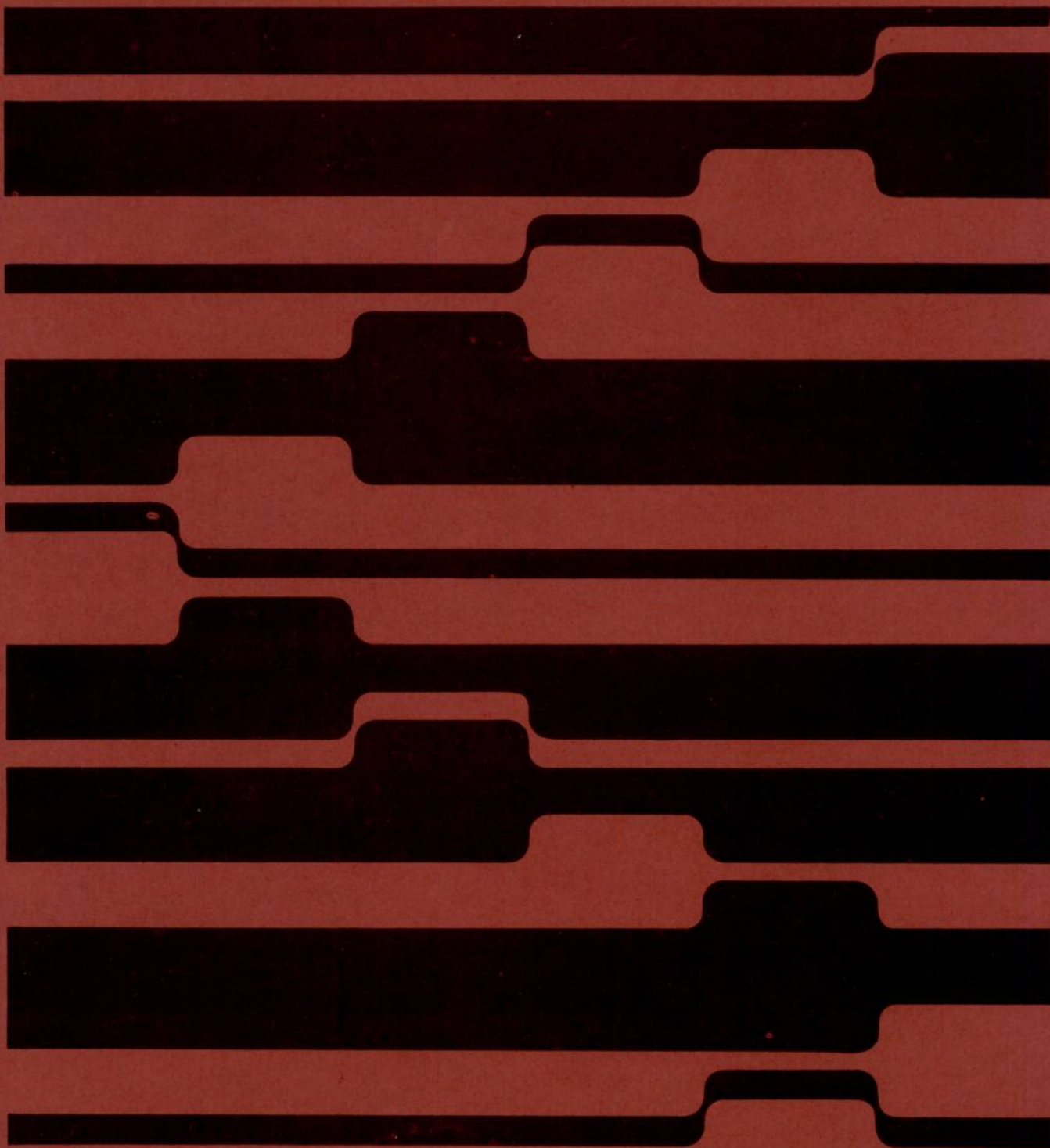
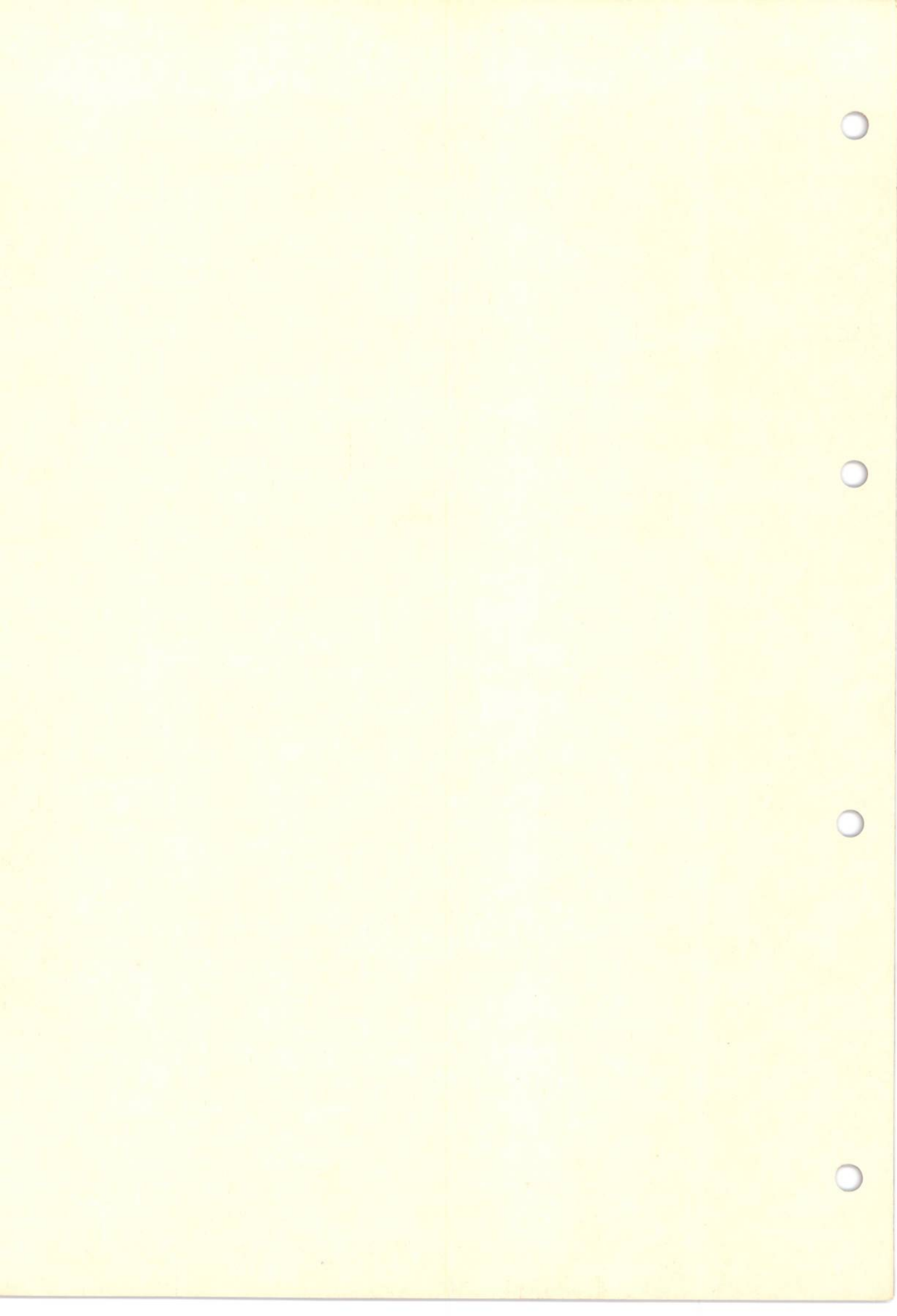




7905
Publications
Guide

4850







**7905
Publications
Guide**

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Technical Publication 4850

© International Computers Limited 1973

Preliminary Edition July 1973

Distributed by Software Distribution Department
International Computers Limited
Head Office: ICL House, Putney, London SW15 1SW
Printed by ICL-Systemset
Works Road, Letchworth, Herts SG6 1JY

PREFACE

There are two aspects in the design of the 7905 Communications Control System which result in a different and rather more comprehensive publications policy than is normal for an ICL product.

First, several components of the 7905 system are part of or form ICL developments of the Computer Technology Limited Modular One computer system. Hence the appropriate CTL publications will be provided to 7905 users where these apply.

Second, as system programming capability is a major feature of the 7905 system, detailed ICL specifications will be provided where these are appropriate.

Since the CTL handbooks are designed to support Modular One, and the ICL specifications were proposed as part of ICL's 7905 development, there may be areas in these publications that are not relevant for the 7905 user. Accordingly each such document will be accompanied by a preamble designed to pilot the 7905 user through the publication by highlighting the relevant points and stating any qualifications on its use. Correspondingly each manufacturer has its own system of reference numbers and type numbers.

Hence as a further aid to the 7905 user this Publications Guide both identifies and describes each relevant document according to readership and topics covered. In the bibliographic section each document is referenced by its Edition and TP number (followed, if applicable, by the corresponding Issue and previous reference number) so that the document can be ordered correctly from the ICL Software Distribution Department and the internal inter-document references are still meaningful. Additionally the relationship of the ICL and CTL type numbers is clarified by the inclusion of a hardware equivalents list.

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INTRODUCTION

This guide has been produced to aid any user or potential user of the 7905 Communications Control System to select the corresponding hardware and software documents relating to his own requirements.

The selection of pertinent documents designed to support Release 1 of the software has been categorised according to readership needs for

- overview
- system potential
- system design
- programming
- operating

in the form of separate readership lists. Each such document has been identified as to be read (for background) and to be referred to for the solution of specific problems.

More detailed descriptions of each document so mentioned and its relationship to cognate documents have been included in the bibliography. Hence under topic both hardware and software documents are identified by full title, issue and reference numbers.

Lastly to make the relationship of the ICL and CTL type numbers clear a hardware equivalents list has been included.

*Bibliography
reference*

Short title

READERSHIP LISTS

Overview

For obtaining an overview of the 7905 Communications Control System

READ

1 *Introduction*

System Potential

For an idea of the capabilities of the 7905 system

READ

1 *Introduction*
2 *Introduction to Communications System*
3a *1.11 Processor*

REFERENCE

3a *1.61 Communications Equipment*
22 *Serial File Organisation*

*Bibliography
reference*

Short title

System Design

In order to be able to specify a 7905 system

READ

1	<i>Introduction</i>
2	<i>Introduction to Communications System</i>
3a	<i>1.11 Processor</i>
3c	<i>1.61 Communications Equipment</i>
15	<i>E4 Executive</i>
13	<i>NALA (E4) Assembler</i>
16	<i>CORAL 66 Programming</i>

REFERENCE

3b	<i>1.3 Basic Peripherals</i>
22	<i>Serial File Organisation</i>

For additional information on the 7905 communications and other software facilities the introductory portions of documents 7, 14, 17 to 20, 22 and 23 could also be referenced.

*Bibliography
reference*

Short title

Programming

For the ability to program an application on the 7905

READ

1	<i>Introduction</i>
2	<i>Introduction to Communications System</i>
3a	<i>1.11 Processor</i>
5	<i>E4 Executive</i>
10	<i>E4 Loading Language (E4SLB)</i>
13	<i>NALA (E4) Assembler</i>
16	<i>CORAL 66 Programming</i>

REFERENCE

3b	<i>1.3 Basic Peripherals</i>
3c	<i>1.6 Communication Equipment</i>
4	<i>Operating Procedures - Hardware</i>
6	<i>E4 Programming</i>
7	<i>Communications User Interface</i>
8	<i>E4 User Operating</i>
9	<i>E4 System Operator</i>
11	<i>7905 Programming Aid</i>
12	<i>NAL (New Assembly Language)</i>
14	<i>NALA (E4) User</i>
15	<i>CORAL 66 Language</i>
17	<i>CORAL 66 User</i>
18	<i>TED Text Editor</i>
19	<i>IDA</i>
20	<i>LIMPID Link Editor</i>
21	<i>GERBIL Language</i>
22	<i>Serial File Organisation</i>
23	<i>VOLMAN</i>

*Bibliography
reference*

Short title

Operating

For the ability to run an application program on the 7905

READ

- | | |
|---|--|
| 1 | <i>Introduction</i> |
| 2 | <i>Introduction to Communications System</i> |
| 3 | <i>Outline Specifications</i> |

REFERENCE

- | | |
|----|--|
| 4 | <i>Operating Procedure - Hardware</i> |
| 7 | <i>Communications User Interface</i> |
| 8 | <i>E4 User Operating</i> |
| 9 | <i>E4 System Operator</i> |
| 14 | <i>NALA (E4) User</i> |
| 17 | <i>CORAL 66 User</i> |
| 18 | <i>TED Text Editor</i> |
| 19 | <i>IDA Interactive Development Aid</i> |
| 20 | <i>LIMPID Link Editor</i> |
| 23 | <i>VOLMAN</i> |

Full title

*Order details
(Original reference)*

BIBLIOGRAPHY

Introductory

- 1 7905 *Introduction* Preliminary Edition, TP4363
ix + 54 pp

Description

This manual is designed specifically for Senior Computing Staff who have a general knowledge of data communications to give an overview of the 7905 Communications Control System.

The topics covered include a chapter on the features and the components (both hardware and software) of the 7905, a chapter on the available hardware (facilities and features particularly on the 7905/0 Processor and 7950 Command Chaining Multiplexer), a chapter on the available software (Operating System, Turnkey Packages, User Programming Development including NAL Assembler, and Parent Processor Software for both 1900 Series and System 4) and Appendices summarising both the hardware and software.

Relevance

The 7905 *Introduction* is currently the only source of information on the 7950 Command Chaining Multiplexer.

Readership

All classes of readers (System Analysts, Programmers and Operators) should read this manual before consulting any other 7905 publication as it is designed as an introduction to all the others.

Related documents

For hardware, read 3. For software, read 2 and then consult the Readership List corresponding to the level of detail desired. In particular the only description of the Command Chain instructions is to be found in 11.

	<i>Full title</i>	<i>Order details (Original reference)</i>
2	7905 Introduction to Communications System ix + 36 pp	Preliminary Edition, TP4851 (SPO/DAL/COM/3/201, Issue 2/0)

Description

This ICL specification has been designed as an overview of the 7905 system from the Communications Application Program point of view and as such complements 1 even though the specification was prepared for Programmers.

The topics covered include a chapter on the 7905 communication capabilities both as a front-end processor and a remote concentrator, a chapter on the 7905 system (application, station, link and transmission level System modules controlled by the Connection Scheduler using the System Intelligence and Peripheral Handlers), a chapter on the Operating System (Executive, Supervisor and Operator Interface), a chapter on System Intelligence (and files, ports and streams) and a chapter on the 7905 application program facilities (commands and terminals supported).

Relevance

This specification introduces the reader to all the concepts essential to the understanding of the 7905 software publications.

Readership documents

This specification forms an essential introduction to 7. For hardware, reference 3. For software, start by reading 5 and then continue with the relevant Readership List.

Full title

*Order details
(Original reference)*

Software

OPERATING SYSTEM

5	7905 <i>E4 Executive</i> ix + 47 pp	Preliminary Edition, TP4855 (381/4Y, Issue 2)
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Description

The manual describes the general, non-communications part of the 7905 Communications Operating System (COS) known as the E4 Executive.

The topics covered include two initial chapters on the main features concept and terminology of E4, a chapter on the protection system, a chapter on the input/output system, a chapter on error handling, a chapter on the structure of E4, a chapter listing the Executive Call instructions, a chapter on the operator interface (system actions and interactions at the Executive console) and a chapter summarising the system generation capabilities.

Relevance

This manual is worth reading as overview of the E4 and its description of E4 concepts and terminology.

Readership

System Analysts, Programmers and Operators should all read this manual especially the initial five and last two chapters.

Related documents

System Analysts should go on to reference 3a, 6 to 9 and 22. Similarly Programmers and Operators should read 3a and then reference 6 to 9 and 22 .

	<i>Full title</i>	<i>Order details (Original reference)</i>
6	7905 E4 Programming ix + 151 pp	Preliminary Edition, TP4856 (381/4P, Issue 2)

Description

As its title implies this manual is designed to help Programmers to use the E4 Executive instructions in general and in particular the non-communications set (for the *communications set* see 3).

The topics covered form a complete definition of the non-communication Executive instruction including a set of three chapters on the instruction format used for Executive calls (Segments, Synchronisation and Activity control), a chapter on the Supervisor Call, a set of three chapters on Input/Output, Access and internal Job Control instructions, a chapter on debugging control, a set of appendices tabulating the Function 30, Supervisor Calls and Input/Output instructions, an appendix listing the error numbers produced by E4 and an appendix describing the control block structure.

Relevance

This manual is the only document providing a definition of the E4 instruction set and the ICL-developed facilities to use the Real Time Clock and magnetic tape.

Readership

Programmers will need to reference the entire document. System Analysts should just consult the introductory portions (first chapter and beginning of each chapter). Operators should just consult the Appendices.

Related documents

System Analysts should go on to read 13 and reference 7. Programmers will need to consult 8 and 9 before they can run or load a program and consult 7 for communications instructions. Operators should continue with 7 to 9.

	<i>Full title</i>	<i>Order details (original reference)</i>
7	7905 Communications User Interface ix + 305 pp	Preliminary Edition, TP4857 (DPO/DAL/COM/3/206, Issue 2/0)

Description

This ICL specification has been designed for Programmers to provide them with a definition of the communications set of the Executive instructions provided on the 7905 and hence complement 6.

The topics covered include a glossary to 7905 Communications Operating System (COS) terminology, a chapter summarising the communication facilities (commands, reports and messages), a set of three chapters detailing the supervisory, program mode as well as device mode connection and inter-program data transfer commands and reports, a set of two chapters detailing the commands and reports for data transport with terminals as well as for the 7950 Command Chaining Multiplexer (line and scanner modes), a chapter on error management, a chapter on the external interface of the COS system intelligence and error messages interface, a chapter on commands and reports for device mode connection (individual peripheral drivers) and a corresponding chapter for program mode connection (Remote Processor Links).

Relevance

This specification is the only source of information on the communications instruction set especially those commands and reports relating to the 7950 Command Chaining Multiplexer.

Readership

System Analysts should refer to the introductory portions of each chapter. Programmers will need to consult the entire specification while Operators will need to consult the specification via the tabular summaries.

Related documents

All readers will need to consult the specification in conjunction with 2 and 6.

	<i>Full title</i>	<i>Order details (Original reference)</i>
8	.7905 E4 User Operating ix + 45 pp	Preliminary Edition, TP4858 (381/4U, Issue 2)

Description

This manual is intended for users (Programmers and Operators) to help them to load, run and control a program to be run under E4 in the interactive mode from the Executive and User console.

The topics covered include an introductory chapter on the facilities, commands and error messages available, a chapter describing the operator interface, a chapter defining the operator command structure, a set of two chapters defining the interactive resource control and job control commands and a set of three appendices defining the command syntax and scanning sequence, listing the error facilities (messages, numbers and meaning).

Relevance

This is the set of user operating instructions for running any program under E4.

Readership

System Analysts will only be interested in the first two chapters. Programmers and Operators will need to consult the appendices and then reference the text as required.

Related documents

System Analysts, Programmers and Operators should all go on to 9 for details on how to start up and control an E4 system. Actual details on how to use the Console are to be found in 4.

9	.7905 E4 System Operator ix + 25 pp	Preliminary Edition, TP4859 (381/4R, Issue 2)
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Description

This manual is designed for the Executive console Operator for loading and controlling an E4 system.

The topics covered include a chapter on the facilities

Full title

*Order details
(Original reference)*

commands and error messages available, a chapter on loading E4 for paper tape, a chapter on power on and power off procedures, a chapter describing the advisory messages for both E4 and device errors, and two chapters on file peripheral control for magnetic devices.

Relevance

This is the set of operating instructions for loading and controlling an E4 system.

Readership

System Analysts will only need to refer to the introductory chapter. Most Programmers will find this amplified by details of the meaning of the advisory messages sufficient. Operators (and Executive Console users) will need to refer to the whole manual.

Related documents

System Analysts, Programmers and Operators should already be familiar with 8. Full details on how to use the Console are to be found in 4.

- 11 7905 E4 Loading Language Preliminary Edition, TP4860
(E4SLB)
ix + 17 pp (300/14/2P, Issue 1)

Description

This manual is a language specification for the specialist who needs to know the structure of the E4 loading language.

The topics covered include a chapter summarising the load information needed (loader directive, program segment presets and control block data), a chapter on program file definition (permitted character set and file layout), a chapter defining the loader directive available, a chapter defining the most important control blocks and a chapter as an example of NAL usage to define these control blocks.

Relevance

This manual is only of interest to System Programmers.

Full title

*Order details
(Original reference)*

Readership

System Analysts and Operators should never need to consult this publication. Specialist System Programmers may need to read this manual.

Related documents

Programmers should already be familiar with 5, 6 and 8. Related information can be found in 14, 20 and 22.

Full title

*Order details
(Original reference)*

PROGRAMMING LANGUAGES

11 7905 *Programming Aid* Preliminary Edition, TP4861
16 pp

Description

This booklet provides an aide-memoire for Programmers.

The topics covered include Assembler Instructions (address modes, 7905 Function Set, CPY Function), Executive Instructions (Supervisor Calls, Special Communications Utility Routines, Input/Output and Communications Data Transport Commands), Command Chain Instructions for the 7950 (Buffer, Command, Branch), Communications Reject Qualifiers, and 7905 Character Sets (Paper Tape and Card versions).

Relevance

The booklet presents all the most essential programming information in tabular form, and in particular is the only source of the Command Chain instructions.

Readership

As its name implies this booklet is for Programmers but to a lesser extent Operators may find the portions on Communications Reject Qualifiers and the 7905 Character Sets useful. System Analysts will find this card too detailed for their use.

Related documents

Programmers should reference 6 and 7 particularly for amplification on Executive Instructions. Operators may also find these useful together with 8 and 9. System Analysts will find 11 too detailed for their needs.

	<i>Full title</i>	<i>Order details (Original reference)</i>
12	7905 NAL (<i>New Assembly Language</i>) ix + 77 pp	Preliminary Edition, TP4862 (382/17/2P, Issue 1)

Description

This manual defines the 7905 Assembly language NAL (in terms of the Instruction set defined in 3a) and is designed for Programmers.

The topics covered include an introductory chapter on the basic concepts and facilities of NAL, a chapter describing and explaining the NAL example programs, and a set of two chapters defining all NAL statements in Backus Naur notation.

Relevance

This manual provides the definition of NAL needed by Programmers.

Readership

As this manual is a detailed language specification it is aimed at Programmers. Hence it is not recommended for System Analysts or Operators.

Related documents

This manual assumes familiarity with 7905/0 Processor and hence 3a. System Analysts may like to read the initial chapter as a shorter version is available in 13. Programmers should read 13 and reference 14, 6, 8, 21 and 22. Operators should not need this manual but read 13 instead.

13	7905 NALA (E4) <i>Assembler</i> ix + 19 pp	Preliminary Edition, TP4863 (382/17/4Y, Issue 1)
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Description

This manual provides an overview of the 7905 Assembler including facilities and availability for paper tape and punched card equipment.

The topics covered include a chapter summarising NALA, a chapter describing the purpose of NALA (assembly of

Full title

*Order details
(Original reference)*

NAL language, input and output procedure and operating sequence), a chapter describing the input (control and source) and output (monitor, binary, errors and symbols) streams and a set of three chapters on the operator facilities, software environment requirements and NALA distribution (variants and medium).

Relevance

This manual is the overview document for both the NAL Assembly language and its Assembler.

Readership

Hence System Analysts, Programmers and Operators should read the document to gain an impression of both NAL and NALA.

Related documents

This manual assumes familiarity with the 7905/0 Processor and hence 3a. System Analysts should then consult 14, 20 and 22 as well as read 16 (see 12). Programmers should then consult 14, 12, 20 and followed up by reading 10 and reference to 21. Operators should then consult 14 and 20.

14	7905 NALA (E4) User ix + 33 pp	Preliminary Edition, TP4864) (382/17/4U, Issue 1 including Amendment 1)
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Description

This manual provides the user (normally a Programmer) with the specifications necessary to have a NAL program run on the 7905 under E4 by an Operator (often the same person).

The topics covered include a chapter summarising the running requirements for NALA, a chapter describing the NAL and NALA facilities, a chapter describing the use of the input (control and source) and output (monitor, binary, listing, errors and symbols) streams, a set of four chapters defining NALA (Operator facilities, Executive supported, variants and distribution medium) a chapter describing the user instructions needed according to streams (input, output) and mode (batch or interactive) as well as list of error messages (numbers and meaning), a chapter describing the operator

Full title

*Order details
(Original reference)*

instructions needed to run a NAL job as well as a chapter and an appendix summarising the data formats and file specification required.

Relevance

This manual is the only source of instruction specific to the running of NAL jobs on the 7905.

Readership

As title implies this publication is for the users of NALA (Programmers and Operators) and hence is of little relevance to System Analysts.

Relevant documents

This manual assumes familiarity with NAL and the 7905/0 and hence 3a, 12, 13 and 8. Programmers should consult 9 to 11 and then, if necessary, 6, 21 and 22. Operators should consult 4, 9 and 11 if necessary.

	<i>Full title</i>	<i>Order details (Original reference)</i>
15	7905 CORAL 66 Language ix + 39 pp	Preliminary Edition, TP4865 (382/13/2P, Issue 2 including Amendment 1)

Description

This manual specifies the CORAL 66 language (accepted by the 7905 CORAL compiler) in terms of the industry standard of the *Official Definition of CORAL 66* (HMSO, 1970).

The topics covered include an introductory chapter on the scope of the manual, a chapter defining the 7905 deviations from official CORAL 66, a chapter describing the 7905 extensions to official CORAL 66, a chapter describing the 7905 CORAL 66 store allocation and addressing procedures, a chapter describing the register usage and a chapter detailing the code generated by the 7905 CORAL 66 compiler for declarations and statements.

Relevance

This manual provides the definition of CORAL needed by Programmers. This specification is only of direct interest to CORAL programmers.

Readership

System Analysts and Operators will find 7905 CORAL and its compiler much better described in 17.

Related documents

This specification assumes familiarity with NAL and the 7905/0 Processor. Hence Programmers should have already consulted 3a, 12 and 16. Further reference to 11 and 20 may become necessary. Then the Programmer should go on to 17.

16	7905 CORAL 66 Programming ix + 63 pp	Preliminary Edition, TP4866 (382/13/2G, Issue 1)
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Description

This manual is a user guide designed to introduce experienced NAL Programmers to CORAL 66 programming by use of definition followed by example.

Full title

Order details
(Original reference)

The topics covered include an introductory chapter on the main features of the 7905 language, a set of three chapters describing basic program structure (block, declaration, statement, label), expressions, arrays, conditions and compound statements, a chapter describing procedures, a chapter describing the loop facilities (FOR and WHILE), a chapter defining constants and preset declarations, a chapter defining the SWITCH statement, a set of three chapters describing packed data (bit and table) handling, fixed-point arithmetic, string, literal and macro facilities, a chapter describing the use of procedure parameters, two chapters describing 7905 extensions to the official CORAL 66 (LIBRARY and KEEP statements, XYZ segmentation, address manipulation and overlays), a chapter describing how to include NAL code in a CORAL program describing how to include NAL code in a CORAL program (for special facilities not provided by the 7905 compiler), a chapter defining the 7905 enhancements (runtime OPTIONS and presetting by CONTROL) and a chapter on CORAL programming strategy.

Relevance

This manual provides the description of 7905 CORAL needed by System Analysts and Programmers, but is too detailed for Operators.

Readership

System Analysts should find the introductory chapters ample. Programmers will need to consult the entire text.

Related documents

System Analysts and Programmers are assumed to be familiar with 6 and 13, then they should consult 17, 20 and 21. Programmers should be familiar with 15 and be able to consult *The Official Definition of CORAL 66* (HMSO, 1970).

17	7905 CORAL 66 User ix + 37 pp	Preliminary Edition, TP4867 (382/13/4U, Issue 2)
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Description

This manual provides the user (usually a Programmer) with instructions to enable a CORAL 66 program to be

Full title

*Order details
(Original reference)*

run under the control of the Operator (frequently the same person) in both interactive and batch mode.

The topics covered include a chapter describing the hardware and software needed to run CORAL 66 programs, a chapter describing the 7905 CORAL 66 language (extensions to the Official Definition, facilities and diagnostics), a chapter describing the 7905 CORAL 66 compiler (three stage process and related Operator prompts), a set of three chapters cataloguing the 7905 CORAL 66 compiler (operator facilities, hardware/software requirements and distribution details), a chapter specifying the 7905 CORAL 66 input conventions, two chapters describing user instructions (loading, file specification, linking procedure and segment usage) and two chapters describing the diagnostic output available (diagnostics format, error and informative messages and Store map).

Relevance

System Analysts will find the initial chapters adequate for their needs. Programmers and Operators will need to reference the entire text.

Related documents

All readers are recommended to have read 16. System Analysts may need 20 and hence 21. Programmers and Operators are assumed to be familiar with 6, 8 and 4 and then, if necessary, should consult 20 and 21. Operators may also need to consult 9.

Full title

*Order details
(Original reference)*

UTILITIES

18	7905 <i>TED Text Editor</i> ix + 45 pp	Preliminary Edition, TP4868 (383/61/4U, Issue 1)
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Description

This manual both describes the facilities and use of TED to modify particular characters or whole lines of any suitable text formatted according to 22 standards.

The topics covered include an introductory chapter on TED (facts and outline description), a chapter describing the TED two pointer addressing system, a chapter defining the commands (for pointer movement, text amendment and administration), a chapter describing user (normally a Programmer) instructions to run TED (data formats, control file, input/output files and system messages), a chapter describing Operator instructions for step-by-step loading, initiation and running of TED jobs and two appendices defining file specifications, command and character/line address formats in Backus Naur notation.

Relevance

This publication is only relevant to those 7905 users who wish to make use of TED to modify existing text such as a debugging or program development aid.

Readership

System Analysts will find the introductory chapters supplemented by the Appendices adequate for their needs. Programmers and Operators will need to read the same information and amplify this by reference to the rest of the manual.

Related documents

This manual assumes the user is familiar with E4 operating procedures. Hence Programmers should consult 8, 4 and 22. Operators may need to reference 9 as well.

	<i>Full title</i>	<i>Order details (Original reference)</i>
19	7905 IDA Interactive Development Aid ix + 53 pp	Preliminary Edition, TP4869 (383/51/4U, Issue 1 including Amendment 1)

Description

This manual describes how the user (usually a Programmer) can prepare a program to be monitored by IDA and run under the control of the Operator (often the same person).

The topics covered a chapter briefly defining IDA (an E4 debugging aid), two chapters describing IDA (controlling snapshotting in both batch and interactive modes, and interactive program corrections), two chapters describing the operator facilities and operating requirements, a chapter defining the user instructions for initiation and snapshots, a chapter defining the format and effects of the individual IDA commands and a chapter defining the operator instructions used for both interactive and batch modes.

Relevance

Although designed for the user (Programmer and Operator) this manual is pertinent for any 7905 system that will offer or need this type of debugging.

Readership

System Analysts will find sufficient information on IDA in the fourth chapter. Programmers and Operators will need to reference the entire text.

Related documents

Readers of this manual are expected to be familiar with E4 and hence 5. Programmers and Operators should be familiar with 8. Operators may also need to consult 9 and 4.

	<i>Full title</i>	<i>Order details (Original reference)</i>
20	7905 LIMPID Link Editor ix + 25 pp	Preliminary Edition, TP4870 (382/16/4U, Issue 2)

Description

This manual describes the facilities and usage of the 7905 Link Editor in both interactive and batch modes to link a set modules in relocatable binary (assembled NAL or compiled CORAL) .

The topics covered include a chapter describing the main features of LIMPID (allocation of storage and resolution of program references, output of linked program and printout), a chapter describing link sequence restraints, a chapter describing the set of outputs available (Local/External maps, Segment table, Overflow and Failure messages), a chapter describing the user instructions in the form of file specifications, a chapter describing the operator instructions need to load, instruct and run LIMPID and a chapter defining LIMPID as a software product.

Relevance

This manual is pertinent only to those 7905 users who are going to use modular programming and then need a link editor.

Readership

System Analysts will find the initial and final chapters adequate for their needs. Programmers and Operators will need this information amplified by reference to the rest of the text.

Related documents

This manual assumes the user is familiar with 7905 operating procedures and GERBIL. Hence Programmers and Operators should have consulted 8 (and 4) as well as 21 . Operators may also need to refer to 9.

	<i>Full title</i>	<i>Order details (Original reference)</i>
21	7905 GERBIL language x + 23 pp	Preliminary Edition, TP4871 (300/14/1P, Issue 2)

Description

This manual is the complete formal definition of the relocatable binary language GERBIL used as the normal output from a NAL assembly or a CORAL compilation.

The topics covered include two chapters to introduce the reader to GERBIL and its syntax, a chapter describing how GERBIL source is loaded, two chapters defining the parameters used and their attributes, a chapter describing the skip facility provided by the Boolean Test Register, a chapter defining the directives used to set parameter attributes and an appendix defining the directive numbers available.

Relevance

This language specification is only of interest to the specialist Programmer writing system modules.

Readership

Hence System Analysts and Operators should not need to consult this manual at all. While most Programmers will only make an acquaintance with this manual via 21.

Related documents

As this manual is for expert 7905 Programmers they should be familiar with 5 and 6. The LIMPID manual 20 is complementary to this manual, which is mentioned in 13 and 16.

	<i>Full title</i>	<i>Order details (Original reference)</i>
22	7905 <i>Serial File Organisation</i> ix + 25 pp	Preliminary Edition, TP4872 (300/13/1R, Issue 1)

Description

This manual is the specification of the serial file organisation handled by the E4 Filing System supported by the 7905 for punched cards and paper tape.

The topics covered include an introduction to the concept of volume, file, block and record (fixed, variable and unknown length) as well as terminator characters in the form of a chapter explaining the mode of presentation, a chapter describing file organisation, a chapter defining data types (symbolic and binary texts, binary data), a chapter defining the related media dependent standards (summarised in a single table in an appendix) and an appendix defining the 7905 character code (internal, punched card and paper tape).

Relevance

As the description of a standard the manual is pertinent to all 7905 readers (System Analysts, Programmers and Operators).

Readership

System Analysts should find the initial chapter and the appendices sufficient. Programmers and Operators may in addition, need to refer to the rest of the text.

Related documents

This is the standard mentioned in 5, 8, 10, 12, 13, 18 and 23.

	<i>Full title</i>	<i>Order details (Original reference)</i>
23	7905 VOLMAN E4 Disc Volume Manager ix + 33 pp	Preliminary Edition, TP4873 (383/62/4U, Issue 2)

Description

This manual describes the facilities and usage in either interactive or batch mode of the utility used for setting up 7980 F/EDS discs into up to 20 partitions assigned with particular access rights.

The topics covered include a chapter defining the hardware and software requirements for VOLMAN disc processing, a chapter briefly describing VOLMAN, a set of two chapters describing the user and operator facilities, a chapter defining the user (usually Programmer) instructions for initialisation program (allocate, deallocate, change, list, terminate) and error conditions, a chapter on the operating instructions, a chapter defining the input data format and a chapter including examples of interactive mode initialisation and batch mode change.

Relevance

This user manual is essential for System Analysts, Programmers and Operators attached to a 7905 system incorporating the 7980.

Readership

System Analysts will find the first and last chapter adequate for their needs. Programmers and Operators will need to reference the entire text.

Related documents

All readers should be familiar with 8. Programmers and Operators will need to consult 22. Operators may also need to refer to 9.

ICL Type No. Equivalent Name CTL Type Number

HARDWARE EQUIVALENTS

Processor

7905/0	PROCESSOR (including Executive Console Real Time Clock)	1.11 1.310/1 1.311 1.391/1
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Store
7905/4

STORE 8K of 750 nanosecond core	1.21
F1488 Read only Memory loader (for use with Paper Tape Reader)	1.083/1
F1489 Read only Memory loader (for use with Executive Console)	1.083/2

Interconnections

7905/1	HIGH SPEED INTERFACE CONNECTION A (not for 7951/1 Command Chain Unit (CCU) or 7987 Local Processor Links (LPL))	1.012
7905/9	HIGH SPEED INTERFACE CONNECTION B (for 7951 CCU or 7987 LPL)	1.012 <u>modified</u>

Communications control

7955	BIT MULTIPLEXER	
7955/1-6	Multiplexer (up to 9600 bps, 4/8/16/32/64/108 channels respectively)	1.610/1-6
F1540	Pair of Telephone Channels (200 bps with auto-answer)	1.612/1
F1541	One Telephone Channel (700/1200 bps)	1.613/1
F1542	One Telephone Channel (2400 bps with fall-back)	1.614/1

ICL Type No.	Equivalent Name	CTL Type No.
F1543	One Telephone Channel (4800/9600 bps)	1.615/1
F1545	Pair of Telegraph channels (up to 200 bps, manual answering)	1.612/4

Note For the connection of Telegraph lines to F1545 type of channel the following are also required:

7922/0	Line Termination Control Unit (for 4 channels)	-
7922/1	Line Termination Unit (for 1 channel)	-

Local peripherals

PAPER TAPE EQUIPMENT

7960/3	PAPER TAPE READER (700 cps)	1.32
F1519/1	Power Dispenser (optional with 7960/3)	-
7963/1	PAPER TAPE PUNCH (75 cps)	1.332

CONSOLE TYPEWRITER

7969/1	USER CONSOLE (including Controller)	1.311 1.310)
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CARD EQUIPMENT

7970/1	CARD READER (400 cpm)	1.341
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MAGNETIC TAPE EQUIPMENT

7974/1	MAGNETIC TAPE CONTROLLER for 7975 or 7976 Tape Decks	1.560
7975/1-4	Clusters of 1, 2, 3 or 4 magnetic Tape Decks (9 track, NRZI, 800 bps)	1.563/1-4
7976/1-4	Clusters of 1, 2, 3 or 4 magnetic Tape Decks (7 track, NRZI, 556/800 bps)	1.564/1-4

ICL Type No. Equivalent Name CTL Type No.

DISC STORES

	Fixed/Exchangeable Disc Store	1.52
7980/1	DISC CONTROLLERS (for 7980/2 and 7980/3)	1.520
7980/2	Transport for Fixed/ Exchangeable Disc Store (2.4 M words)	1.522
7980/3	Transport for Exchangeable Disc (1.2 M words)	1.521

FIXED HEAD DISC STORE

7982/1	DISC CONTROLLER (for 7982/2-5)	1.510/1
7982/2	Fixed Disc Store (1 × 128K words)	1.511/2
7982/3	Fixed Disc Store (1 × 256K words)	1.511/3
7982/4	Fixed Disc Store (2 × 128K words)	1.511/2 × 2
7902/5	Fixed Disc Store (2 × 256K words)	1.511/3 × 2

PERIPHERAL MULTIPLEXER

7986/1	PERIPHERAL MULTIPLEXER (capacity for 11 additional slow input/output peripherals)	1.051
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EARLY EQUIPMENT (no longer available)

7962/1	PAPER TAPE PUNCH (120 cps)	1.331
7965/1	LINE PRINTER (300-1000 lpm 64 characters, 80 print positions)	1.361/1
7966/2	LINE PRINTER (200-950 lpm 64 characters, 136 print positions)	1.362/1

