SUMMARY OF CONTENTS

The G-15 Computer has been designed to be programmed either in basic machine language or by use of systems in which the computer itself handles the bulk of coding detail. This manual describes basic machine programming. Introductory information is presented on page 1; the internal memory and registers are described on pages 1 and 2; the command structure on pages 2 and 3; and the input-output system on pages 3 and 4.

Forty basic commands for programming the G-15 Computer are listed on page 5. The effect of each command is described on pages 6 to 10. The list is self-contained and permits the coding of any type of problem. Arithmetic, transfer of control, extraction, and input-output operations are included.

Coding examples are on pages 11 to 13.

The function of a standard command can be changed by altering its code. By a slight change in code a command can be made operative on double-precision data, or on a block of information, instead of on a single word. By changing one of the command components, multiplication, division and shift operations can be made more flexible. The procedures are explained on pages 14 and 15.

The address, or any other portion of a command, can be modified by the computer during computation. The technique is described on page 16.

"Minimum access coding" permits much non-productive computing time to be eliminated. The term is defined and the technique explained on page 16. An example is on page 18.

A typical computer problem is illustrated on pages 19 to 21.