs cycle time
	60 single-address instructions – built-in floating-point arithmetic, automatic address modification, indexing
	simultaneous drum/disk file and magnetic tape operations – buffered input/output, interrupt facility, open-ended design
	central processor: immediate access core store of 1024 words – word length: 40 bits + 2 flag bits – instruction execution times from 29 μs to 267 μs

Secondary Storage	Type	Capacity	Transfer Time	Number
	magnetic drum store, random access	320 tracks of 40 words = 12,800 words	20 ms/track	3
	magnetic disk file, random access	9600 blocks of 40 words = 384,000 words	3 ms/block	4
	buffer store	core store of 4096 words	7 and 15 μs/word	1

Peripherals	Type	Speed	Number
	off-line perforator typewriter	8–12 char/sec	–
	on-line monitor typewriter	8–12 char/sec	1
	paper tape punch	150 char/sec	1
	paper tape reader, photo-electric	2000 char/sec	2
	punched card reader, pneumatic	1600 cards/min	1
	magnetic tape station	28,800 char/sec*	4
	line printer	667 lines/min	1
	converter, off-line, multi-directional	2000 char/sec**	–
	hybrid computer linkage equipment	60 μs***	–
	data logging system	10,000 ch/sec****	–

      * at 800 char/inch (36 inches/sec)
    ** conversion from paper tape to magnetic tape
  *** conversion time – analog input channels
**** peak scanning speed – analog inputs, fast-scan group

Software	ALGOL 60 compiler (GIER ALGOL IV)
	utility program system (HELP) with symbolic loader program (SLIP) and numerous other debugging aids
	comprehensive information service (GIER System Library) with descriptions and tapes of programs and subroutines, books, reports, and surveys – literature and program tapes include: general information, service routines, basic data processing, mathematics, mathematical statistics, operational research, science and engineering, and business applications
Typical Installation Requirements*	area: 50 m² minimum
	weight: 2600 kg (700 kg/m² floor load)
	power: 9 kW maximum
	air temperature: 18–23° C
	relative humidity: 40–60 %
	* based on central processor with 1 drum, console with basic peripherals, buffer store, 4 tape stations, card reader, and line printer
General	The GIER Computer is supplied with an operator's console and a ready-to-use package.
	Extra options include connection of digital increment plotter, real-time clock, or MICR reader.
	The price includes installation. The six months' warranty covers training, programming, and technical service, and in addition to this, extensive customer and maintenance service is available by contract.

SPECIFICATION

LIST OF SPECIFICATIONS

GENERAL INFORMATION

A/S Regnecentralen

References

List of Specifications
Summary
Computer and Converter Configurations

GIER ELECTRONICS

GENERAL INFORMATION

HARDWARE

GIER Console

GIER Computer

Disk File

Buffer Store

Paper Tape Punch

Paper Tape Reader

Punched Card Reader

Magnetic Tape Station

Line Printer

Converter

Hybrid Computer Linkage Equipment

Data Logging System

- on-line typewriter
- tape punch
- tape reader
- central processor
- drum store
- disk file
- buffer store
- card reader
- tape station
- line printer
- converter
- plotter/real-time clock/MICR reader
- hybrid computer linkage equipment (data logging system)

SOFTWARE

GIER ALGOL Compiler

HELP Administrative System

SLIP Input Program

GIER System Library

Selected Execution Times in GIER ALGOL
Correlation of Bits with Integers and Decimal Digits
Magnetic Tape Utilization

Table of Codes

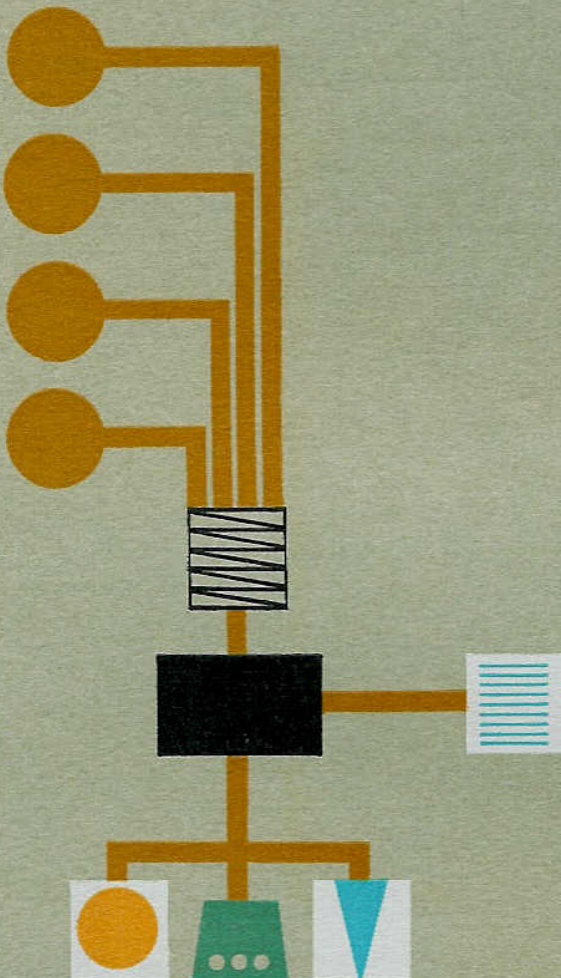**Configurations (inside)**

Summary (back)

GIER-DISK

GIER
ELECTRONICS
**COMPUTER and
CONVERTER
CONFIGURATIONS**

GIER Standard
with Three-Drum Unit

GIER-DISK
with Printer and Additional Disk Files

GIER-DISK
with Magnetic Tape