APPENDIX A : EQUIPMENT AND STORE SPACE REQUIRED BY THE MASTER PROGRAMME

Due to the different combinations of peripheral equipment there are slightly different versions of the Master Program for each machine. The maximum store space required by Issue 6 Master Program is 8192 short compartments and the minimum 4740 short compartments. (4540 short compartments with overwrite allocate). The two basic versions are as follows :

Version A - has the routines for paper tape input, punched card input and output, General Purpose printer and magnetic tape. The typewriter and paper tape punch routines assume that output is via the General Purpose Output assembler and the Programme Trials System uses a General Purpose printer.

Version B - has the routines for paper tape input, punched card input and output, special printer, and magnetic tape. The typewriter and paper tape punch routines assume that output is via the paper tape output assembler and the Programme Trials System uses a Special printer.

A version for a particular installation is made by deletions from one of these basic versions.

Peripherals

Item	When Required	Purpose
Typewriter	Permanently	(i) Communication with Operator (ii) Computer Log
Card Reader or Paper Tape Reader	For all operator commands of groups 2 and 4	To read control data specifying programme to which command relates
Card Punch (optional)	When any reel of magnetic tape is loaded for output	Produces control cards for clerical control on magnetic tape
Magnetic Tape Route	When allocating and loading	-
Clock (optional)	Permanently when installed	To note time against log entries
Millisecond Timer (optional)	Permanently when installed	Used for timing programmes

APPENDIX B : MASTER PROGRAMME OPERATING INSTRUCTIONS

CONTENTS

ADDENDUM TO SOFTWARE RELEASE NOTICE

Index of pages to Appendix B of LEO Users Manual Volume IV, Part 1

Pages marked * on the right are reissued with this amendment.

B.1 GENERAL NOTES

This appendix outlines the operating procedures to be followed when LEO III/326 programmes are run under Master Programme Control.

Facilities that may or may not be included in the Master Programme, according to users' requirements and available store space, are noted in the text as 'optional facilities'.

Procedures for loading and amending the Master Programme itself are contained in Part 3 of this volume under the section heading MASTER PROGRAMME INPUT SEQUENCES.

Facilities are noted as optional where appropriate in this appendix. The fully reduced Master Programme, which is produced by the omission of all optional facilities when the Master is generated, provides the following facilities:

Control of timesharing (one program only)

Log routine

Operator Intervention:
- Decode indicators
- Deal with answers to options

Commands:
- Group 2 - Abandon programme
- Group 4 - Set up Released Tapes Index for 24 tapes
  Allocation (without alternate routes)

Read control data for commands

Single annexe working for loading programmes

Programme facilities :
- Programme Unload
- Programme Options
- Programme Output on Log
- Overlay
- Input/Output Control
- Open and Close Files
- Read/Write
- Set Reel Counter
- Rewind
- Run Forward and Back
- Step Back

STEP 2 Check that Green 'READY for COMMAND' lamp is lit

STEP 3 Set up required pattern on Indicator Stacking Keys

STEP 4 Press Stack Indicators Button

STEP 5 Watch log for confirmation that command has been accepted and obeyed

STEP 6 Unload control data, restore to file

B.2.4 Unacceptable Commands

Confirmation that the command has been accepted is indicated by the appropriate log comment (see B.3). If this is not given, the procedure should be as follows.

B.2.4.1 No Log Entry is Made

Reasons:

1. Checks detailed in 2.3 were not carried out

OR 2. I13 is not set

OR 3. Interruption has failed

OR 4. Stack Indicators Button failed to operate

OR 5. Master Programme corruption or computer fault

Action

STEP 1 Repeat command procedure with special emphasis on checks

STEP 2 (If still no Log Entry)

Check condition of I13

If not set, report to Engineers, suspect failure to set I13

If set, report to Engineers suspect failure of Stack Indicators Button or of Interrupt

} If no fault found take post-mortem of Master Programme

B.2.5 Unidentified Halts, etc.

STEP 1 Note Contents of:

Sequence Control Register

Order Register

Tag Register

Compartment 1 if LEO 3, compartment 32 if LEO 360, 326

STEP 2 (LOCKOUT ONLY) Restart - details are typed in log.

(Others) Suggested Action: Stack and execute sequence change to compartment with incompatible tag, so that 'lockout' alarm is generated. Then proceed as above.

STEP 3 Enter Store Dump Routine